

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

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

MINERALYS THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

2834

(Primary Standard Industrial
Classification Code Number)

84-1966887

(I.R.S. Employer
Identification No.)

**150 N. Radnor Chester Road, Suite F200
Radnor, PA 19087
888-378-6240**

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

**Jon Congleton
Chief Executive Officer
Mineralys Therapeutics, Inc.
150 N. Radnor Chester Road, Suite F200
Radnor, PA 19087
(888) 378-6240**

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

Copies to:

**Cheston J. Larson
Matthew T. Bush
Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92130
(858) 523-5400**

**Adam Levy
Chief Financial Officer and Chief Business Officer
Mineralys Therapeutics, Inc.
150 N. Radnor Chester Road, Suite F200
Radnor, PA 19087
(888) 378-6240**

**Iir Mujalovic
Shearman & Sterling LLP
559 Lexington Avenue
New York, NY 10022
(212) 848-4000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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

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

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

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

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

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

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

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

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

Subject to Completion
Preliminary Prospectus dated , 2022

PROSPECTUS

Shares



Common Stock

This is Mineralys Therapeutics, Inc.'s initial public offering. We are selling shares of our common stock.

We expect the public offering price for our common stock to be between \$ and \$ per share. Currently, no public market exists for the shares of our common stock. We have applied for approval to list our common stock on the Nasdaq Global Market under the symbol "MLYS," and this offering is contingent upon obtaining such approval.

We are an "emerging growth company" and a "smaller reporting company" under the federal securities laws and are subject to reduced public company disclosure standards. See the section titled "Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company."

Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page12 of this prospectus.

	Per Share	Total
Public offering price	\$	\$
Underwriting discount ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) We refer you to "Underwriting" for additional information regarding underwriting compensation.

The underwriters may also exercise their option to purchase up to an additional shares of common stock from us, at the initial public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

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

The shares will be ready for delivery on or about , 2023.

BofA Securities

Evercore ISI

Stifel

Guggenheim Securities

Credit Suisse

Wells Fargo Securities

The date of this prospectus is , 2022.

TABLE OF CONTENTS

PROSPECTUS SUMMARY	1
RISK FACTORS	12
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	72
MARKET AND INDUSTRY DATA	73
USE OF PROCEEDS	74
DIVIDEND POLICY	76
CAPITALIZATION	77
DILUTION	79
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	81
BUSINESS	93
MANAGEMENT	121
EXECUTIVE AND DIRECTOR COMPENSATION	128
CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS	142
PRINCIPAL STOCKHOLDERS	145
DESCRIPTION OF CAPITAL STOCK	148
SHARES ELIGIBLE FOR FUTURE SALE	153
MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS	156
UNDERWRITING	160
LEGAL MATTERS	168
EXPERTS	168
WHERE YOU CAN FIND MORE INFORMATION	168
INDEX TO FINANCIAL STATEMENTS	F-1

Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this 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 you should consider before investing in our common stock. You should carefully read this entire prospectus, including the information under the sections titled "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Special Note Regarding Forward-Looking Statements," and our financial statements and related notes included elsewhere in this prospectus, before making an investment decision. Unless the context requires otherwise, references in this prospectus to "Mineralys," the "Company," "we," "us," and "our" refer to Mineralys Therapeutics, Inc.

Overview

We are a clinical-stage biopharmaceutical company focused on developing medicines to target diseases driven by abnormally elevated aldosterone. Our product candidate, MLS-101, is a proprietary, orally administered, highly selective aldosterone synthase inhibitor (ASI) that we are initially developing for the treatment of patients with uncontrolled hypertension (uHTN), defined as individuals who are unable to achieve BP of below 130/80 mmHg despite taking two or more lines of antihypertensive medication or resistant hypertension (rHTN). In the United States, there are over 115 million patients who have sustained elevated blood pressure (BP), or hypertension and more than half of this population fails to achieve their BP goals, defined as BP of 130/80 mmHg, with currently available medications. There are over 30 million treated patients who do not achieve their BP goal, of whom approximately 20 million have systolic BP levels greater than 140 mmHg. Patients with hypertension that persists despite taking two or more medications have 1.8 and 2.5 times greater mortality risk due to either cardiovascular disease or stroke, respectively. In a Phase 2 clinical trial evaluating 200 subjects with uHTN and rHTN (Target-HTN), MLS-101 demonstrated a clinically meaningful and statistically significant reduction in BP with once-daily dosing and was well tolerated. In addition to hypertension, we intend to develop MLS-101 for the treatment of chronic kidney disease (CKD) and believe that our product candidate holds promise to be an innovative solution for the rapidly growing unmet need in multiple cardiorenal disorders.

Hypertension is one of the most common medical conditions globally, afflicting approximately 1.3 billion people and resulting in an estimated average of \$130 billion annual economic burden in the United States alone between 2003 and 2014. Despite the availability of multiple treatment options, including thiazide diuretics, angiotensin-converting enzyme (ACE)-inhibitors, angiotensin II receptor blockers (ARBs), calcium channel blockers, beta blockers, and mineralocorticoid receptor antagonists (MRAs), the prevalence of uHTN continues to grow, further exacerbated by the rapidly rising rate of obesity. Over 30 million hypertensive patients in the United States are unable to achieve their BP goal despite treatment. Within this population there are approximately 10.3 million patients suffering from rHTN, defined as individuals who are unable to achieve BP of below 130/80 mmHg despite taking three or more antihypertensive medications. Multiple large-scale studies have demonstrated that patients who fail to achieve their BP goal have a significantly elevated risk of developing heart disease, stroke and kidney disease (Wright JT Jr, et al. A randomized trial of intensive versus standard blood-pressure control. *N Engl J Med.* 2015;373(22):2103-2116; and Zhou, et al., Uncontrolled Hypertension Increases Risk of All-Cause and Cardiovascular Disease Mortality in US Adults: the NHANES III Linked Mortality Study. *Scientific Reports*, 2018;8(1):1-7). Patients with rHTN have a 1.5 and 2.3 times higher risk than normotensive patients for composite cardiovascular events and end-stage renal disease, respectively. Notwithstanding this significant and growing unmet need, there has been a lack of U.S. Food and Drug Administration (FDA)-approved novel therapies targeting hypertension, with no new class of antihypertensive treatment approved within the last fifteen years.

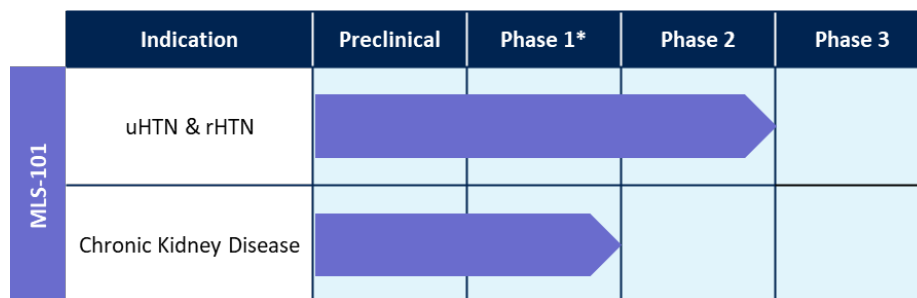
Abnormally elevated aldosterone levels are a key factor in driving hypertension in approximately 25% of hypertensive patients. Developing an effective hypertension therapy that targets aldosterone synthase remains a significant challenge, given the tight homology between the enzymes that regulate aldosterone and cortisol synthesis, as well as aldosterone's role in potassium retention. Several large pharmaceutical companies have tried to develop ASIs, but their efforts have been hampered due to insufficient selectivity for aldosterone, resulting in off-target toxicities associated with cortisol inhibition. These challenges have led to the discontinuation of many ASIs in development to date.

Our Product Candidate, MLS-101

Our product candidate, MLS-101, is a proprietary, orally administered, highly selective ASI that is designed to reduce aldosterone levels by inhibiting CYP11B2, the enzyme responsible for producing the hormone. We licensed MLS-101 from Mitsubishi Tanabe Pharmaceutical Company (Mitsubishi Tanabe), who discovered the compound and provided the early foundational work, including demonstrating the selectivity of MLS-101, and progressing the asset through Phase 1 clinical development. We completed the Target-HTN trial, a Phase 2 proof-of-concept trial for MLS-101 in the treatment of uHTN and rHTN in 2022. Some of the key differentiators that we have observed to date for MLS-101, relative to initially developed ASIs, are:

- **Compelling Clinical Results:** Target-HTN demonstrated a clinically meaningful and statistically significant 9.7 mmHg and 7.9 mmHg reduction in systolic BP in the 50 mg and 100 mg once-daily (QD) cohorts, respectively. The reduction in systolic BP was supported by 24-hour mean ambulatory blood pressure monitoring (ABPM), which further demonstrated that MLS-101 provides both central and nighttime BP reduction;
- **High Selectivity:** Phase 1 and Phase 2 clinical data demonstrated high aldosterone selectivity with no cortisol suppression, as anticipated by the 374 to 1 inhibitory effect on the CYP11B2 enzyme responsible for synthesizing aldosterone, compared to the CYP11B1 enzyme, which is responsible for synthesizing cortisol;
- **Optimal Half-Life:** A majority of our clinical trial subjects maintained a serum potassium in the normal range. There were modest incidences of hyperkalemia requiring dose adjustment or discontinuation. Six subjects experienced transient elevated serum potassium greater than 6.0 mmol/L, none of which were considered a serious adverse event (SAE) and all rapidly resolved after discontinuation or dose adjustment. One of the events was assessed as erroneous due to sample misprocessing. MLS-101’s observed 10 to 12 hour half-life may be viewed more favorably by physicians compared to compounds with longer half-lives, which may have greater risk of sustained potassium elevation; and
- **Convenient Dosing and Well Tolerated:** Target-HTN demonstrated clinically meaningful results on a once-daily dosing regimen. Furthermore, MLS-101 was well-tolerated.

Given that hypertension and abnormal aldosterone biology can lead to cardiorenal disease, we intend to further develop MLS-101 across other indications such as the treatment of CKD.



*The first-in-human Phase 1 clinical trial of MLS-101 was conducted by Mitsubishi Tanabe. See “Business—Phase 1 Clinical Trial Results” beginning on page 107 for additional details regarding this trial.

We may rely on the data from MLS-101’s completed Phase 1 trial in healthy volunteers and intend to use the observations from that trial and the Phase 2 trial in uHTN and rHTN to inform the development of MLS-101 for the treatment of CKD.

Target-HTN was a randomized, double-blind, placebo-controlled trial conducted in the United States across 200 subjects with uHTN and rHTN to evaluate the efficacy of MLS-101 at various doses either once or twice a day. All subjects were required to remain on background medications.

Target-HTN Key Clinical Results

BP Lowering Metrics (Observed Mean)	Associated BP Reduction	
	100mg QD Part 1	50mg QD
Placebo-adjusted Systolic BP*	-8.7 mmHg	-10.0 mmHg
Placebo-adjusted 24-hour Systolic ABPM	-8.3 mmHg	-10.7 mmHg**
Placebo-adjusted 24-hour Systolic ABPM Nighttime	-8.2 mmHg	-4.3 mmHg**
Placebo-adjusted 24-hour Central Systolic BP	-11.6 mmHg	-11.9 mmHg**

*Mixed effects model with repeated measures (MMRM) results for 100mg QD Part1 and 50mg QD were -7.9mmHg and -9.7mmHg, respectively.

**Results from post-hoc sensitivity analysis reflecting subjects who passed Quality Control criteria and in whom both baseline AOBP and ABPM > 130mmHg.

The results of the Target-HTN trial demonstrated a clinically meaningful and statistically significant placebo-adjusted reduction in systolic BP, as measured by automated office blood pressure (AOBP), of 9.7 mmHg (p<0.01) and 7.9 mmHg (p<0.04) in the 50 mg and 100 mg QD cohorts, respectively. A p-value is the probability that the reported result was achieved purely by chance, such that a p-value of less than or equal to 0.05 means that there is a less than or equal to 5% probability that the difference between the control group and the treatment group is purely due to chance. A p-value of 0.05 or less typically represents a statistically significant result. The FDA’s evidentiary standard when evaluating the results of a clinical trial generally relies on a p-value of less than or equal to 0.05. In a meta-analysis of 147 randomized trials, a 10 mmHg reduction of systolic BP or a 5 mmHg reduction in diastolic BP has been shown to reduce the risk of stroke by 41% and coronary heart disease by 22%. The reduction in systolic BP, as measured by AOBP, was validated and confirmed by comparable reductions in systolic BP with MLS-101, as measured by 24-hour mean ABPM. The ABPM data further demonstrated the benefits of MLS-101 on both central and nighttime BP reduction, which have been strongly linked to cardiovascular health risk. The trial results also highlighted that patients with a body mass index (BMI) greater than 30, or obese patients, who are at an elevated risk of cardiorenal diseases, exhibited a 13.2 or 16.6 mmHg placebo-adjusted reduction in systolic BP with a 100 mg QD or 50 mg QD dose, respectively. Treatment-emergent SAEs were reported in three subjects, one of which was deemed to be possibly related to MLS-101 in a subject with worsening of preexisting hyponatremia, which reversed after discontinuation. The two active, once-daily doses saw modest increases in potassium levels across the cohorts of 0.25 mmol/L with the 50 mg QD and 0.35 mmol/L with the 100 mg QD dose. Six subjects experienced transient elevated serum potassium greater than 6.0 mmol/L, none of which were considered an SAE, and all rapidly resolved after discontinuation or dose adjustment, which is consistent with the short half-life of MLS-101. One of the events was assessed as erroneous due to sample misprocessing. As anticipated, and in a manner similar to ACE-inhibitors and ARBs, the BP lowering effect of MLS-101 led to a beneficial, reversible dose-dependent reduction in estimated glomerular filtration rate (eGFR), a measure of kidney function. Finally, the selectivity of MLS-101 for aldosterone inhibition was confirmed as cortisol levels were not observed to be inhibited across the range of doses.

Our Strategy

Our strategy is to develop and commercialize MLS-101 for the treatment of diseases driven by abnormally elevated aldosterone, initially focused on hypertension, with the goal of eventually expanding to other cardiorenal diseases. Key elements of our strategy include:

- ***Advance MLS-101, our ASI product candidate, through clinical development for the treatment of uHTN and rHTN.*** uHTN and rHTN represent a significant unmet need within the 115 million patients in the United States who have hypertension. More than half of hypertensive patients fail to achieve their BP goals despite treatment, and approximately 20 million treated patients have systolic BP greater than 140 mmHg. Topline data from our Target-HTN Phase 2 trial demonstrated that MLS-101 lowered the systolic BP of patients with uHTN and rHTN at a clinically meaningful and statistically significant level, with a mean placebo-adjusted reduction in systolic BP of 9.7 or 7.9 mmHg with a 50 or 100 mg QD dose, respectively. Additionally, treatment with MLS-101 demonstrated a robust effect in obese patients, who, studies show, tend to have abnormal aldosterone biology. We believe our approach of normalizing aldosterone levels can provide an effective and more targeted approach for the control of hypertension. We plan to continue to advance the development of MLS-101 in hypertension.
- ***Expand the development of MLS-101 into additional indications where abnormally elevated aldosterone is a driver in the disease pathology, including CKD and potentially other cardiorenal indications.*** MLS-101 has been developed to normalize the production of aldosterone, and we believe this mechanism can be applied to other indications where abnormal aldosterone biology plays a role. We intend to initiate a Phase 2 proof-of-concept trial for CKD. Uninhibited aldosterone is known to play a critical role in the progression of CKD, which affects over 23 million people in the United States. Furthermore, we may expand the development of MLS-101 into additional cardiorenal indications.
- ***Opportunistically evaluate strategic partnerships to maximize the value of MLS-101. We have worldwide development and commercialization rights to MLS-101.*** Given the potential of aldosterone inhibition to treat multiple cardiorenal conditions, we may opportunistically explore partnerships with other biopharmaceutical companies that could provide expertise and resources to expand the development and commercialization of MLS-101.
- ***Continue to evaluate opportunities to selectively expand our pipeline beyond MLS-101.*** Our team has experience in various aspects of drug discovery, clinical development, business development and commercialization. We will continue to leverage our team's expertise to selectively evaluate potential strategic partnerships, collaborations, licenses and acquisitions to expand our pipeline, particularly in cardiorenal indications.

Our Team and Investors

Founded by Catalys Pacific in 2019, we are led by an experienced management team with diverse backgrounds and significant experience in drug discovery, development and company building. Our management team consists of industry veterans with extensive experience at pharmaceutical companies such as Amgen, Aventis, Cephalon, Novartis, ProQR, Sanifit, Teva and Vertex. Together, our team has a proven track record in the discovery, development and commercialization of numerous approved therapeutics.

Since our inception, we have raised approximately \$158 million of capital from various investors.

Summary of Risks Associated with Our Business

Our ability to execute our business strategy is subject to numerous risks and uncertainties that you should consider before investing in the Company, as more fully described in the section titled “Risk Factors” immediately following this Prospectus Summary. These risks include, among others:

- We have a limited operating history and none of MLS-101 or any future product candidates have been approved for commercial sale. We have a history of significant net losses since our inception and expect to continue to incur significant losses for the foreseeable future. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.
- Even if we complete this offering, we will need substantial additional funds to pursue our business objectives, which may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed on acceptable terms, or at all, may force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.
- Our future performance at this time is entirely dependent on the success of our only product candidate, MLS-101, which is currently in clinical development and which has not completed a pivotal trial. If we are unable to advance MLS-101 in clinical development, obtain regulatory approval and ultimately commercialize MLS-101, or experience significant delays in doing so, our business will be materially harmed.
- Clinical and preclinical development involves a lengthy and expensive process with uncertain timelines and outcomes, and results of prior clinical trials and studies of MLS-101 are not necessarily predictive of future results. MLS-101 may not achieve favorable results in our clinical trials or receive regulatory approval on a timely basis, if at all.
- Use of MLS-101 or any future product candidates could be associated with adverse side effects, adverse events or other properties or safety risks, which could delay or preclude regulatory approval, cause us to suspend or discontinue clinical trials, abandon a product candidate, limit the commercial profile of an approved label or result in other significant negative consequences that could severely harm our business, prospects, operating results and financial condition.
- We heavily rely on our exclusive license with Mitsubishi Tanabe to provide us with intellectual property rights to develop and commercialize MLS-101. If the license is terminated, we would lose our rights to develop and commercialize MLS-101, which in turn would have a material adverse effect on our business, financial condition, results of operations and prospects, including, but not limited to, cessation of our operations to the extent we are unable to develop other product candidates at the time of such termination.
- The COVID-19 pandemic could adversely impact our business, including the conduct of our clinical trials.
- We face significant competition, and if our competitors develop and commercialize technologies or product candidates more rapidly than we do, or their technologies or product candidates are more effective, safer, or less expensive than MLS-101 and any future product candidates we develop, our business and our ability to develop and successfully commercialize products will be adversely affected.
- We rely on, and intend to continue to rely on third parties to conduct, supervise and monitor our clinical trials and preclinical studies. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, our development programs and our ability to seek or obtain regulatory approval for or commercialize MLS-101 and any future product candidates may be delayed or subject to increased costs, each of which may have an adverse effect on our business and prospects.

- If we are unable to obtain, maintain and enforce patent or other intellectual property protection for MLS-101 or any future product candidates or technology, or if the scope of the patent or other intellectual property protection obtained is not sufficiently broad, our competitors or other third parties could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize MLS-101 or any future product candidates may be adversely affected.

Our Corporate and Other Information

We were originally founded as a Delaware corporation on May 31, 2019 under the name Catalys SC1, Inc. On May 29, 2020, we changed our name to Mineralys Therapeutics, Inc. Our principal executive offices are located at 150 N. Radnor Chester Road, Suite F200, Radnor, PA 19087, and our telephone number is (888) 378-6240. Our website address is www.mineralystx.com. The information contained in, or accessible through, our website does not constitute part of this prospectus. We have included our website address as an inactive textual reference only.

We use our trademarks in this prospectus as well as trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

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

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). An emerging growth company may take advantage of certain reduced disclosure and other requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (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, unless the SEC determines the new rules are necessary for protecting the public;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended (the Securities Act), which such fifth anniversary will occur in 2028. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act of 1934 (the Exchange Act), our annual gross revenues exceed \$1.235 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information in this prospectus and that we provide to our stockholders in the future may be different than what you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected to avail ourselves of this exemption and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Common stock offered by us	shares.
Option to purchase additional shares	The underwriters have been granted an option to purchase up to additional shares of common stock from us at any time within 30 days from the date of this prospectus.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	<p>We estimate that the net proceeds to us from this offering will be approximately \$ million (or approximately \$ million if the underwriters exercise their option to purchase additional shares in full) from the sale of the shares of common stock offered by us in this offering, assuming an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We intend to use the net proceeds of this offering, together with our existing cash, cash equivalents and marketable securities, to fund the research and development of MLS-101 and the remainder for working capital and general corporate purposes. See the section titled "Use of Proceeds."</p>
Risk factors	Investing in our common stock involves a high degree of risk. See the section titled "Risk Factors" and other information included in this prospectus for a discussion of risks you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	"MLYS"

The number of shares of our common stock to be outstanding after this offering set forth above is based on 69,315,006 shares of our common stock outstanding as of September 30, 2022, including 13,260,785 shares subject to forfeiture, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering, and excludes:

- 14,263,474 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2022, with a weighted-average exercise price of \$0.08 per share;
- shares of common stock reserved for future issuance under our 2023 Incentive Plan (the 2023 Plan), which will become effective in connection with this offering (which number includes 3,627,395 shares of common stock reserved for issuance under our Amended and Restated 2020 Equity Incentive Plan (the 2020 Plan) as of September 30, 2022, which shares will be added to the 2023 Plan upon its effectiveness, but does not include any potential evergreen increases pursuant to the terms of the 2023 Plan); and
- shares of common stock reserved for future issuance under our 2023 Employee Stock Purchase Plan (the ESPP), which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering;
- the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering;
- a -for- stock split of our common stock to be effected before the closing of this offering;
- no exercise of the outstanding options described above; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

SUMMARY FINANCIAL DATA

The following tables set forth a summary of our historical financial data as of, and for the periods ended on, the dates indicated. We have derived the summary statements of operations data for the years ended December 31, 2020 and 2021 from our audited financial statements included elsewhere in this prospectus. We have derived the summary statements of operations data for the nine months ended September 30, 2021 and 2022 and the summary balance sheet data as of September 30, 2022 from our unaudited condensed financial statements included elsewhere in this prospectus. The unaudited condensed financial statements have been prepared on a basis consistent with our audited financial statements included in this prospectus and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary to fairly state the financial information in those statements. You should read these data together with our financial statements and related notes included elsewhere in this prospectus and the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” Our historical results for any prior period are not necessarily indicative of our future results, and our interim results are not necessarily indicative of our expected results for the year ending December 31, 2022.

(in thousands, except share and per share data)	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2021	2022
			(unaudited)	
Statements of Operations Data:				
Operating expenses:				
Research and development	\$ 2,411	\$ 16,308	\$ 9,692	\$ 18,432
General and administrative	532	2,417	1,950	3,039
Total operating expenses	2,943	18,725	11,642	21,471
Loss from operations	(2,943)	(18,725)	(11,642)	(21,471)
Other income (expense)				
Interest expense	(115)	(27)	(27)	741
Change in fair value of convertible notes	(367)	(657)	(657)	—
Other income (expense)	(1)	1	1	4
Total other expenses, net	(483)	(683)	(683)	745
Net loss	\$ (3,426)	\$ (19,408)	\$ (12,325)	\$ (20,726)
Net loss per share, basic and diluted ⁽¹⁾	\$ (0.07)	\$ (0.36)	\$ (0.23)	\$ (0.37)
Weighted-average shares of common stock outstanding, basic and diluted ⁽¹⁾	50,000,000	53,820,364	53,548,713	55,639,462
Pro forma net loss per share, basic and diluted (unaudited) ⁽²⁾		\$ —		\$ —
Pro forma weighted-average shares of common stock outstanding, basic and diluted (unaudited) ⁽²⁾				

- (1) See Note 2 to our audited financial statements and our unaudited condensed financial statements included elsewhere in this prospectus for an explanation of the method used to calculate historical net loss per share, basic and diluted, and the weighted-average number of shares of common stock used in the computation of the per share amounts.
- (2) The calculations for the unaudited pro forma net loss per share attributable to common stockholders, basic and diluted, for the year ended December 31, 2021, exclude the \$0.7 million change in fair value of the convertible notes and \$27 thousand in interest expense, resulting in pro forma net loss attributable to common stockholders of \$18.7 million for the year ended December 31, 2021. The unaudited pro forma weighted average common shares outstanding, basic and diluted, assume the conversion of all our outstanding shares of convertible preferred stock into 61,180,259 and 222,843,084 shares of our common stock as of December 31, 2021 and September 30, 2022, respectively, as if the conversion had occurred at the beginning of the period presented, or the issuance date, if later, and the conversion of our convertible notes into shares of our common stock, resulting in an additional 53,185,763 and 145,678,702 weighted average shares of our common stock as of December 31, 2021 and September 30, 2022, respectively.

(in thousands)	As of September 30, 2022		
	Actual	Pro forma ^{(1) (3)}	Pro forma as adjusted ⁽²⁾
Balance Sheet Data:			
Cash, cash equivalents and marketable securities	\$ 120,953	\$ —	\$ —
Working capital ⁽⁴⁾	114,666	—	—
Total assets	122,450	—	—
Convertible preferred stock	158,644	—	—
Accumulated deficit	(43,737)	—	—
Total stockholders' equity (deficit)	(43,414)	—	—

- (1) Gives effect to the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 222,843,084 shares of our common stock and the related reclassification of the carrying value of the convertible preferred stock to permanent equity immediately prior to the closing of this offering.
- (2) Gives effect to (i) the pro forma adjustments set forth in footnote (1) above, and (ii) the issuance and sale of shares of our common stock in this offering at the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share would increase (decrease) the pro forma as adjusted amount of each of our cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' equity (deficit) by approximately \$, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price of \$ per share would increase (decrease) the pro forma as adjusted amounts of each of our cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' equity (deficit) by approximately \$, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.
- (3) The pro forma and pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.
- (4) We define working capital as current assets less current liabilities. See our financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes included elsewhere in this prospectus and in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” before making an investment decision. Other risks and uncertainties that we do not presently consider to be material, or of which we are not presently aware, may become important factors that affect our future financial condition and financial performance. If any of those or the following risks are realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Limited Operating History, Financial Position and Capital Requirements

We have a limited operating history, have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We may never generate any revenue or become profitable or, if we achieve profitability, we may not be able to sustain it.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are a clinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. We commenced operations in 2019 and, to date, we have focused primarily on organizing and staffing our company, business planning, raising capital, in-licensing our product candidate, MLS-101, establishing our intellectual property portfolio and conducting research, preclinical studies, and clinical trials. We have not yet completed any pivotal clinical trials, obtained regulatory approvals, manufactured products at commercial scale, or arranged for a third party to do so on our behalf, or conducted sales and marketing activities necessary for successful product commercialization. Consequently, any predictions made about our future success or viability may not be as accurate as they could be if we had a history of successfully developing and commercializing biopharmaceutical products.

We have incurred significant operating losses since our inception and expect to incur significant losses for the foreseeable future. We do not have any products approved for sale and have not generated any revenue since our inception. If MLS-101 is not successfully developed, approved and commercialized, we may never generate significant revenue, if we generate any revenue at all. Our net losses were \$19.4 million and \$20.7 million for the year ended December 31, 2021 and the nine months ended September 30, 2022, respectively. As of December 31, 2021 and September 30, 2022, we had an accumulated deficit of \$23.0 million and \$43.7 million, respectively. Substantially all of our losses have resulted from expenses incurred in connection with in-licensing intellectual property related to, and developing, MLS-101 and from general and administrative costs associated with our operations. MLS-101 and any future product candidates will require substantial additional development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase substantially as we continue our development of, seek regulatory approval for and potentially commercialize MLS-101, seek to identify, assess, acquire, in-license intellectual property related to or develop additional product candidates and become a public company.

To become and remain profitable, we must succeed in developing, obtaining regulatory approvals for, and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing clinical trials and preclinical studies of MLS-101 and any future product candidates, acquiring additional product candidates, obtaining regulatory approval for MLS-101 and any future product candidates, and manufacturing, marketing, and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability. In addition, we have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to

achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable may have an adverse effect on the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product candidates, achieve our strategic objectives or even continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will require substantial additional capital to finance our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our development programs, commercialization efforts or other operations.

The development of biopharmaceutical product candidates is capital-intensive. We expect our expenses to substantially increase in connection with our ongoing activities, particularly as we conduct our ongoing and planned clinical trials for MLS-101 and potentially seek regulatory approval for MLS-101 and any future product candidates we may develop and become a public company. In addition, if we are able to progress MLS-101 through development and commercialization, we will be required to make milestone and royalty payments to Mitsubishi Tanabe Pharma Corporation (Mitsubishi Tanabe) from whom we have in-licensed intellectual property related to MLS-101. If we obtain regulatory approval for MLS-101 or any future product candidates, we also expect to incur significant commercialization expenses related to product manufacturing, marketing, sales, and distribution. Because the outcome of any clinical trial or preclinical study is highly uncertain, we cannot reliably estimate the actual amount of financing necessary to successfully complete the development and commercialization of MLS-101 or any future product candidates. Furthermore, following the completion of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will enable us to fund our operations for at least the next months from the date of this prospectus. We have based these estimates on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our operating plans and other demands on our cash resources may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned. The net proceeds of this offering, together with our existing cash and restricted cash, may not be sufficient to complete development of MLS-101, or any future product candidate, and after this offering, we will require substantial capital in order to advance MLS-101 and any future product candidates through clinical trials, regulatory approval and commercialization. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from factors that include but are not limited to, inflation, the conflict between Russia and Ukraine and other factors, diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. If the equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts, or even cease operations. We expect to finance our cash needs through public or private equity or debt financings or other capital sources, including potential collaborations, licenses and other similar arrangements. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop MLS-101 and any future product candidates.

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

- the initiation, type, number, scope, progress, expansions, results, costs and timing of, clinical trials and preclinical studies of MLS-101 and any future product candidates we may choose to pursue, including

any modifications to clinical development plans based on feedback that we may receive from regulatory authorities;

- the costs and timing of manufacturing for MLS-101, or any future product candidate, including commercial manufacture at sufficient scale, if any product candidate is approved, including as a result of inflation, any supply chain issues or component shortages;
- requirements of regulatory authorities in any additional jurisdictions in which we may seek approval for MLS-101 and any future product candidates and our anticipated timing for seeking approval in such jurisdictions;
- the costs, timing and outcome of regulatory meetings and reviews of MLS-101 or any future product candidates;
- any delays and cost increases that may result from the COVID-19 or any future pandemic;
- the costs of obtaining, maintaining, enforcing and protecting our patents and other intellectual property and proprietary rights;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal control over financial reporting;
- the costs associated with hiring additional personnel and consultants as our business grows, including additional executive officers and clinical development, regulatory, CMC quality and commercial personnel;
- the timing and amount of the milestone, royalty or other payments we must make to Mitsubishi Tanabe, from whom we have in-licensed MLS-101, or any future licensors;
- the costs and timing of establishing or securing sales and marketing capabilities if MLS-101 or any future product candidate is approved;
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;
- our ability and strategic decision to develop future product candidates other than MLS-101, and the timing of such development, if any;
- patients' willingness to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements; and
- costs associated with any products or technologies that we may in-license or acquire.

Conducting clinical trials and preclinical studies and potentially identifying future product candidates is a time consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and commercialize MLS-101 or any future product candidates. If approved, MLS-101 and any future product candidates may not achieve commercial success. Our commercial revenue, if any, will initially be derived from sales of MLS-101, which we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

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

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. Such restrictions could adversely impact our ability to conduct our operations and execute our business plan.

If we raise additional funds through future collaborations, licenses and other similar arrangements, we may be required to relinquish valuable rights to our future revenue streams, product candidates, research programs, intellectual property or proprietary technology, or grant licenses on terms that may not be favorable to us and/or that may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed or on terms acceptable to us, we would be required to delay, limit, reduce, or terminate our product development or future commercialization efforts, or grant rights to develop and market product candidates that we might otherwise prefer to develop and market ourselves, or on less favorable terms than we would otherwise choose.

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

We currently depend entirely on the success of MLS-101, which is our only product candidate. If we are unable to advance MLS-101 in clinical development, obtain regulatory approval and ultimately commercialize MLS-101, or experience significant delays in doing so, our business will be materially harmed.

We currently only have one product candidate, MLS-101, the intellectual property for which we have in-licensed and which is in Phase 2 clinical development. Our business presently depends entirely on our ability to successfully develop, obtain regulatory approval for, and commercialize MLS-101 in a timely manner. This may make an investment in our company riskier than similar companies that have multiple product candidates in active development and may be able to better sustain the delay or failure of a lead product candidate. In addition, our assumptions about MLS-101's development potential are partially based on the data generated from preclinical studies and clinical trials conducted by our licensor and we may observe materially and adversely different results as we continue to conduct our clinical trials. The success of MLS-101 will depend on several factors, including the following:

- successful initiation and enrollment of clinical trials and completion of clinical trials with favorable results;
- acceptance of regulatory submissions by the FDA or comparable foreign regulatory authorities for the conduct of preclinical studies and clinical trials of MLS-101 and our proposed design of planned clinical studies and clinical trials of MLS-101;
- the frequency and severity of adverse events in preclinical and clinical trials;
- maintaining relationships with preclinical vendors to ensure successful completion of preclinical studies with favorable results, including toxicology and other studies designed to be compliant with good laboratory practices (GLP);
- maintaining and establishing relationships with contract research organizations (CROs) and clinical sites for the clinical development of MLS-101, and ability of such CROs and clinical sites to comply with clinical trial protocols, current Good Clinical Practices (cGCPs) and other applicable requirements;

- demonstrating the safety and efficacy of MLS-101 to the satisfaction of applicable regulatory authorities, including by establishing a safety database of a size satisfactory to regulatory authorities;
- receipt and maintenance of marketing approvals from applicable regulatory authorities for the initial and any additional indications;
- maintain relationships with our third-party manufacturers and their ability to comply with current Good Manufacturing Practices (cGMPs) as well as making arrangements with our third-party manufacturers for, or establishing our own, commercial manufacturing capabilities at a cost and scale sufficient to support commercialization;
- establishing sales, marketing and distribution capabilities and launching commercial sales of MLS-101, if and when approved, whether alone or in collaboration with others;
- obtaining, establishing, maintaining and enforcing patent and any potential trade secret protection or regulatory exclusivity for MLS-101;
- maintaining an acceptable safety profile of MLS-101 following regulatory approval, if any;
- maintaining and growing an organization of people who can develop and, if approved, commercialize, market and sell MLS-101; and
- acceptance of our products, if approved, by patients, the medical community and third-party payors.

If we are unable to develop, receive marketing approval for and successfully commercialize MLS-101, or if we experience delays as a result of any of the above factors or otherwise, our business would be significantly harmed.

Clinical and preclinical development involves a lengthy and expensive process with uncertain timelines and outcomes, and results of prior clinical trials and studies of MLS-101 are not necessarily predictive of future results. MLS-101 may not achieve favorable results in our nonclinical studies or clinical trials or receive regulatory approval on a timely basis, if at all.

Clinical and preclinical development is expensive and can take many years to complete, and its outcome is inherently uncertain. We cannot guarantee that any clinical trials or preclinical studies will be conducted as planned or completed on schedule, if at all, and failure can occur at any time during the trial or study process. Despite promising preclinical or clinical results, any product candidate can unexpectedly fail at any stage of clinical development. The historical failure rate for product candidates in our industry is high, particularly in the earlier stages of development.

The results from preclinical studies or clinical trials of a product candidate or a competitor's product candidate in the same class may not predict the results of later clinical trials of our product candidate, and interim, topline, or preliminary results of a clinical trial are not necessarily indicative of final results. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics despite having progressed through preclinical studies and initial clinical trials. For example, while we have completed the Target-HTN Phase 2 clinical trial of MLS-101, with 200 patients who had either completed eight weeks of treatment in, or withdrew from the trial, this population represents a small sample size relative to our targeted enrollment for our future planned clinical trials. As a result, we do not know how MLS-101 will perform in future clinical trials. It is not uncommon to observe results in clinical trials that are unexpected based on earlier clinical trials and preclinical studies, and many product candidates fail in clinical trials despite very promising early results. A number of companies in the biopharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies. Based upon negative or inconclusive results, we or any future collaborator may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials, which would cause us to incur additional operating expenses and delays and may not be sufficient to support regulatory approval on a timely basis or at all.

As a result, we cannot be certain that our ongoing and planned clinical trials and preclinical studies will be successful. Any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of MLS-101 in those and other indications, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Any difficulties or delays in the commencement or completion, or the termination or suspension, of our current or planned clinical trials or preclinical studies could result in increased costs to us, delay or limit our ability to generate revenue or adversely affect our commercial prospects.

Before obtaining marketing approval from regulatory authorities for the sale of MLS-101 or any future product candidates, we must conduct extensive clinical trials to demonstrate the safety and efficacy of the product candidates in humans. Before we can initiate clinical trials for any future product candidates, we must submit the results of preclinical studies to the FDA or comparable foreign regulatory authorities along with other information, including information about product candidate chemistry, manufacturing and controls and our proposed clinical trial protocol, as part of an investigational new drug application (IND) or similar regulatory submission. The FDA or comparable foreign regulatory authorities may require us to conduct additional preclinical studies for any product candidate before it allows us to initiate clinical trials under any IND or similar regulatory submission, which may lead to delays and increase the costs of our preclinical development programs. Moreover, even if we commence clinical trials, issues may arise that could cause regulatory authorities to suspend or terminate such clinical trials. Any such delays in the commencement or completion, or the termination or suspension, of our ongoing and planned clinical trials or preclinical studies for MLS-101 and any future product candidate could significantly affect our product development timelines and product development costs.

We do not know whether our planned clinical trials and preclinical studies will begin on time or be completed on schedule, if at all. The commencement, data readouts and completion of clinical trials and preclinical studies can be delayed for a number of reasons, including delays related to:

- inability to obtain animals or materials to initiate and generate sufficient preclinical, toxicology, or other in vivo or in vitro data to support the initiation or continuation of clinical trials;
- obtaining allowance from regulatory authorities to commence a trial or reaching a consensus with regulatory authorities on trial design;
- the FDA or comparable foreign regulatory authorities disagreeing as to the design or implementation of our clinical trials;
- any failure or delay in reaching an agreement with CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delays in identifying, recruiting and training suitable clinical investigators;
- obtaining approval from one or more institutional review boards (IRBs) or ethics committees (ECs) at clinical trial sites;
- IRBs/ECs refusing to approve, suspending or terminating the trial at an investigational site, precluding enrollment of additional subjects, or withdrawing their approval of the trial;
- major changes or amendments to the clinical trial protocol;
- clinical sites deviating from the trial protocol or dropping out of a trial;
- failure by our CROs to perform in accordance with cGCP requirements or applicable regulatory guidelines in other countries;
- obtaining raw materials for manufacturing sufficient quantities of MLS-101 or obtaining sufficient quantities of combination therapies or other materials needed for use in clinical trials and preclinical trials;

- obtaining adequate materials for packaging clinical trial material;
- expiration of the shelf life of clinical material for use in clinical trials prior to the enrollment of any of our clinical trials;
- subjects failing to enroll or remain in our trials at the rate we expect, or failing to return for post-treatment follow-up, including subjects failing to remain in our trials due to movement restrictions, health reasons or otherwise resulting from the COVID-19 pandemic or any future public health concerns;
- individuals choosing an alternative product for the indications for which we are developing MLS-101 or any future product candidates, or participating in competing clinical trials;
- lack of adequate funding to continue the clinical trials, preclinical trials, manufacturing or incurring greater costs than we anticipate;
- subjects experiencing severe or serious unexpected drug-related adverse effects;
- occurrence of serious adverse events in trials of the same class of agents conducted by other companies that could be considered similar to MLS-101 or any future product candidates;
- selection of clinical endpoints that require prolonged periods of clinical observation or extended analysis of the resulting data;
- transfer of manufacturing processes to larger-scale facilities operated by a contract manufacturing organization (CMO), delays or failure by our CMOs or us to make any necessary changes to such manufacturing process, or failure of our CMOs to produce clinical trial materials in accordance with cGMP regulations or other applicable requirements; and
- third parties being unwilling or unable to satisfy their contractual obligations to us in a timely manner.

In addition, disruptions caused by the COVID-19 pandemic may increase the likelihood that we encounter such difficulties or delays in initiating, enrolling, conducting or completing our planned and ongoing clinical trials.

Clinical trials must be conducted in accordance with the FDA and other applicable regulatory authorities' legal requirements, regulations or guidelines, and are subject to oversight by these governmental agencies and ECs or IRBs at the medical institutions where the clinical trials are conducted. We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a data safety monitoring board for such trial or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance GCP and other with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. For example, the IRB for the MLS-101 Phase 2 clinical trial terminated one of the clinical sites due to failure to comply with the study protocol and GCP. In addition, changes in regulatory requirements and policies may occur, and we may need to amend clinical trial protocols to comply with these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

Further, conducting clinical trials in foreign countries, as has been done for MLS-101 and intended to be done in the future for MLS-101 or any future product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled subjects in foreign countries to adhere to clinical protocols as a result of differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, and political and economic risks, including war, relevant to such foreign countries.

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

In addition, many of the factors that cause, or lead to, the termination or suspension of, or a delay in the commencement or completion of, clinical trials may also ultimately lead to the denial of regulatory approval of a product candidate. We may make formulation or manufacturing changes to MLS-101 or any future product candidates, in which case we may need to conduct additional preclinical studies or clinical trials to bridge our modified product candidates to earlier versions. Any resulting delays to our clinical trials could shorten any period during which we may have the exclusive right to commercialize our product candidates. In such cases, our competitors may be able to bring products to market before we do, and the commercial viability of MLS-101 or any future product candidates could be significantly reduced. Any of these occurrences may harm our business, financial condition and prospects.

We may find it difficult to enroll patients in our clinical trials. If we encounter difficulties or delays enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

Successful and timely completion of clinical trials will require that we identify and enroll a specified number of patients for each of our clinical trials. We may not be able to initiate or continue clinical trials for MLS-101 or any future product candidates if we are unable to identify and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. Subject enrollment, a significant factor in the timing of clinical trials, is affected by many factors, including the size and characteristics of the patient population, the proximity of patients to clinical sites, the eligibility and exclusion criteria for the trial, the design of the clinical trial, the ability to obtain and maintain informed consents, the risk that enrolled patients will not complete a clinical trial, our ability to recruit clinical trial investigators with the appropriate competencies and experience, and competing clinical trials and clinicians' and patients' perceptions as to the potential advantages and risks of the product candidate being studied in relation to other available therapies, including any new products that may be approved for the indications we are investigating as well as any product candidates under development. We will be required to identify and enroll a sufficient number of patients for each of our clinical trials and monitor such patients adequately during and after treatment. Potential patients for any planned clinical trials may not be adequately diagnosed or identified with the diseases which we are targeting, which could adversely impact the outcomes of our trials and could have safety concerns for the potential patients. Potential patients for any planned clinical trials may also not meet the entry criteria for such trials.

Additionally, other pharmaceutical companies targeting these same diseases are recruiting clinical trial patients from these patient populations, which may make it more difficult to fully enroll our clinical trials. We may not be able to initiate or continue clinical trials if we are unable to locate a sufficient number of eligible patients to participate in the clinical trials required by the FDA or comparable foreign regulatory authorities. In addition, the process of finding and recruiting patients may prove costly. The timing of our clinical trials depends, in part, on the speed at which we can recruit patients to participate in our trials, as well as completion of required follow-up periods. The eligibility criteria of our clinical trials, once established, may further limit the pool of available trial participants. If patients are unwilling or unable to participate in our trials for any reason, including the existence of concurrent clinical trials for similar target populations, the availability of approved or authorized therapies, the effects of the COVID-19 pandemic, or the fact that enrolling in our trials may prevent patients from taking a different product, or we otherwise have difficulty enrolling a sufficient number of patients, the timeline for recruiting patients, conducting trials and obtaining regulatory approval of our product candidates may be delayed. Our inability to enroll a specified number of patients for any of our future clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. In addition, we rely on, and will continue to rely on, CROs and clinical trial sites to ensure proper and timely conduct of our clinical trials and preclinical

studies. Though we have entered into agreements governing their services, we will have limited influence over their actual performance.

We cannot assure you that our assumptions used in determining expected clinical trial timelines are correct or that we will not experience delays or difficulties in enrollment, or be required by the FDA or other regulatory authority to increase our enrollment, which would result in the delay of completion of such trials beyond our expected timelines.

Use of MLS-101 or any future product candidates could be associated with adverse side effects, adverse events or other properties or safety risks, which could delay or preclude regulatory approval, cause us to suspend or discontinue clinical trials, abandon a product candidate, limit the commercial profile of an approved label or result in other significant negative consequences that could severely harm our business, prospects, operating results and financial condition.

As is the case with biopharmaceuticals generally, it is likely that there may be adverse side effects associated with MLS-101 or any future product candidates' use. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of expected or unexpected side effects or unexpected characteristics. Undesirable side effects caused by our product candidates when used alone or in combination with approved or investigational drugs could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label, or lead to the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences could severely harm our business, prospects, operating results and financial condition.

Moreover, if MLS-101 or any future product candidates are associated with undesirable side effects in clinical trials or demonstrate characteristics that are unexpected, we may elect to abandon their development or limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for the product candidate if approved. We may also be required to modify our development and clinical trial plans based on findings in our ongoing clinical trials. Many compounds that initially showed promise in early-stage testing have later been found to cause side effects that prevented further development of the compounds.

It is possible that as we test MLS-101 or any future product candidates in larger, longer and more extensive clinical trials, including with different dosing regimens, or as the use of these product candidates becomes more widespread following any regulatory approval, more illnesses, injuries, discomforts and other adverse events than were observed in earlier trials, as well as new conditions that did not occur or went undetected in previous trials, may be discovered. If such side effects become known later in development or upon approval, if any, such findings may harm our business, financial condition and prospects significantly.

In addition, if MLS-101 or any future product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such product, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw, suspend or limit approvals of such product, or seek an injunction against its manufacture or distribution;
- we may be required to recall a product or change the way such product is administered to patients;
- regulatory authorities may require additional warnings on the label, such as a "black box" warning or a contraindication;
- we may be required to change the way a product is distributed or administered, conduct additional clinical trials or change the labeling of a product or be required to conduct additional post-marketing studies or surveillance;

- we could be sued and held liable for harm caused to patients;
- sales of the product may decrease significantly or the product could become less competitive; and
- our reputation may suffer.

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

We may not be successful in our efforts to investigate MLS-101 in additional indications. We may expend our limited resources to pursue, acquire or license a new product candidate or a particular indication for MLS-101 and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on specific indications for MLS-101. We may fail to generate additional clinical development opportunities for MLS-101 for a number of reasons, including that MLS-101 may in indications we are seeking or may seek in the future, on further study, be shown to have harmful side effects, limited to no efficacy, or other characteristics that suggest it is unlikely to receive marketing approval and achieve market acceptance in such additional potential indications. Our resource allocation and other decisions may cause us to fail to identify and capitalize on viable potential product candidates or additional indications for MLS-101. Our spending on current and future research and development programs for new product candidates or additional indications for existing product candidates may not yield any commercially viable product candidates or indications. If we do not accurately evaluate the commercial potential or target market for a particular indication or product candidate, we may fail to develop such product candidate or indication, or relinquish valuable rights to that product candidate through collaborations, license agreements and other similar arrangements in cases where it would have been more advantageous for us to retain sole development and commercialization rights to such indication or product candidate, or negotiate less advantageous terms for any such arrangements than is optimal.

Additionally, we may pursue additional in-licenses or acquisitions of development-stage assets or programs, which entails additional risk to us. Identifying, selecting and acquiring promising product candidates requires substantial technical, financial and human resources expertise. Efforts to do so may not result in the actual acquisition or license of a particular product candidate, potentially resulting in a diversion of our management's time and the expenditure of our resources with no resulting benefit. For example, if we are unable to identify programs that ultimately result in approved products, we may spend material amounts of our capital and other resources evaluating, acquiring and developing products that ultimately do not provide a return on our investment.

We intend to conduct some of our clinical trials for MLS-101 outside of the United States. However, the FDA and other foreign equivalents may not accept data from such trials, in which case our development plans will be delayed, which could materially harm our business.

We intend to conduct one or more of our clinical trials for our MLS-101 product candidate outside the United States. The acceptance of study data from clinical trials conducted outside the U.S. or another jurisdiction by the FDA or comparable foreign regulatory authority may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the sole 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; (ii) the trials were performed by clinical investigators of recognized competence and pursuant to GCP regulations; and (iii) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. In addition, even where the foreign study data are not intended to serve as the sole basis for approval, the FDA will not accept the data as support for an application for marketing approval unless the study is well-designed and well-conducted in accordance with GCP requirements and the FDA is able to validate the data from the study through an onsite inspection if deemed necessary. We currently plan to conduct part of the future clinical program for MLS-101 in the European Union. While data from clinical trial sites in such countries will not serve as the sole basis for FDA approval, any foreign data we use as part of any NDA submission will be subject to the foregoing FDA requirements

and standards. Many foreign regulatory authorities have similar approval requirements. There can be no assurance that the FDA or any comparable foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the FDA or any comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which could be costly and time-consuming, and which may result in current or future product candidates that we may develop not receiving approval for commercialization in the applicable jurisdiction. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted, which may increase costs or time required to complete the clinical trial.

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

- additional foreign regulatory requirements;
- foreign exchange fluctuations;
- compliance with foreign manufacturing, customs, shipment and storage requirements;
- inconsistent standards for reporting and evaluating clinical data and adverse events;
- COVID-19 or any other pandemic or any future public health concerns;
- diminished protection of intellectual property in some countries; and
- political instability, civil unrest, war or similar events that may jeopardize our ability to commence, conduct or complete a clinical trial and evaluate resulting data.

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

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

Interim data from clinical trials that we may complete are further subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between interim, topline, or preliminary 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 common stock.

In addition, others, including regulatory authorities, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. Moreover, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular drug, product candidate or our business. If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory

authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, MLS-101 and any future product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

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

As product candidates progress through clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize safety, efficacy, yield and manufacturing batch size, minimize costs and achieve consistent quality and results. For example, the manufacturing process being used to produce clinical material for our planned clinical trials is different than that used in prior trials of MLS-101. There can be no assurance that such changes will achieve these intended objectives. These changes and any future changes we may make to MLS-101 or any future product candidates may also cause such candidates to perform differently and affect the results of future clinical trials conducted with the altered materials. Such changes or related unfavorable clinical trial results could delay initiation or completion of additional clinical trials, require the conduct of bridging studies or clinical trials or the repetition of one or more studies or clinical trials, increase development costs, delay or prevent potential marketing approval and jeopardize our ability to commercialize MLS-101 or any future product candidates, if approved, and generate revenue.

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

The ability of the FDA and other government agencies to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory and policy changes, a government agency's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the government agency's ability to perform routine functions. Average review times at the FDA and other government agencies have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs or modifications to approved drugs to be reviewed and/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.

Separately, in response to the COVID-19 pandemic, in March 2020, the FDA postponed most inspections of foreign and domestic manufacturing facilities. Subsequently, in July 2020, the FDA resumed certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA utilized this risk-based assessment system to assist in determining when and where it was safest to conduct prioritized domestic inspections. Additionally, on April 15, 2021, the FDA issued a guidance document in which the FDA described its plans to conduct voluntary remote interactive evaluations of certain drug manufacturing facilities and clinical research sites, among other facilities. According to the guidance, the FDA may request such remote interactive evaluations where the FDA determines that remote evaluation would be appropriate based on mission needs and travel limitations. In July 2021, the FDA resumed standard inspectional operations of domestic facilities. More recently, the FDA has continued to monitor and implement changes to its inspectional activities to ensure the safety of its employees and those of the firms it regulates as it adapts to the evolving COVID-19 pandemic. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Risks Related to Our Reliance on Third Parties

We heavily rely on our exclusive license with Mitsubishi Tanabe to provide us with intellectual property rights to develop and commercialize MLS-101. If this license is terminated, we would lose our rights to develop and commercialize MLS-101.

Pursuant to our license with Mitsubishi Tanabe (the Mitsubishi License), we have, among other things, secured an exclusive, royalty-bearing license from Mitsubishi Tanabe under certain patents and know-how relating to MLS-101 to commercialize MLS-101 globally for the prevention, treatment, diagnosis, detection, monitoring or predisposition testing with respect to indications, diseases and conditions in humans (the Field). The Mitsubishi License expires on a country-by-country basis and product-by-product basis upon the expiration of the applicable royalty term with respect to each product in each country, as applicable, or in its entirety upon the expiration of the royalty term with respect to the last product commercialized in the last country, unless terminated earlier. We may terminate the Mitsubishi License in its entirety or on a Product-by-Product or country-by-country basis at our discretion upon (i) ninety days prior written notice to Mitsubishi Tanabe with respect to any country for which there is not a Product approved by the Regulatory Authority, and (ii) one hundred and eighty days prior written notice to Mitsubishi Tanabe with respect to any country for which there is a Product approved by the Regulatory Authority. We and Mitsubishi Tanabe may terminate the Mitsubishi License in the case of the other party's insolvency, or upon prior written notice within a specified time period for the other party's material uncured breach. Mitsubishi Tanabe may terminate the Mitsubishi License in its entirety if (i) we challenge the licensed patents, or assist any third party in challenging such patents; or (ii) have not initiated regulatory consultation for the first global clinical trials of MLS-101 in at least one major market country within a specified amount of time. In addition, if any of the regulatory milestones or other cash payments become due under the terms of the Mitsubishi License, and we do not have sufficient funds available to meet our obligations, Mitsubishi Tanabe has the right to terminate the Mitsubishi License upon our uncured failure to pay Mitsubishi Tanabe. If the Mitsubishi License is terminated, we would lose our rights to develop and commercialize MLS-101, which in turn would have a material adverse effect on our business, financial condition, results of operations and prospects, including, but not limited to, cessation of our operations to the extent we are unable to develop other product candidates at the time of such termination.

Additionally, pursuant to the license agreement with Mitsubishi Tanabe, if we elect to sublicense our rights under the Mitsubishi License to a third party with respect to exploitation of MLS-101 or any MLS-101 Product in certain countries in Asia, we agreed to negotiate such a sublicense first, for a specified period of time, with Mitsubishi Tanabe, if Mitsubishi Tanabe notifies us that it would like to obtain such a sublicense. We also agreed not to commercialize any competing product prior to three years following the first commercial sale of the first MLS-101 Product in any country without Mitsubishi Tanabe's prior consent. Lastly, if Mitsubishi Tanabe is interested in obtaining rights to any product or compound other than an MLS-101 Product, in the Field, which we may develop in the future, we are obligated to negotiate with Mitsubishi Tanabe in good faith for a certain period of time to provide it a non-exclusive, royalty-bearing license under certain of our know-how and patents to exploit such product or compound on terms and conditions to be mutually agreed to by the parties in their discretion. Accordingly, we may be obligated to enter into collaborations with Mitsubishi Tanabe in the future, even if we prefer another counterparty for strategic or other reasons, we are obligated to license certain of our future product candidates (if any) even if we would prefer to retain the use of such intellectual property, and we may not commercialize competing products for a certain period of time, even if we believe this presents a commercial opportunity. For additional information on the Mitsubishi License, see "Business—License Agreement with Mitsubishi Tanabe."

We rely on, and intend to continue to rely on third parties to conduct, supervise and monitor our clinical trials and preclinical studies. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements or meet expected deadlines, our development programs and our ability to seek or obtain regulatory approval for or commercialize MLS-101 and any future product candidates may be delayed or subject to increased costs, each of which may have an adverse effect on our business and prospects.

We are dependent on third parties to conduct our clinical trials and preclinical studies. Specifically, we rely on, and intend to continue to rely on, medical institutions, clinical investigators, CROs and consultants to conduct preclinical studies and clinical trials, in each case in accordance with our clinical protocols and regulatory

requirements. These CROs, investigators and other third parties play a significant role in the conduct and timing of these trials and subsequent collection and analysis of data. Though we expect to carefully manage our relationships with our CROs, investigators and other third parties, 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 a material adverse impact on our business, financial condition and prospects. Further, while we have and will have agreements governing the activities of our third-party contractors, we have limited influence over their actual performance. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards and requirements, and our reliance on our CROs and other third parties does not relieve us of our regulatory responsibilities. In addition, we and our CROs are required to comply with GLP and GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for MLS-101 and any future product candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs or trial sites fail to comply with applicable GLP or GCP or other requirements, the clinical data generated in our clinical trials may be deemed unreliable, and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. For example, the conduct of the MLS-101 Phase 2 clinical trial at one of our clinical sites was terminated by the IRB following our report to the IRB regarding such site's failure to comply with GCP, which we observed during one of our routine clinical site inspections. Furthermore, our clinical trials must be conducted with products produced under cGMP regulations. Failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

There is no guarantee that any of our CROs, investigators or other third parties will devote adequate time and resources to such trials or studies or perform as contractually required. If any of these third parties fail to meet expected deadlines, adhere to our clinical protocols or meet regulatory requirements, or otherwise perform in a substandard manner, our clinical trials may be extended, delayed or terminated. In addition, many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other development activities that could harm our competitive position. In addition, principal investigators for our clinical trials are expected to serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the study, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA of any New Drug Application (NDA) we submit. Any such delay or rejection could prevent us from receiving regulatory approval for, or commercializing MLS-101 and any future product candidates.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach and under other specified circumstances. If any of our relationships with these third parties terminate, we may not be able to enter into arrangements with alternative third parties on commercially reasonable terms, in a timely manner or at all. Switching or adding additional CROs, investigators and other third parties involves additional cost and requires our management's time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we work to carefully manage our relationships with our CROs, investigators and other third parties, 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 a material adverse impact on our business, financial condition and prospects.

We currently rely on a third party for the manufacture of MLS-101 for clinical development and expect to continue to rely on third parties for the foreseeable future. This reliance on third parties increases the risk that we will not have sufficient quantities of MLS-101 or such quantities at an acceptable cost, which could delay, prevent or impair our development or potential commercialization efforts.

We do not own or operate manufacturing facilities and have no plans to develop our own clinical or commercial-scale manufacturing capabilities. We rely on a third party, and expect to continue to rely, on third parties for the manufacture of MLS-101 and related raw materials for clinical development, as well as for

commercial manufacture if MLS-101 or any future product candidates receive marketing approval. The facilities used by third-party manufacturers to manufacture MLS-101 must be approved by the FDA and any comparable foreign regulatory authority pursuant to inspections that will be conducted after we submit an NDA to the FDA or any comparable submission to a foreign regulatory authority. We do not control the manufacturing process of, and are completely dependent on, third-party manufacturers for compliance with cGMP requirements for manufacture of products. If these third-party manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or any comparable foreign regulatory authority, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of third-party manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or any comparable foreign regulatory authority does not approve these facilities for the manufacture of MLS-101 or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market MLS-101, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, seizures or recalls of MLS-101 or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products.

Our or a third party's failure to execute on our manufacturing requirements on commercially reasonable terms, in a timely manner and in compliance with cGMP or other regulatory requirements could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of MLS-101 or any future product candidates;
- delay in submitting regulatory applications, or receiving marketing approvals, for MLS-101 or any future product candidates;
- subjecting third-party manufacturing facilities or our potential future manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease development or to recall batches of MLS-101 or any future product candidates; and
- in the event of approval to market and commercialize MLS-101 or any future product candidates, an inability to meet commercial demands for MLS-101 or any future product candidates.

In addition, we do not have any long-term commitments or supply agreements with any third-party manufacturers. We may be unable to establish any long-term supply agreements with third-party manufacturers or to do so on acceptable terms, which increases the risk of failing to timely obtain sufficient quantities of MLS-101 or such quantities at an acceptable cost. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- failure of third-party manufacturers to comply with regulatory requirements and maintain quality assurance;
- breach of the manufacturing agreement by the third party;
- failure to manufacture our product according to our specifications;
- failure to obtain adequate raw materials and other materials required for manufacturing;
- failure to manufacture our product according to our schedule or at all;
- failure to successfully scale up manufacturing capacity, if required;
- misappropriation of our proprietary information, including any potential trade secrets and know-how; and

- termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval, or jeopardize our ability to commence or continue commercialization of MLS-101 or any future product candidates, and any related remedial measures may be costly or time consuming to implement. We do not currently have arrangements in place for redundant supply or a second source for all required raw materials used in the manufacture of our product candidates. If our existing or future third-party manufacturers cannot perform as agreed, we may be required to replace such manufacturers and we may be unable to replace them on a timely basis or at all. Without additional suppliers of required raw materials, we may also be unable to meet the commercial needs of a commercial launch of any future product candidates.

In addition, our current and anticipated future dependence upon others for the manufacture of MLS-101 and any future product candidates may adversely affect our future profit margins and our ability to commercialize any products that receive marketing approval on a timely and competitive basis.

Our reliance on third parties requires us to share potential trade secrets, which increases the possibility that a competitor or other third party will discover them or that potential trade secrets will be misappropriated or disclosed.

Because we currently rely on a third party to manufacture MLS-101 and to perform quality testing, we must, at times, share our proprietary technology and confidential information, including potential trade secrets, with them. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements, and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including any potential trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors or other third parties, are intentionally or inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and despite our efforts to protect any potential trade secrets, a competitor's or other third party's discovery of our proprietary technology and confidential information or other unauthorized use or disclosure of such technology or information would impair our competitive position and may have a material adverse effect on our business, financial condition, results of operations and prospects.

We may seek to enter into collaborations, license agreements and other similar arrangements and may not be successful in doing so, and even if we are, we may relinquish valuable rights and may not realize the benefits of such relationships, and our collaborations would be subject to other risks attendant to third party relationships, including inability to prevent or control actions taken or not taken by such third parties which may adversely impact us.

We may seek to enter into collaborations, joint ventures, license agreements and other similar arrangements for the development or commercialization of MLS-101 and any future product candidates, due to capital costs required to develop or commercialize the product candidate or manufacturing constraints. We may not be successful in our efforts to establish or maintain such collaborations because our research and development pipeline may be insufficient, MLS-101 or any future product candidates may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy or significant commercial opportunity. In addition, we face significant competition in seeking appropriate strategic partners, and the negotiation process can be time-consuming and complex. Even if we are successful in our efforts to establish such collaborations, the terms that we agree upon may not be favorable to us. For example, we may need to relinquish valuable rights to our future revenue streams, research programs, intellectual property or product candidates, or grant licenses on terms that may not be favorable to us, as part of any such arrangement, and such arrangements may restrict us from entering into additional agreements with other potential collaborators. In addition, if we enter into such collaborations, we will have limited control over the amount and timing of resources that our collaborators will dedicate to the development or commercialization of our

product candidates. Our ability to generate revenue from these arrangements will depend on any future collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot be certain that, following a collaboration, license or strategic transaction, we will achieve an economic benefit that justifies such transaction.

Furthermore, we may not be able to maintain such collaborations if, for example, the development or approval of a product candidate is delayed, the safety of a product candidate is questioned or the sales of an approved product candidate are unsatisfactory.

Collaborations involving MLS-101 or any future product candidates would pose significant risks to us, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected or at all;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or drugs, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- a collaborator with marketing and distribution rights to any product candidate that achieves regulatory approval may not commit sufficient resources to the marketing and distribution of such products;
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws, resulting in civil or criminal proceedings;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays in or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly enforce, maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe, misappropriate or otherwise violate the intellectual property rights of third parties, which may expose us to litigation and potential liability;

- collaborators may not provide us with timely and accurate information regarding development, regulatory or commercialization status or results, which could adversely impact our ability to manage our own development efforts, accurately forecast financial results or provide timely information to our stockholders regarding our out-licensed product candidates;
- we may be required to invest resources and attention into such collaboration, which could distract from other business objectives;
- disputes may arise between the collaborators and us regarding ownership of or other rights in the intellectual property generated in the course of the collaborations;
- collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all;
- if a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated; and
- collaborations may be terminated, including for the convenience of the collaborator, prior to or upon the expiration of the agreed upon terms and, if terminated, we may find it more difficult to enter into future collaborations or be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

Any termination of collaborations we enter into in the future, or any delay in entering into collaborations related to MLS-101 or any future product candidates, could delay the development and commercialization of our product candidates and reduce their competitiveness if they reach the market, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to Commercialization of MLS-101 and any Future Product Candidates

Even if we receive regulatory approval for MLS-101 or any future product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, MLS-101 and any future product candidates, if approved, could be subject to labeling and other restrictions on marketing or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our product candidates, when and if any of them are approved.

Any regulatory approvals that we may receive for MLS-101 or any future product candidates will require the submission of reports to regulatory authorities, subject us to surveillance to monitor the safety and efficacy of the product, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA may require a risk evaluation and mitigation strategy as a condition of approval of MLS-101 or any future product candidates, which could include requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves MLS-101 or any future product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our products will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and cGCPs requirements for any clinical trials that we conduct post-approval. Manufacturers of approved products and their facilities are subject to continual review and periodic, unannounced inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. Failure to comply with regulatory requirements or later discovery of previously unknown problems with our products, including adverse events of unanticipated

severity or frequency, or with our third-party manufacturers or manufacturing processes, may result in, among other things:

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary or mandatory product recalls;
- restrictions on product distribution or use, or requirements to conduct post-marketing studies or clinical trials;
- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- fines, restitutions, disgorgement of profits or revenue, warning letters, untitled letters, adverse publicity requirements or holds on clinical trials;
- refusal by the FDA or other regulatory authorities to approve pending applications or supplements to approved applications submitted by us or suspension or revocation of approvals;
- product seizure or detention, or refusal to permit the import or export of our products; and
- Injunctions and the imposition of civil or criminal penalties.

The occurrence of any event or penalty described above may inhibit our ability to commercialize MLS-101 or any future product candidates and generate revenue and could require us to expend significant time and resources in response and could generate negative publicity.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be promulgated that could prevent, limit or delay marketing authorization of any product candidates we develop. We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may be subject to enforcement action and we may not achieve or sustain profitability.

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

The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription products, such as MLS-101 or any future product candidates, if approved. In particular, a product may not be promoted for uses that are not approved by the FDA or such other regulatory agencies as reflected in the product's approved labeling. If we receive marketing approval for MLS-101 or any future product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The U.S. federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined several companies from engaging in off-label promotion. The government has also required companies to enter into consent decrees or imposed permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot successfully manage the promotion of MLS-101 or any future product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

The commercial success of MLS-101 or any future product candidates will depend upon the degree of market acceptance of such product candidates by healthcare providers, product recipients, healthcare payors and others in the medical community. If MLS-101 or any future product candidates fail to achieve the broad degree of adoption by the medical community necessary for commercial success, our operating results and financial condition will be adversely affected, which may delay, prevent or limit our ability to generate revenue and continue our business.

MLS-101 and any future product candidates may not be commercially successful. Even if MLS-101 or any future product candidates receive regulatory approval, they may not gain market acceptance among healthcare providers, individuals within our target population, healthcare payors or the medical community. The commercial success of MLS-101 or any future product candidates will depend significantly on the broad adoption and use of the resulting product by these individuals and organizations for approved indications. The degree of market acceptance of our products will depend on a number of factors, including:

- demonstration of clinical efficacy and safety, including as compared to any more-established products;
- the indications for which our product candidates are approved;
- the limitation of our targeted patient population and other limitations or warnings contained in any FDA-approved labeling;
- acceptance of a new drug for the relevant indication by healthcare providers and their patients;
- the pricing and cost-effectiveness of our products, as well as the cost of treatment with our products in relation to alternative treatments and therapies;
- our ability to obtain and maintain sufficient third-party coverage and adequate reimbursement from government healthcare programs, including Medicare and Medicaid, private health insurers and other third-party payors;
- the willingness of patients to pay all, or a portion of, out-of-pocket costs associated with our products in the absence of sufficient third-party coverage and adequate reimbursement;
- any restrictions on the use of our products, and the prevalence and severity of any adverse effects;
- potential product liability claims;
- the timing of market introduction of our products as well as availability, safety and efficacy of competitive drugs;
- the effectiveness of our or any potential future collaborators' sales and marketing strategies; and
- unfavorable publicity relating to the product.

If MLS-101 or any future product candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors or patients, we may not generate sufficient revenue from that product and may not become or remain profitable. Our efforts to educate the medical community and third-party payors regarding the benefits of our products may require significant resources and may never be successful.

The successful commercialization of MLS-101 or any future product candidates, if approved, will depend in part on the extent to which governmental authorities and health insurers establish coverage, adequate reimbursement levels and favorable pricing policies. Failure to obtain or maintain coverage and adequate reimbursement for our products could limit our ability to market those products and decrease our ability to generate revenue.

The availability of coverage and the adequacy of reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford prescription medications such as MLS-101 and any future product candidates, if approved. Our ability to achieve coverage and acceptable levels of reimbursement for our products by third-party payors will have an

effect on our ability to successfully commercialize those products. Accordingly, we will need to successfully implement a coverage and reimbursement strategy for any approved product candidate. Even if we obtain coverage for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high.

If we participate in the Medicaid Drug Rebate Program or other governmental pricing programs, in certain circumstances, our products would be subject to ceiling prices set by such programs, which could reduce the revenue we may generate from any such products. Participation in such programs would also expose us to the risk of significant civil monetary penalties, sanctions and fines should we be found to be in violation of any applicable obligations thereunder.

For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. 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. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available, or at an acceptable level, for any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

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

There is significant uncertainty related to third-party payor 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 will be covered. 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 MLS-101 and any future product candidates.

Obtaining and maintaining reimbursement status is time-consuming, costly and uncertain. The Medicare and Medicaid programs increasingly are used as models for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs. However, no uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time consuming and costly process that will require us to provide scientific and clinical support for the use of our products 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 and, in some cases, at short notice, and we believe that changes in these rules and regulations are likely.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and other countries has and will continue to put pressure on the pricing and usage of our products candidates, if approved in these jurisdictions. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products but monitor and control company profits. Additional foreign price controls or other changes in

pricing regulation could restrict the amount that we are able to charge for our products. Accordingly, in markets outside the United States, if any, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

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

We face significant competition, and if our competitors develop and commercialize technologies or product candidates more rapidly than we do, or their technologies or product candidates are more effective, safer, or less expensive than MLS-101 and any future product candidates we develop, our business and our ability to develop and successfully commercialize products will be adversely affected.

The biopharmaceutical industry is characterized by rapid advancing technologies, intense competition and a strong emphasis on proprietary and novel products and product candidates. Our competitors have developed, are developing or may develop products, product candidates and processes competitive with MLS-101. MLS-101 and any future product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. Our competitors include larger and better-funded pharmaceutical, biopharmaceutical, biotechnological and therapeutics companies. Moreover, we may also compete with universities and other research institutions that may be active in research in our target indications and could be in direct competition with us. We also compete with these organizations to recruit management, scientists and clinical development personnel, and our inability to compete successfully could negatively affect our level of expertise and our ability to execute our business plan. We will also face competition in establishing clinical trial sites, enrolling subjects for clinical trials and identifying and in-licensing intellectual property related to new product candidates, as well as entering into collaborations, joint ventures, license agreements and other similar arrangements. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

We believe that our current and future competition for resources and eventually for customers can be grouped into three broad categories:

- companies working to develop aldosterone synthase inhibitors, including Boehringer Ingelheim, CinCor, Damian Pharma and PhaseBio;
- companies with product candidates with other mechanisms of action, including Idorsia, Quantum Genomics, IONIS, Alnylam, Sihuan Pharmaceutical Holdings Group and KBP BioSciences; and
- companies commercializing standard-of-care antihypertensive agents, such as ACE inhibitors, ARBs, thiazide diuretics and calcium channel blockers, many of which are available as generic medicines at very low prices including AstraZeneca, Johnson & Johnson, Merck, Novartis and Pfizer.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for MLS-101 or any future product candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, more convenient, less expensive or marketed and sold more effectively than any products we may develop. Competing products may render MLS-101 or any future product candidates we develop obsolete or noncompetitive before we recover the expense of developing and commercializing our product candidates. If we are

unable to compete effectively, our opportunity to generate revenue from the sale of our products we may develop, if approved, could be adversely affected.

We currently have no marketing and sales organization and have no experience as a company in commercializing products, and we may need to invest significant resources to develop these capabilities. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our products, we may not be able to generate product revenue.

We have no internal sales, marketing or distribution capabilities, nor have we commercialized a product. If MLS-101 or any future product candidates ultimately receives regulatory approval, we must build a marketing and sales organization with technical expertise and supporting distribution capabilities to commercialize each such product in major markets, which will be expensive and time consuming, or collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. We have no prior experience as a company with the marketing, sale or distribution of biopharmaceutical products and there are significant risks involved in the building and managing of a sales organization, including our ability to hire, retain and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We may not be able to enter into collaborations or hire consultants or external service providers to assist us in sales, marketing and distribution functions on acceptable financial terms, or at all. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we are not successful in commercializing our products, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

If the market opportunities for MLS-101 and any future product candidates are smaller than we believe they are, our revenue may be adversely affected, and our business may suffer.

The precise incidence and prevalence for all the conditions we aim to address with MLS-101 or any future product candidates are unknown. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on a number of internal and third-party estimates. These estimates have been derived from a variety of sources, including the scientific literature, surveys of clinics, patient foundations or market research, and may prove to be incorrect. Further, new trials may change the estimated incidence or prevalence of these indications. While we believe our assumptions and the data underlying our estimates are reasonable, we have not independently verified the accuracy of the third-party data on which we have based our assumptions and estimates, and these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, including as a result of factors outside our control, thereby reducing the predictive accuracy of these underlying factors. The total addressable market across all of the potential indications for MLS-101 and any future product candidates will ultimately depend upon, among other things, the diagnosis criteria included in the final label for each such product candidate which receives marketing approval for these indications, the availability of alternative treatments and the safety, convenience, cost and efficacy of such product candidates relative to such alternative treatments, acceptance by the medical community and patient access, drug pricing and reimbursement. The number of patients in the United States and other major markets and elsewhere may turn out to be lower than expected, patients may not be otherwise amenable to treatment with our product candidates or new patients may become increasingly difficult to identify or gain access to, all of which would adversely affect our business, financial condition and results of operations.

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

Our future growth may depend, in part, on our ability to develop and commercialize MLS-101 and any future product candidates in foreign markets. We are not permitted to market or promote any product candidate before we receive regulatory approval from applicable regulatory authorities in foreign markets, and we may never receive such regulatory approvals for MLS-101 or any future product candidates. To obtain separate regulatory approval in many other countries we must comply with numerous and varying regulatory requirements regarding safety and efficacy and governing, among other things, clinical trials, commercial sales, pricing and distribution of MLS-101 and any future product candidates. Approval procedures may be more onerous than those in the United States and may require that we conduct additional preclinical studies or clinical trials. If we obtain regulatory approval of product candidates and ultimately commercialize our products in foreign markets, we would be subject to additional risks and uncertainties, including:

- different regulatory requirements for approval of drugs in foreign countries;
- reduced protection for intellectual property rights;
- the existence of additional third-party patent rights of potential relevance to our business;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with export control and import laws and regulations;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- foreign reimbursement, pricing and insurance regimes;
- workforce uncertainty in countries where labor unrest is common;
- differing regulatory requirements with respect to manufacturing of products;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires; and
- disruptions resulting from the impact of public health pandemics or epidemics (including, for example, the ongoing COVID-19 pandemic).

Risks Related to Our Business Operations and Industry

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- the timing and cost of, and level of investment in, research, development, regulatory approval and commercialization activities relating to MLS-101 or any future product candidates, which may change from time to time;
- the timing and success or failure of preclinical studies or clinical trials for MLS-101 or any future product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- coverage and reimbursement policies with respect to MLS-101 or any future product candidates, if approved, and potential future drugs that compete with our products;
- expenditures that we may incur to acquire, develop or commercialize additional product candidates and technologies;
- the level of demand for any approved products, which may vary significantly;
- future accounting pronouncements or changes in our accounting policies;
- the timing and amount of any milestone, royalty or other payments payable by us or due to us under any collaboration, licensing or other similar agreement; and
- changes in general market and economic conditions.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

We are dependent on the services of our management and other clinical and scientific personnel, and if we are not able to retain these individuals or recruit additional management or clinical and scientific personnel, our business will suffer.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, as well as our senior scientists and other members of our management team. The loss of services of any of these individuals could delay or prevent the successful development of MLS-101 or any future product candidates, initiation or completion of our clinical trials and preclinical studies, regulatory approvals or the commercialization of MLS-101 or any of our product candidates. Although we have executed employment agreements or offer letters with each member of our senior management team, these agreements are terminable at will with or without notice and, therefore, we may not be able to retain their services as expected. We do not currently maintain “key person” life insurance on the lives of our executives or any of our employees. This lack of insurance means that we may not have adequate compensation for the loss of the services of these individuals.

In addition, job candidates and existing employees often consider the value of the stock awards they receive in connection with their employment. If the perceived benefits of our stock awards decline, either because we are a public company or for other reasons, it may harm our ability to recruit and retain highly skilled employees. Our employees may be more likely to leave us if the shares they own have significantly appreciated in value relative to the original purchase prices of the shares, or if the exercise prices of the options that they hold are significantly below the market price of our common stock, particularly after the expiration of the lock-up agreements described herein.

We will need to expand and effectively manage our managerial, operational, financial and other resources in order to successfully pursue our clinical development and commercialization efforts. We may not be successful in maintaining our unique company culture and continuing to attract or retain qualified management and scientific and clinical personnel in the future due to the intense competition for qualified personnel among biopharmaceutical, biotechnology and other businesses. Our industry has experienced a high rate of turnover of management personnel in recent years. If we are not able to attract, integrate, retain and motivate necessary personnel to accomplish our business objectives, we may experience constraints that will significantly impede the achievement of our development objectives, our ability to raise additional capital and our ability to implement our business strategy.

We will need to develop and expand our organization, and we may encounter difficulties in managing our growth and expanding our operations successfully, which could disrupt our operations.

As of September 30, 2022, we had 12 full-time employees, of whom eight were primarily engaged in research and development. As we continue development and pursue the potential commercialization of MLS-101 and any future product candidates, as well as transition to functioning as a public company, we will need to expand our financial, accounting, development, regulatory, manufacturing, information technology, marketing and sales capabilities or contract with third parties to provide these capabilities for us. As our operations expand, we expect that we will need to manage additional relationships with various strategic partners, suppliers and other third parties and we may not be successful in doing so. Our future financial performance and our ability to develop and commercialize MLS-101 and any future product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively.

We are subject to various U.S. federal, state and foreign healthcare laws and regulations, which could increase compliance costs, and our failure to comply with these laws and regulations could harm our results of operations and financial condition.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers expose us to broadly applicable foreign, federal and state 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 any products for which we obtain marketing approval. Such laws include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe or certain rebates), directly or indirectly, overtly or covertly, in cash or in kind, in return for, either the referral of an individual or the purchase, lease, or order, or arranging for or recommending the purchase, lease, or order of any good, facility, item or service, for which payment may be made, in whole or in part, under a federal healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation;
- the federal false claims laws, including the civil False Claims Act, and civil monetary penalties laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making or causing to be made a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government

may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;

- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare & Medicaid Services (CMS), information related to payments and other "transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain non-physician practitioners (physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiology assistants and certified nurse-midwives), and teaching hospitals and other healthcare providers, as well as ownership and investment interests held by such healthcare professionals and their immediate family members; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; some state laws require biotechnology companies to comply with the biotechnology industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; some state laws that require biotechnology companies to report information on the pricing of certain drug products; and some state and local laws that require the registration or pharmaceutical sales representatives.

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

Recently enacted legislation, future legislation and healthcare reform measures may increase the difficulty and cost for us to obtain marketing approval for and commercialize MLS-101 and any future product candidates and may affect the prices we may set.

In the United States and some foreign jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes to the healthcare system, including cost-containment measures that may reduce or limit coverage and reimbursement for newly approved drugs and affect our ability to profitably sell any product candidates for which we obtain marketing approval. In particular, there have been and continue to

be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare.

For example, in March 2010, the ACA was enacted in the United States. The ACA established an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; extended manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations; expanded eligibility criteria for Medicaid programs; expanded the entities eligible for discounts under the 340B drug pricing program; increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program; established a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research; and establishes a Center for Medicare & Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending.

Since its enactment, there have been executive, judicial and Congressional challenges to certain aspects of the ACA, and on June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden had issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the healthcare reform measures will impact our business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. On March 11, 2021, the American Rescue Plan Act of 2021 was signed into law, which eliminates the statutory cap on the Medicaid drug rebate, currently set at 100% of a drug's AMP, beginning January 1, 2024. Further, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient assistance programs, and reform government program reimbursement methodologies for products. Most recently, the Inflation Reduction Act of 2022, or IRA, included a number of significant drug pricing reforms, which include the establishment of a drug price negotiation program within the U.S. Department of Health and Human Services, or HHS (beginning in 2026) that requires manufacturers to charge a negotiated "maximum fair price" for certain selected drugs or pay an excise tax for noncompliance, the establishment of rebate payment requirements on manufacturers under Medicare Parts B and D to penalize price increases that outpace inflation (first due in 2023), and a redesign of the Part D benefit, as part of which manufacturers are required to provide discounts on Part D drugs (beginning in 2025). The IRA permits the HHS Secretary to implement many of these provisions through guidance, as opposed to regulation, for the initial years. Additional drug pricing proposals could appear in future legislation. Further, it is possible that additional governmental action is taken in response to the COVID-19 pandemic.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for MLS-101 and any future product candidates, if approved, or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

We expect that these new laws and other healthcare reform measures that may be adopted in the future may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new

payment methodologies and additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize MLS-101 and any future product candidates, if approved.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit, delay or cease commercialization of our products.

We face an inherent risk of product liability as a result of the clinical trials of MLS-101 and any future product candidates and will face an even greater risk if we commercialize our product candidates, especially if our products are prescribed for off-label uses (even if we do not promote such uses). For example, we may be sued if our product candidates allegedly cause injury or are found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product candidate, negligence, strict liability and a breach of warranties. Claims may be brought against us by clinical trial participants, patients or others using, administering or selling products that may be approved in the future. Claims could also be asserted under state consumer protection acts.

If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit, delay or cease the commercialization of our products. Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our products;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of our management's time and our resources;
- substantial monetary awards to trial participants or product recipients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant negative financial impact;
- the inability to commercialize MLS-101 or any future product candidates; and
- a decline in our stock price.

We currently hold approximately \$10.0 million in product liability insurance coverage in the aggregate. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of MLS-101 or any future product candidates. Insurance coverage is increasingly expensive. Our inability to obtain and retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of MLS-101 or any future product candidates. Although we will maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies will also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

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

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include property, general liability, employment benefits liability, business automobile, workers' compensation, products liability, malicious invasion of our electronic systems, and directors' and officers', and employment practices insurance. We do not know, however, if we will be able to maintain insurance with adequate levels of coverage. No assurance can be given that an insurance carrier will not seek to cancel or deny coverage after a claim has occurred. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our financial position and results of operations.

We and any of our potential future collaborators will be required to report to regulatory authorities if any of our approved products cause or contribute to adverse medical events, and any failure to do so would result in sanctions that would materially harm our business.

If we or any of our potential future collaborators are successful in commercializing our products, the FDA and foreign regulatory authorities would require that we and such collaborators report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We and any of our potential future collaborators or CROs may fail to report adverse events within the prescribed timeframe. If we or any of our potential future collaborators or CROs fail to comply with such reporting obligations, the FDA or a foreign regulatory authority could take action, including criminal prosecution, the imposition of civil monetary penalties, seizure of our products or delay in approval or clearance of future products.

We and our service providers may be subject to a variety of privacy and data security laws and contractual obligations, which could increase compliance costs, and our actual or perceived failure to comply with such laws and obligations could subject us to potentially significant liability, fines or penalties and otherwise harm our business.

We and our service providers maintain and will maintain a large quantity of sensitive information, including confidential business and patient health information, in connection with our preclinical studies and clinical trials, and are subject to laws and regulations governing the privacy and security of such information. The global data protection landscape is rapidly evolving, and we and our service providers may be affected by or subject to new, amended or existing laws and regulations in the future, including as our operations continue to expand or if we operate in foreign jurisdictions. These laws and regulations may be subject to differing interpretations, which adds to the complexity of processing personal data. Guidance on implementation and compliance practices is often updated or otherwise revised. This may create uncertainty in our business, affect our ability to operate in certain jurisdictions or to collect, store, transfer, use, share and otherwise process personal information, necessitate the acceptance of more onerous obligations in our contracts, result in liability or impose additional costs on us. The cost of compliance with these laws, regulations and standards is high and is likely to increase in the future. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulation, our internal policies and procedures or our contracts governing our processing of personal information could result in negative publicity, government investigations and enforcement actions, claims by third parties and damage to our reputation, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

As our operations and business grow, we may become subject to or affected by new or additional data protection laws and regulations and face increased scrutiny or attention from regulatory authorities. In the United States, numerous federal and state laws and regulations, including health information privacy laws, data breach notification laws and consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, storage, transfer, disclosure, protection and other processing of health-related and other personal information could apply to our operations or the operations of our collaborators and third-party providers. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA. Depending on the facts and circumstances, we could be subject to significant penalties if we violate HIPAA.

In addition, certain state laws govern the privacy and security of health-related and other personal information in certain circumstances, some of which may be more stringent, broader in scope or offer greater individual rights with respect to protected health information than HIPAA, many of which may differ from each other, thus, complicating compliance efforts. These laws are evolving rapidly and may differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. Failure to comply with these laws, where applicable, can result in the imposition of significant civil and/or criminal penalties and private litigation. By way of example, the California Consumer Privacy Act (CCPA), which went into effect on January 1, 2020, gives California residents individual privacy rights to access and delete their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that are expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability and many similar laws have been proposed at the federal level and in other states. Further, the California Privacy Rights Act (CPRA) was recently passed in California. The CPRA will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions of the CPRA will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. Other states are exploring their own laws, which may or may not be similar to the CCPA or the CPRA. In the event that we are subject to or affected by HIPAA, the CCPA, the CPRA or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial condition.

There also are a wide variety of privacy laws in other countries that may impact our operations, now or in the future. For example, in Europe, the General Data Protection Regulation (GDPR) imposes stringent requirements regarding the collection, use, disclosure, storage, transfer or other processing of personal data of individuals within the European Economic Area (EEA), including providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches and taking certain measures when engaging third-party processors. Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements and potential fines for noncompliance of up to €20 million or 4% of the annual global revenue of the noncompliant company, whichever is greater. The GDPR also confers a private right of action in some circumstances on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR. Among other things, the GDPR requires the establishment of a lawful basis for the processing of data, imposes requirements relating to the consent of the individuals to whom the personal data relates, including detailed notices for clinical trial subjects and investigators, as well as requirements regarding the security of personal data and notification of data processing obligations to the competent national data processing authorities. In addition, the GDPR increases the scrutiny of transfers of personal data from the EEA to the United States and other jurisdictions that the European Commission does not recognize as having “adequate” data protection laws. Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States. For example, on July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (Privacy Shield) under which personal data could be transferred from the EEA to United States entities that had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on the standard contractual clauses alone may not necessarily be sufficient in all circumstances. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular applicable surveillance laws and rights of individuals, and additional measures and/or contractual provisions may need to be put in place, however, the nature of these additional measures is currently uncertain. The European Commission issued revised standard contractual clauses on June 4, 2021 to account for the decision of the CJEU and recommendations made by the European Data Protection Board. The revised standard contractual clauses must be used for relevant new data transfers beginning on September 27, 2021 and existing

standard contractual clauses arrangements must be migrated to the revised clauses by December 27, 2022. The new standard contractual clauses apply only to the transfer of personal data outside of the EEA and not the United Kingdom; the United Kingdom's Information Commissioner's Office launched a public consultation on its draft revised data transfers mechanisms in August 2021 and the United Kingdom standard contractual clauses came into force in March 2022, with a two-year grace period. There is some uncertainty around whether the revised clauses can be used for all types of data transfers, particularly whether they can be relied on for data transfers to non-EEA entities subject to the GDPR. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Further, following the withdrawal of the United Kingdom from the European Union and the EEA and the end of the transition period, from January 1, 2021, we have to comply with the GDPR and separately the GDPR as implemented in the United Kingdom, which, together with the amended UK Data Protection Act 2018, retains the GDPR in UK national law. The UK GDPR mirrors the fines under the GDPR and has the ability to fine up to the greater of €20 million/£17 million or 4% of global turnover. The relationship between the United Kingdom and the European Union and the EEA in relation to certain aspects of data protection law remains unclear, and it is unclear how United Kingdom data protection laws and regulations will develop in the medium to longer term. The European Commission has adopted an adequacy decision in favor of the United Kingdom, enabling data transfers from EU member states to the United Kingdom without additional safeguards. However, the UK adequacy decision will automatically expire in June 2025 unless the European Commission re-assesses and renews or extends that decision, which could have implications for our transfer of personal data.

In many jurisdictions, enforcement actions and consequences for noncompliance are rising. In the United States, these include enforcement actions in response to rules and regulations promulgated under the authority of federal agencies and state attorneys general and legislatures and consumer protection agencies. In addition, privacy advocates and industry groups have regularly proposed, and may propose in the future, self-regulatory standards that may legally or contractually apply to us. If we fail to follow these security standards, even if no personal information is compromised, we may incur significant fines or experience a significant increase in costs. Many state legislatures have adopted legislation that regulates how businesses operate online, including measures relating to privacy, data security and data breaches. Laws in all U.S. states require businesses to provide notice to customers whose personally identifiable information has been disclosed as a result of a data breach. The laws are not consistent, and compliance in the event of a widespread data breach is costly.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, store, use, transfer, disclose and otherwise process data, update our data privacy and security policies and procedures, or in some cases, impact our ability to operate in certain jurisdictions. Failure by us or our collaborators and our service providers to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose such information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend, could result in adverse publicity and adversely affect our business, financial condition, results of operations and prospects. Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our internal information technology systems, or those of any of our service providers, may fail or suffer security breaches, loss or leakage of data and other disruptions, which could result in a material disruption of our product development programs, comprise sensitive information related to our business or prevent us from accessing critical information, potentially exposing us to liability or otherwise adversely affecting our business.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information.

Attacks upon information technology systems are increasing in their frequency, levels of persistence, sophistication and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives and expertise. These attacks can present meaningful risks to our operations, data and commercial information. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. Even if identified, we may be unable to adequately investigate or remediate incidents or breaches due to attackers increasingly using tools and techniques that are designed to circumvent controls, to avoid detection, and to remove or obfuscate forensic evidence. It is not possible to prevent all cybersecurity threats to our information technology systems and information and those of our third-party service providers, over which we exert less control, and any controls we implement to do so may prove to be ineffective.

If any security breach or other incident, whether actual or perceived, were to occur, it could impact our reputation and/or operations, cause us to incur significant costs, including legal expenses, harm customer confidence, hurt our expansion into new markets, cause us to incur remediation costs, or cause us to lose existing customers. For example, the loss of clinical trial data from clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. We also rely on a third party to manufacture MLS-101, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any actual or perceived disruption or security breach affects our systems (or those of our third-party collaborators, service providers, contractors or consultants) or were to result in a loss of or accidental, unlawful or unauthorized access to, use of, release of, or other processing of personally identifiable information, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, the further development and commercialization of MLS-101 or any future product candidates could be delayed, and we could be subject to significant fines, penalties or liabilities for any noncompliance to certain privacy and security laws.

Further, despite the implementation of security measures, our internal technology systems (including infrastructure) and those of our current and any future CROs and other contractors, consultants and collaborators are vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, computer viruses, cybersecurity threats (such as ransomware attacks, denial-of-service attacks, cyber-attacks or cyber-intrusions over the Internet, hacking, phishing and other social engineering attacks), unauthorized access or use, natural disasters, terrorism, war and telecommunication and electrical failures. Such information technology systems are additionally vulnerable to security incidents from inadvertent or intentional actions by our employees, contractors, consultants or other third parties. We and certain of our service providers are from time to time subject to cyberattacks and security incidents and we experienced security incidents in the past and may experience security incidents in the future. If a significant system failure, accident or security breach were to occur, it may cause interruptions in our operations or result in the unauthorized disclosure of or access to personally identifiable information or individually identifiable health information, and result in a material disruption of our development programs and our business operations, whether due to a loss of any potential trade secrets or other similar disruptions. Although we currently hold cybersecurity insurance, the costs related to significant security breaches or disruptions could be material and cause us to incur significant expenses.

We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or could have access to our confidential information. If our third-party vendors fail to protect their information technology systems and our confidential and proprietary information, we may be vulnerable to disruptions in service and unauthorized access to our confidential or proprietary information and we could incur liability and reputational damage. If the information technology systems of our third-party vendors and other contractors and consultants become subject to disruptions or security breaches, we may have insufficient recourse against such third parties and we may have to expend significant resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring. Some of the federal, state and foreign government requirements include obligations of companies to notify individuals of security breaches involving particular categories of personally identifiable information, which could result from breaches experienced by us or by our vendors, contractors, or organizations with which we have formed strategic relationships.

Our business, operations and clinical development timelines and plans are subject to risks arising from the COVID-19 pandemic and other epidemic diseases.

The COVID-19 worldwide pandemic has presented substantial public health and economic challenges and has affected our employees, patients, physicians and other healthcare providers, communities and business operations, as well as the U.S. and global economies and financial markets. International and U.S. governmental authorities in impacted regions have taken, and may in the future continue to take, actions in an effort to slow the spread of COVID-19 and variants of the virus, including issuing varying forms of “stay-at-home” orders and restricting business functions outside of one’s home. To date, we have not experienced material disruptions in our business operations. However, while it is not possible at this time to estimate the impact that COVID-19 could have on our business in the future, particularly as we advance MLS-101 through clinical development, the continued spread of COVID-19 and the measures taken by the governmental authorities, and any future epidemic or pandemic disease outbreaks, could disrupt the supply chain and the manufacture or shipment of drug substances and finished drug products for MLS-101 for use in our clinical trials and research and preclinical studies and, delay, limit or prevent our employees and CROs from continuing research and development activities, impede our clinical trial initiation and recruitment and the ability of patients to continue in clinical trials, including due to measures taken that may limit social interaction or prevent reopening of high-transmission settings, impede testing, monitoring, data collection and analysis and other related activities, any of which could delay our preclinical studies and clinical trials and increase our development costs, and have a material adverse effect on our business, financial condition and results of operations. The COVID-19 pandemic and any future epidemic or pandemic disease outbreak could also potentially further affect the business of the FDA, EMA or other regulatory authorities, which could result in delays in meetings related to our planned clinical trials. The COVID-19 pandemic and mitigation measures have had and may continue to have, and any future epidemic disease outbreak may have, an adverse impact on global economic conditions which could have an adverse effect on our business and financial condition, including impairing our ability to raise capital when needed. The extent to which the COVID-19 pandemic impacts our results will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of the virus, including the identification of new variants, the rate of vaccine administration, and the actions to contain its impact.

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

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

Legal proceedings, government investigations and enforcement actions can be expensive and time-consuming. An adverse outcome resulting from any such proceedings, investigations or enforcement actions could

result in significant damages awards, fines, penalties, exclusion from the federal healthcare programs, healthcare debarment, injunctive relief, product recalls, reputational damage and modifications of our business practices, which could have a material adverse effect on our business and results of operations. Even if such a proceeding, investigation or enforcement action is ultimately decided in our favor, the investigation and defense thereof could require substantial financial and management resources.

Our employees and independent contractors, including principal investigators, CROs, consultants and vendors, may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading, which could harm our business, financial condition and results of operations.

We are exposed to the risk that our employees and independent contractors, including principal investigators, CROs, consultants and vendors may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate: (i) the laws and regulations of the FDA and other similar regulatory requirements, including those laws that require the reporting of true, complete and accurate information to such authorities, (ii) manufacturing standards, including cGMP requirements, (iii) federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the United States and abroad (iv) laws that require the true, complete and accurate reporting of financial information or data, or (v) laws that prohibit insider trading. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, the creation of fraudulent data in our 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 be in compliance with such laws or regulations. In addition, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgements, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, imprisonment, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We may engage in strategic transactions that could increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, subject us to other risks, adversely affect our liquidity, increase our expenses and present significant distractions to our management.

Although we currently have no agreements or commitments to complete any such transactions and are not involved in negotiations to do so, from time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of intellectual property, products or technologies. Additional potential transactions that we may consider in the future include a variety of business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. Any future transactions could increase our near and long-term expenditures, result in potentially dilutive issuances of our equity securities, including our common stock, or the incurrence of debt, contingent liabilities, amortization expenses or acquired in-process research and development expenses, any of which could affect our financial condition, liquidity and results of operations. Future acquisitions may also require us to obtain additional financing, which may not be available on favorable terms or at all. These transactions may never be successful and may require significant time and attention of our management. In addition, the integration of any business that we may acquire in the future may disrupt our existing business and may be a complex, risky and costly endeavor for which we may never realize the full benefits. Furthermore, we may experience losses related to investments in other companies, including as a result of failure to realize expected benefits or the materialization of unexpected liabilities or risks, which could have a material negative effect on our results of operations and financial condition. Accordingly, although there can be no assurance that we will undertake

or successfully complete any additional transactions of the nature described above, any additional transactions that we do complete could have a material adverse effect on our business, results of operations, financial condition and prospects.

Our ability to use net operating loss carryforwards and other tax attributes may be limited in connection with this offering or other ownership changes.

We have incurred substantial losses during our history, do not expect to become profitable in the near future and may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any (subject to limitations), until such unused losses expire (if at all). As of December 31, 2021, we had net operating loss (NOL) carryforwards of approximately \$4.2 million for federal income tax purposes and \$0.2 million for state income tax purposes. Our federal NOL carryforwards will not expire but may generally only be used to offset 80% of taxable income, which may require us to pay federal income taxes in future years despite generating federal NOL carryforwards in prior years. Our state NOL carryforwards begin to expire in various amounts in 2041.

In addition, our NOL carryforwards and other tax attributes are subject to review and possible adjustment by the Internal Revenue Service (IRS) and state tax authorities. Furthermore, in general, under Section 382 of the U.S. Internal Revenue Code of 1986, as amended (the Code), our federal NOL carryforwards may be or become subject to an annual limitation in the event we have had or have in the future an “ownership change.” For these purposes, an “ownership change” generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company’s stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. We have not yet determined the amount of the cumulative change in our ownership resulting from this offering or other transactions, or any resulting limitations on our ability to utilize our NOL carryforwards and other tax attributes. However, we believe that our ability to utilize our NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including potential changes in connection with this offering. If we earn taxable income, such limitations could result in increased future income tax liability to us and our future cash flows could be adversely affected. We have recorded a full valuation allowance related to our NOL carryforwards and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

Inflation could adversely affect our business and results of operations.

While inflation in the United States has been relatively low in recent years, during 2021 and 2022, the economy in the United States encountered a material level of inflation. The impact of COVID-19, geopolitical developments such as the Russia-Ukraine conflict and global supply chain disruptions continue to increase uncertainty in the outlook of near-term and long-term economic activity, including whether inflation will continue and how long, and at what rate. Increases in inflation raise our costs for commodities, labor, materials and services and other costs required to grow and operate our business, and failure to secure these on reasonable terms may adversely impact our financial condition. Additionally, increases in inflation, along with the uncertainties surrounding COVID-19, geopolitical developments and global supply chain disruptions, have caused, and may in the future cause, global economic uncertainty and uncertainty about the interest rate environment, which may make it more difficult, costly or dilutive for us to secure additional financing. A failure to adequately respond to these risks could have a material adverse impact on our financial condition, results of operations or cash flows.

Risks Related to Our Intellectual Property

If we are unable to obtain, maintain and enforce patent or other intellectual property protection for MLS-101 or any future product candidates or technology, or if the scope of the patent or other intellectual property protection obtained is not sufficiently broad, our competitors or other third parties could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize MLS-101 or any future product candidates may be adversely affected.

We rely upon a combination of patents, trademarks, and in-licenses of intellectual property rights to protect the intellectual property related to MLS-101 and any future product candidates and technologies to prevent third

parties from copying and surpassing our achievements, thus eroding our competitive position in our market. These legal measures afford only limited protection, and competitors or others may gain access to or use our intellectual property and proprietary information. Our success depends in large part on our ability to obtain, maintain, expand, enforce, and defend the scope of our intellectual property protection in the United States and other countries with respect to our product candidates and other proprietary technologies we may develop. We generally seek to protect our proprietary position, in part, by filing patent applications in the United States and abroad relating to MLS-101 and any future product candidates, manufacturing processes, and methods of use. We have in-licensed from Mitsubishi Tanabe a number of patents and patent applications relating to MLS-101 and structurally related compounds, the manufacture of MLS-101 and structurally related compounds, and methods of use of MLS-101. In addition to the patents and patent applications in-licensed from Mitsubishi Tanabe, our portfolio includes pending patent applications solely owned by us and pending patent applications jointly owned with Mitsubishi Tanabe. If we or Mitsubishi Tanabe are unable to obtain, maintain or enforce patent protection, our business, financial condition, results of operations and prospects could be materially harmed.

Changes in either the patent laws or their interpretation in the United States and other jurisdictions may diminish our or our licensor's ability to protect our intellectual property, obtain, maintain and enforce our intellectual property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our protection. We cannot predict whether the patent applications we currently or may in the future pursue or in-license will issue as patents in any particular jurisdiction, will provide sufficient protection against competitors or other third parties, or if these patents are challenged by our competitors, will be found to be invalid, unenforceable, or not infringed.

The patent prosecution process is expensive, time-consuming, and complex, and we or our licensors may not be able to file, prosecute, maintain, enforce, or license all necessary or desirable patent applications or reissue applications at a reasonable cost or in a timely manner or in all jurisdictions. It is also possible that we will fail to identify patentable aspects of our research and development output in time to obtain patent protection before public disclosures are made. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, third-party collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our or our licensors' ability to seek patent protection. Consequently, we may not be able to prevent any third party from using any of our technology that is in the public domain to compete with MLS-101 and any future product candidates or technologies. In addition, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our inventions and the prior art allow our inventions to be patentable in light of the prior art. Furthermore, publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we or our licensors were the first to invent the inventions claimed in any of our licensed patents or pending patent applications, or that we or our licensors were the first to make the inventions claimed in those owned or licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions. If a third party can establish that we or our licensors were not the first to make or the first to file for patent protection of such inventions, our owned or licensed patents and patent applications may not issue as patents and even if issued, may be challenged and invalidated or rendered unenforceable.

Composition of matter patents for pharmaceutical product candidates often provide a strong form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain that the claims in our pending patent applications covering compositions of matter of our MLS-101 or any future product candidates will be considered patentable by the United States Patent and Trademark Office (USPTO), or by patent offices in foreign countries, or that the claims in any of our issued or reissued patents will be considered valid and enforceable by courts in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products "off-label." Although off-label prescriptions may infringe or contribute to

the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued. Any issued patents may not afford sufficient protection of our product candidates or their intended uses against competitors, nor can there be any assurance that the patents issued will not be infringed, designed around, invalidated by third parties, or effectively prevent others from commercializing competitive technologies, products or product candidates. Further, even if these patents are granted, they may be difficult to enforce. Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated if we fail to comply with these requirements. In the event we experience noncompliance events that cannot be corrected and we lose our patent rights, competitors could enter the market, which would have a material adverse effect on our business. Further, any issued patents that we may license or own covering our MLS-101 or any future product candidates could be narrowed or found invalid or unenforceable if challenged in court or before administrative bodies in the United States or other countries, including the USPTO. Also, patent terms, including any extensions or adjustments that may or may not be available to us, may be inadequate to protect our competitive position on our product candidates for an adequate amount of time, and we may be subject to claims challenging the inventorship, validity, enforceability of our patents and/or other intellectual property. Changes in United States patent law, or laws in other countries, could diminish the value of patents in general, thereby impairing our ability to protect our product candidates. Further, if we encounter delays in our clinical trials or delays in obtaining regulatory approval, the period of time during which we could market our product candidates under patent protection would be reduced. Thus, the patents that we own and license may not afford us any meaningful competitive advantage.

Moreover, the claim coverage in a patent application can be significantly reduced before the corresponding patent is granted. Even if our owned or in-licensed patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Any patents issuing from our patent applications may be challenged, narrowed, circumvented or invalidated by third parties. Our competitors or other third parties may avail themselves of safe harbors under the Drug Price Competition and Patent Term Restoration Act of 1984 (Hatch-Waxman Amendments) to conduct research and clinical trials. Consequently, we do not know whether MLS-101 or any of our future product candidates and other proprietary technology will be protectable or remain protected by valid and enforceable patents. Even if a patent is granted, our competitors or other third parties may be able to circumvent the patent by developing similar or alternative technologies or products in a non-infringing manner which could materially adversely affect our business, financial condition, results of operations and prospects. In addition, given the amount of time required for the development, testing and regulatory review of our future product candidates, patents protecting the product candidates might expire before or shortly after such product candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

The issuance of a patent is not conclusive as to its inventorship, scope, validity, or enforceability and our patent rights may be challenged in the courts or patent offices in the United States and abroad. We may be subject to a third-party post-issuance submission of prior art to the United States Patent and Trademark Office (USPTO) challenging the validity of one or more claims of our in-licensed patents or patents we may own in the future. Such submissions may also be made prior to a patent's issuance, precluding the granting of a patent based on one of our owned or licensed pending patent applications. A third party may also claim that our patent rights are invalid or unenforceable in a litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In addition, we may become involved in opposition, derivation, revocation, reexamination, reissue, post-grant and inter partes review or interference proceedings and other similar proceedings in foreign jurisdictions challenging the validity, priority or other features of patentability of our patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our patent rights, allow third parties to commercialize our product candidates and other proprietary technologies we may

develop and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize our products without infringing third-party patent rights. Such adverse determinations may also require us to cease using the related technology or to attempt to license rights from the prevailing party. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us. Any of the foregoing, could have a material adverse effect on our business, financial condition, results of operations and prospects.

Moreover, some of our patent rights are, and may in the future be, co-owned with third parties, including Mitsubishi Tanabe. In the United States, each co-owner has the freedom to license and exploit the technology. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patent rights, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of such patent rights in order to enforce such patent rights against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

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

Filing, prosecuting, maintaining, enforcing and defending patents on MLS-101 and any future product candidates in all countries throughout the world is expensive, and the laws of foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States. Prosecution of patent applications is often a longer process and patents may grant at a later date, and with a shorter term, than in the United States. The requirements for patentability differ in certain jurisdictions and countries. Additionally, the patent laws of some countries do not afford intellectual property protection to the same extent as the laws of the United States. For example, unlike patent law in the United States, patent law in most European countries and many other jurisdictions precludes the patentability of methods of treatment and diagnosis of the human body. Other countries may impose substantial restrictions on the scope of claims, limiting patent protection to specifically disclosed embodiments. Consequently, we may not be able to prevent third parties from practicing our or our licensors' inventions in all countries outside the United States, or from selling or importing products made using our intellectual property in and into the United States or other jurisdictions. Competitors may use our or our licensors' intellectual property in jurisdictions where we or our licensors have not pursued and obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our products, and our owned and in-licensed 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, some jurisdictions, such as Europe, Japan and China, may have a higher standard for patentability than in the United States, including, for example, the requirement of claims having literal support in the original patent filing and the limitation on using supporting data that is not in the original patent filing. Under those heightened patentability requirements, we may not be able to obtain sufficient patent protection in certain jurisdictions even though the same or similar patent protection can be secured in the United States and other jurisdictions.

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 or our licensors may not prevail in any lawsuits that we or our licensors 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.

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.

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

The USPTO and various non-U.S. government agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. In some circumstances, we are dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. For example, periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our owned or licensed patents and applications or any patents and applications we may own in the future. In certain circumstances, we rely on our licensors to pay these fees due to U.S. and non-U.S. patent agencies. In some cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in a partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

The USPTO and various non-U.S. government agencies require compliance with certain foreign filing requirements during the patent application process. For example, in some countries, including the United States, China, India and some European countries, a foreign filing license is required before certain patent applications are filed. The foreign filing license requirements vary by country and depend on various factors, including where the inventive activity occurred, citizenship status of the inventors, the residency of the inventors and the invention owner, the place of business for the invention owner and the nature of the subject matter to be disclosed (e.g., items related to national security or national defense). In some cases, a foreign filing license may be obtained retroactively in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment of a pending patent application or can be grounds for revoking or invalidating an issued patent, resulting in the loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the relevant markets with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations and prospects. We are also dependent on our licensors to take the necessary actions to comply with these requirements with respect to our licensed intellectual property.

The COVID-19 pandemic may impair our and our licensors' ability to comply with these procedural, document submission, fee payment, and other requirements imposed by government patent agencies, which may materially and adversely affect our ability to obtain or maintain patent protection for our products and product candidates.

Changes in patent laws or their interpretations 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 the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. 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 America Invents Act (the America Invents Act) enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other 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. A third party that files a patent application in the USPTO after March 2013, but before us or our licensors could therefore be awarded a patent covering an invention of ours or our licensors even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to MLS-101 or any of our product candidates and other proprietary technologies we may develop or (ii) invent any of the inventions claimed in our patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party protests and submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO-administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of patents issuing from those patent applications, 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 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. We cannot predict how decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patent rights. 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 existing patent portfolio and our ability to protect and enforce our intellectual property in the future. Similarly, changes in patent law and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we have licensed or that we may obtain in the future.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad.

Our patent rights may be subject to priority, validity, inventorship and enforceability disputes. Legal proceedings relating to intellectual property claims, with or without merit, are unpredictable and generally expensive and time-consuming and likely to divert significant resources from our core business, including distracting our management and scientific personnel from their normal responsibilities and generally harm our business. If we or our licensors are unsuccessful in any of these proceedings, such patents and patent applications may be narrowed, invalidated or held unenforceable, we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or we may be required to cease the development, manufacture and commercialization of MLS-101 or future product candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we or our licensors initiate legal proceedings against a third party to enforce a patent covering MLS-101 or any of our future product candidates, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could include an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement, lack of sufficient written description, failure to claim patent-eligible subject matter or obviousness-type double patenting. 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 raise claims challenging the validity or enforceability of a patent 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). Such proceedings could result in the revocation of, cancellation of or amendment to our patent rights in such a way that they no longer cover our product candidates or prevent third parties from competing with our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we or our licensing partners and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on MLS-101 and any future product candidates. Such a loss of patent protection would have a material adverse impact on our business, financial condition, results of operations and prospects.

We cannot ensure that patent rights relating to inventions described and claimed in our pending patent applications will issue or that patents based on our patent applications will not be challenged and rendered invalid and/or unenforceable.

We have pending United States and foreign patent applications in our portfolio; however, we cannot predict:

- if and when patents may issue based on our patent applications;
- the scope of protection of any patent issuing based on our patent applications;
- whether the claims of any patent issuing based on our patent applications will provide protection against competitors;
- whether or not third parties will find ways to invalidate or circumvent our patent rights;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings to enforce and/or defend our patent rights which will be costly whether we win or lose; and/or
- whether the patent applications that we own, or in-license will result in issued patents with claims that cover MLS-101 or any of our future product candidates or uses thereof in the United States or in other foreign countries.

The claims in our pending patent applications directed to MLS-101 and any of our future product candidates and/or technologies may not be considered patentable by the USPTO or by patent offices in foreign countries. Any such patent applications may not issue as granted patents. One aspect of the determination of patentability of our inventions depends on the scope and content of the “prior art,” information that was or is deemed available to a person of skill in the relevant art prior to the priority date of the claimed invention. There may be prior art of which we are not aware that may affect the patentability of our patent claims or, if issued, affect the validity or enforceability of a patent claim. Even if the patents do issue based on our patent applications, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, patents in our portfolio may not adequately exclude third parties from practicing relevant technology or prevent others from designing around our claims. If the breadth or strength of our intellectual property position with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop and threaten our ability to commercialize our product candidates. In the event of litigation or administrative proceedings, the claims in any of our issued patents may not be considered valid by courts in the United States or foreign countries.

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

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional or international patent application filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent has expired, we may be vulnerable to competition from competitive products, including generics. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such product candidates might expire before or shortly after such product 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 have sufficient patent life to protect our products, our business, financial condition, results of operations, and prospects will be adversely affected.

If we do not obtain patent term extension and equivalent extensions outside of the United States for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of MLS-101 or any future product candidate we may develop, one or more of our in-licensed issued U.S. patents or issued U.S. patents we may own in the future may be eligible for limited patent term extension under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent term extension of up to 5 years as compensation for patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of fourteen (14) years from the date of product approval, only 1 patent 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 patent term restoration provisions to compensate for commercialization delay caused by regulatory review are also available in certain foreign jurisdictions, such as in Europe under Supplemental Protection Certificate. However, we may not be granted an extension for various reasons, including 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 failing to satisfy other applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. In addition, to the extent we wish to pursue patent term extension based on a patent that we in-license from a third party, we may need the cooperation of that third party. If we are unable to obtain patent term extension, or the foreign equivalent, or if the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our business, financial condition, results of operations and prospects could be materially harmed).

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

We or our licensors may be subject to claims that former employees, consultants, collaborators or other third parties have an interest in our patent rights, any potential trade secrets, or other intellectual property as an inventor, co-inventor or owner of any potential trade secrets. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates and other proprietary technologies we may develop. Litigation may be necessary to defend against these and other claims challenging inventorship or our patent rights, any potential 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 product candidates and other proprietary technologies we may develop. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

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

In addition to seeking patent protection for our product candidates and proprietary technologies, we may also rely on trade secret protection and confidentiality agreements to protect our unpatented know-how, technology, and other proprietary information and to maintain our competitive position. We seek to protect any potential 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, third-party 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. Trade secrets and know-how can be difficult to protect. We cannot guarantee that we have entered into applicable agreements with each party that may have or have had access to any potential trade secrets or proprietary technology and processes. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including any potential trade secrets, and we may not be able to obtain adequate remedies for such breaches. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. We cannot guarantee that any potential trade secrets and other proprietary and confidential information will not be disclosed or that competitors will not otherwise gain access to any potential trade secrets. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our potential 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 from using that technology or information to compete with us.

Furthermore, others may independently discover any potential trade secrets and proprietary information. If any of our potential 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 potential trade secrets were to be disclosed or misappropriated or if any such information were to be independently developed by a competitor or other third party, our competitive position would be materially and adversely harmed.

We may be subject to claims that third parties have an ownership interest in any potential trade secrets. For example, we may have disputes arise from conflicting obligations of our employees, consultants or others who are involved in developing our product candidate. Litigation may be necessary to defend against these and other claims challenging ownership of any potential trade secrets. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable trade secret rights, such as exclusive ownership of, or right to use, trade secrets that are important to our product candidates and other proprietary technologies we may develop. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our 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 not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop and market our products and product candidates.

We cannot guarantee that any of our or our licensors' patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we or our licensors have identified each and every third-party patent and pending patent application in the United States and abroad that is relevant to or necessary for the commercialization of our current and future products and product candidates in any jurisdiction. Patent applications in the United States and elsewhere are not published until approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our product candidates could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover product candidates or the use of our product candidates. The scope of a patent claim is determined by the

interpretation of the law, the words of a patent claim, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending patent application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products or product candidates are not covered by a third-party patent or may incorrectly predict whether a third party's pending patent application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, and we may incorrectly conclude that a third-party patent is invalid and unenforceable. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products and product candidates. If we fail to identify and correctly interpret relevant patents, we may be subject to infringement claims. Also, because the claims of published patent applications can change between publication and patent grant, there may be published patent applications that may ultimately issue with claims that we infringe. As the number of competitors in the market grows and the number of patents issued in this area increases, the possibility of patent infringement claims escalates. Moreover, in recent years, individuals and groups that are non-practicing entities, commonly referred to as "patent trolls," have purchased patents and other intellectual property assets for the purpose of making claims of infringement in order to extract settlements. From time to time, we may receive threatening letters, notices or "invitations to license," or may be the subject of claims that our products and business operations infringe or violate the intellectual property rights of others. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our product candidates that are held to be infringing. We might, if possible, also be forced to redesign product candidates or services so that we no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

We may be subject to claims asserting that our employees, consultants or advisors have wrongfully used or disclosed alleged trade secrets of their current or former employers or claims asserting ownership of what we regard as our own intellectual property.

Some of our employees, consultants and advisors are currently or were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these individuals 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. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to our management.

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

Third-party claims of intellectual property infringement, misappropriation or other violations against us or our collaborators could be expensive and time consuming and may prevent or delay the development and commercialization of our product candidates.

Our commercial success depends in part on our ability to avoid infringing, misappropriating and otherwise violating the patents and other intellectual property rights of third parties. There is a substantial amount of complex litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, derivation and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. 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 products and techniques without payment, or limit the duration of the patent protection of our technology. As discussed above, recently, due to changes in U.S. law referred to as patent reform, new procedures including inter partes review and post-grant review have also been implemented. As stated above, this reform adds uncertainty to the possibility of challenge to our patent rights in the future.

Numerous U.S. and foreign-issued patents and pending patent applications owned by third parties exist in the fields in which we are commercializing or plan to commercialize MLS-101. As the biotechnology and pharmaceutical industries expand and more patents are issued, and as we gain greater visibility and market exposure as a public company, the risk increases that MLS-101 or any future product candidates, and commercializing activities may give rise to claims of infringement of the patent rights of others. We cannot assure you that MLS-101 or any future product candidates we develop will not infringe existing or future patents owned by third parties. We may not be aware of patents that have already been issued for which a third party, such as a competitor in the fields in which we are developing MLS-101 or our future product candidates, might accuse us of infringing. It is also possible that patents owned by third parties of which we are aware, but which we do not believe we infringe or that we believe we have valid defenses to any claims of patent infringement, could be found to be infringed by us. It is not unusual that corresponding patents issued in different countries have different scopes of coverage, such that in one country a third-party patent does not pose a material risk, but in another country, the corresponding third-party patent may pose a material risk to MLS-101 and any future product candidates. As such, we monitor third-party patents in the relevant pharmaceutical markets. In addition, because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that we may infringe.

In the event that any third-party claims that we infringe their patents or that we are otherwise employing their proprietary technology without authorization and initiates litigation against us, even if we believe such claims are without merit, a court of competent jurisdiction could hold that such patents are valid, enforceable and infringed by us. Defense of infringement claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and other employee resources from our business, and may impact our reputation. In the event of a successful claim of infringement against us, we may be enjoined from further developing or commercializing the infringing products or technologies. In addition, we may be required to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties and/or redesign our infringing products or technologies, which may be impossible or require substantial time and monetary expenditure. Such licenses may not be available on commercially reasonable terms or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms or at all, we may be unable to commercialize the infringing products or technologies or such commercialization efforts may be significantly delayed, which could in turn significantly harm our business. In addition, we may in the future pursue patent challenges with respect to third-party patents, including as a defense against the foregoing infringement claims. The outcome of such challenges is unpredictable.

Even if resolved in our favor, the foregoing proceedings could be very expensive, particularly for a company of our size, and time-consuming. Such 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 proceedings adequately. Some of our competitors may be able to sustain the costs of litigation or administrative proceedings more effectively than we can because of greater financial resources. Such proceedings may also absorb significant time of our technical and management personnel and distract them from their normal responsibilities. Uncertainties resulting from such proceedings could impair our ability to compete in the marketplace. 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 common stock. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

We may become involved in lawsuits to protect or enforce our patent and other intellectual property rights, which could be expensive, time-consuming and unsuccessful.

Third parties, such as a competitor, may infringe our patent rights. In an infringement proceeding, a court may decide that a patent owned by us or licensed to us is invalid or unenforceable or may refuse to stop the other party from using the invention at issue on the grounds that the patent does not cover the technology in question. In addition, our or our licensors' patent rights may become involved in inventorship, priority or validity disputes. To counter or defend against such claims can be expensive and time-consuming. An adverse result in any litigation proceeding could put our patent rights at risk of being invalidated, held unenforceable or interpreted narrowly. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation and proceedings, there is a risk that some of our confidential information could be compromised by disclosure during such litigation and proceedings.

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 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 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 more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

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 or unregistered trademarks or trade names may be challenged, infringed, diluted, circumvented or declared generic or determined to be infringing, misappropriating or violating other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in the markets of interest. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we are given an opportunity to respond to such rejections, we may be unable to overcome them. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition, and could require us to devote resources to advertising and marketing new brands. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, which may not survive such proceedings. Moreover, any name we may propose to use with MLS-101 or any future product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA or an equivalent administrative body in a foreign jurisdiction objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe, misappropriate or otherwise violate the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark.

We may not be able to obtain, protect or enforce our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties 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, misappropriation, dilution or other claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long

term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to obtain, enforce or protect our proprietary rights related to trademarks, trade names, domain name or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and prospects.

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:

- others may be able to make products that are similar to MLS-101 or any future product candidates or utilize similar technology but that are not covered by the claims of the patents that we license or may own;
- we or our licensors might not have been the first to make the inventions covered by our or our licensors' current or future patent applications;
- We or our licensors might not have been the first to file patent applications covering our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our or our licensors' technologies without infringing our intellectual property rights;
- it is possible that our or our licensors' current or future patent applications will not lead to issued patents;
- any patent issuing from our or our licensors' current or future patent applications may be held invalid or unenforceable, including as a result of legal challenges by our competitors or other third parties;
- Others may have access to the same intellectual property rights licensed to use in the future on a non-exclusive basis;
- our competitors or other third parties might conduct research and development activities in countries where we or our licensors do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents or other intellectual property rights of others may harm our business; and
- we may choose not to file for patent protection in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent application covering such intellectual property.

Should any of the foregoing occur, it could adversely affect our business, financial condition, results of operations and prospects.

We partially depend on intellectual property licensed from third parties, and our licensors may not always act in our best interest. If we fail to comply with our obligations under our intellectual property licenses, if the licenses are terminated or if disputes regarding these licenses arise, we could lose significant rights that are important to our business.

We are a party to the Mitsubishi License under which we are granted rights to intellectual property that are important to MLS-101 and our business and we may enter into additional license agreements in the future with other third parties. The Mitsubishi License imposes, and we expect that any future license agreements where we in-license intellectual property, will impose on us, various development, regulatory and/or commercial diligence obligations, payment of milestones and/or royalties and other obligations. We may need to devote substantial time and attention to ensuring that we are compliant with our obligations under such agreements, which may divert management's time and attention away from our research and development programs or other day-to-day activities. If we fail to comply with our obligations under these agreements, or we are subject to bankruptcy-related proceedings, the licensor may

have the right to terminate the license, in which event we would not be able to develop or market products covered by the license, or we may be subject to litigation for breach of these agreements.

If we or our licensors fail to adequately protect our licensed intellectual property, our ability to commercialize MLS-101 or any future product candidates could suffer. We do not have complete control over the maintenance, prosecution and litigation of our in-licensed patents and patent applications and may have limited control over future intellectual property that may be in-licensed. For example, we cannot be certain that activities such as the maintenance and prosecution by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. It is possible that our licensors' infringement proceedings or defense activities may be less vigorous than had we conducted them ourselves or may not be conducted in accordance with our best interests.

In addition, the agreements under which we license intellectual property or technology from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant patents, know-how and proprietary technology, or increase what we believe to be our financial or other obligations under the relevant agreement. Disputes that may arise between us and our licensors regarding intellectual property subject to a license agreement could include disputes regarding:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of MLS-101 or any future product candidates and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected technology or MLS-101 or any future product candidates. As a result, any termination of or disputes over our intellectual property licenses could result in the loss of our ability to develop and commercialize MLS-101 or any future product candidates, or we could lose other significant rights, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

For example, our agreements with certain of our third-party research partners provide that improvements developed in the course of our relationship may be owned solely by either us or our third-party research partner, or jointly between us and the third party. If we determine that rights to such improvements owned solely by a research partner or other third party with whom we collaborate are necessary to commercialize MLS-101 or any future product candidates or maintain our competitive advantage, we may need to obtain a license from such third party in order to use the improvements and continue developing, manufacturing or marketing MLS-101 or any future product candidates. We may not be able to obtain such a license on an exclusive basis, on commercially reasonable terms, or at all, which could prevent us from commercializing MLS-101 or any future product candidates or allow our competitors or others the chance to access technology that is important to our business. We also may need the cooperation of any co-owners of our intellectual property in order to enforce such intellectual property against third parties, and such cooperation may not be provided to us.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

The growth of our business may depend in part on our ability to acquire, in-license or use third-party intellectual property and proprietary rights. For example, MLS-101 or any future product candidates may require specific formulations to work effectively and efficiently, we may develop product candidates containing our compounds and pre-existing pharmaceutical compounds, or we may be required by the FDA or comparable foreign regulatory authorities to provide a companion diagnostic test or tests with our product candidates, any of which could require us to obtain rights to use intellectual property held by third parties. In addition, with respect to any patent or other intellectual property rights we may co-own with third parties, we may require licenses to such co-owners interest to such patents. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary or important to our business operations. In addition, we may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. Were that to happen, we may need to cease use of the compositions or methods covered by those third-party intellectual property rights and may need to seek to develop alternative approaches that do not infringe, misappropriate or otherwise violate those intellectual property rights, which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, which means that our competitors may also receive access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

Additionally, we may collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. In certain cases, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Even if we hold such an option, we may be unable to negotiate a license from the institution within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies that may be more established or have greater resources than we do may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize MLS-101 or any future product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. There can be no assurance that we will be able to successfully complete these types of negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to develop or market. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of certain programs and our business financial condition, results of operations and prospects could suffer.

Our intellectual property licensed from third parties may be subject to retained rights.

Our current or future licensors may retain certain rights under their agreements with us, including the right to use the underlying technology for noncommercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It is difficult to monitor whether our licensors will limit their use of the technology to these uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse.

Government agencies may provide funding, facilities, personnel or other assistance in connection with the development of the intellectual property rights owned by or licensed to us. Such government agencies may have retained rights in such intellectual property. For example, the United States federal government retains certain rights in inventions produced with its financial assistance under the Patent and Trademark Law Amendments Act, or the Bayh-Dole Act; these include the right to grant or require us to grant mandatory licenses or sublicenses to such intellectual property to third parties under certain specified circumstances, including if it is necessary to meet health

and safety needs that we are not reasonably satisfying or if it is necessary to meet requirements for public use specified by federal regulations, or to manufacture products in the United States. Any exercise of such rights, including with respect to any such required sublicense of these licenses could result in the loss of significant rights and could harm our ability to commercialize licensed products. While it is our policy to avoid engaging our university partners in projects in which there is a risk that government funds may be commingled, we cannot be sure that any such co-developed intellectual property will be free from government rights. If, in the future, we co-own or license in technology that is critical to our business that is developed in whole or in part with government funds subject to certain government rights, our ability to enforce or otherwise exploit patents covering such technology may be adversely affected.

Risks Related to Our Common Stock and This Offering

There has been no public market for our common stock. An active, liquid and orderly market for our common stock may not develop, or we may in the future fail to satisfy the continued listing requirements of the Nasdaq and our stock may be delisted, and you may not be able to resell your common stock at or above the initial public offering price or at all.

Prior to this offering, there has been no public market for our common stock. Although we have applied to list our common stock on the Nasdaq Global Market (Nasdaq), an active trading market for our common stock may never develop or may not be sustained following this offering. We and the representatives of the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. In addition, an active trading market may not develop following the consummation of this offering or, if it is developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other businesses or technologies using our shares as consideration, which, in turn, could materially adversely affect our business.

If, after listing, we fail to satisfy the continued listing requirements of Nasdaq, such as the corporate governance requirements or the minimum closing bid price requirement, Nasdaq may take steps to delist our common stock. Such a delisting would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with the listing requirements of Nasdaq.

The trading price of the shares of our common stock could be highly volatile, and purchasers of our common stock could incur substantial losses.

Our stock price is likely to be volatile. The stock market in general and the market for stock of biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price for our common stock may be influenced by those factors discussed in this “Risk Factors” section and many others, including:

- results of our clinical trials and preclinical studies, and the results of trials of our competitors or those of other companies in our market sector;
- our ability to enroll subjects in our future clinical trials;
- our ability to obtain and maintain regulatory approval of MLS-101 or any future product candidates or additional indications thereof, or limitations to specific label indications or patient populations for its use, or changes or delays in the regulatory review process;
- regulatory or legal developments in the United States and foreign countries;

- changes in the structure of healthcare payment systems;
- the success or failure of our efforts to identify, develop, acquire or license additional product candidates;
- innovations, clinical trial results, product approvals and other developments by our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- the degree and rate of physician and market adoption of any of our current and future product candidates;
- manufacturing, supply or distribution delays or shortages, including our inability to obtain adequate product supply, at acceptable prices or at all;
- any changes to our relationship with any manufacturers, suppliers, collaborators or other strategic partners;
- achievement of expected product sales and profitability;
- variations in our financial results or those of companies that are perceived to be similar to us, including variations from expectations of securities analysts or investors;
- market conditions in the biopharmaceutical sector and issuance of securities analysts' reports or recommendations;
- trading volume of our common stock;
- an inability to obtain additional funding or obtaining funding on unattractive terms;
- sales of our stock by us, our insiders or our stockholders, as well as the anticipation of lock-up releases;
- general economic, industry and market conditions other events or factors, many of which are beyond our control;
- actual or anticipated fluctuations in our financial condition and results of operations;
- publication of news releases by other companies in our industry, and especially direct competitors, including about adverse developments related to safety, effectiveness, accuracy and usability of their products, reputational concerns, reimbursement coverage, regulatory compliance, and product recalls;
- announcement or progression of geopolitical events (including in relation to the conflict between Russia and Ukraine);
- additions or departures of senior management or key personnel;
- intellectual property, product liability or other litigation against us or our inability to enforce our intellectual property;
- changes in our capital structure, such as future issuances of securities and the incurrence of additional debt; and
- changes in accounting standards, policies, guidelines, interpretations or principles.

In addition, in the past, stockholders have initiated class action lawsuits against biopharmaceutical companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs, divert our management's attention and resources and damage

our reputation, which could have a material adverse effect on our business, financial condition and results of operations and prospects.

We will have broad discretion in the use of the net proceeds from this offering, and may use them ineffectively, in ways that you and other stockholders may not approve, or in ways that do not increase the value of your investment.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in “Use of Proceeds.” Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment, in ways that are otherwise ineffective or in ways with which you disagree, and the failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected results, which could cause our stock price to decline.

You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering.

The initial public offering price of our common stock is substantially higher than the pro forma as adjusted net tangible book value per share of our outstanding common stock immediately after the completion of this offering. Purchasers of common stock in this offering will experience immediate dilution of approximately \$ per share, assuming an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover of this prospectus. In the past, we issued options to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding options are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

After this offering, our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to significantly influence all matters submitted to stockholders for approval and may prevent new investors from influencing significant corporate decisions.

Following the completion of this offering, our executive officers, directors and greater than 5% stockholders, in the aggregate, will own approximately % of our outstanding common stock (assuming no exercise of the underwriters’ option to purchase additional shares and no exercise of outstanding options and without giving effect to any potential purchases by such persons in this offering). As a result, such persons, acting together, will have the ability to significantly influence all matters submitted to our board of directors or stockholders for approval, including the appointment of our management, the election and removal of directors and approval of any significant transactions, as well as our management and business affairs, which may prevent new investors from influencing some or all of the foregoing. This concentration of ownership may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover or other business combination involving us, or discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders.

We do not currently intend to pay dividends on our common stock, and, consequently, your ability to achieve a return on your investment will depend on appreciation, if any, in the price of our common stock.

We have never declared or paid any cash dividend on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, any future debt agreements may preclude us from paying dividends. For the foreseeable future, any return to stockholders will therefore be limited to the appreciation of their stock. There is no guarantee that shares of our common stock will appreciate in value or even maintain the price at which stockholders have purchased their shares.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could significantly reduce the market price of our common stock and impair our ability to raise adequate capital through the sale of additional equity or equity-linked securities.

Based on shares of common stock outstanding as of September 30, 2022, upon the closing of this offering, we will have a total of shares of common stock outstanding, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options or warrants. Of these shares, only the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable, without restriction, in the public market immediately following this offering, unless they are purchased by one of our affiliates.

Our directors and executive officers and holders of substantially all of our outstanding securities have entered into lock-up agreements with the underwriters pursuant to which they may not, with limited exceptions, for a period of 180 days from the date of this prospectus, offer, sell or otherwise transfer or dispose of any of our securities, without the prior written consent of BofA, Evercore and Stifel. The underwriters may permit our officers, directors and other securityholders who are subject to the lock-up agreements to sell shares prior to the expiration of the lock-up agreements at any time in their sole discretion. See "Underwriting." Sales of these shares, or perceptions that they will be sold, could cause the trading price of our common stock to decline. After the lock-up agreements expire, up to an additional shares of common stock will be eligible for sale in the public market, of which shares will be held by directors, executive officers and other affiliates and will be subject to volume limitations under Rule 144 under the Securities Act of 1933, as amended (the Securities Act), in each case based on shares of common stock outstanding as of September 30, 2022 and without giving effect to any potential purchases by such persons in this offering.

In addition, as of September 30, 2022, 14,263,474 shares of common stock that are subject to outstanding options under our employee benefit plans 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 common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering, the holders of shares of our outstanding common stock, or approximately % of our total outstanding common stock based on shares outstanding as of September 30, 2022, will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to vesting and the 180-day lock-up agreements described above. See "Description of Capital Stock—Registration Rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

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

We are an emerging growth company, as defined in the JOBS Act, and may remain an emerging growth company until the last day of the fiscal year following the fifth anniversary of the completion of this offering. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," as defined under the Securities Exchange Act of 1934, as amended (the Exchange Act), our annual gross revenue exceeds \$1.235 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure

requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure in connection with registered securities offerings;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley);
- 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, unless the U.S. Securities and Exchange Commission (SEC) determines the new rules are necessary for protecting the public;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have taken advantage of reduced reporting burdens in this prospectus. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation-related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we 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 reduced or more volatile. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have irrevocably elected to avail ourselves of this exemption and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of Sarbanes-Oxley.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect immediately prior to the consummation of this offering will contain provisions that could significantly reduce the value of our shares to a potential acquiror or delay or prevent changes in control or changes in our management without the consent of our board of directors. The provisions in our charter documents will include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors, unless the board of directors grants such right to the stockholders, to elect a director to fill a vacancy created by the expansion of the 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;
- the required approval of at least 66-2/3% of the shares entitled to vote to remove a director for cause, and the prohibition on removal of directors without cause;
- the ability of our board of directors to authorize the issuance of 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 acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66-2/3% of the shares entitled to vote to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal 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;
- an exclusive forum provision providing that the Court of Chancery of the State of Delaware will be the exclusive forum for certain actions and proceedings;
- the requirement that a special meeting of stockholders may be called only by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order 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 acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Our current amended and restated certificate of incorporation provides, and 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 substantially all disputes between us and our stockholders and that the federal district courts shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees or the underwriters or any offering giving rise to such claim.

Our current amended and restated certificate of incorporation provides, and our amended and restated certificate of incorporation that will be in effect immediately prior to the consummation 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 amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided, that, this provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, our amended and restated certificate of incorporation will also provide that unless we

consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees and result in increased costs for investors to bring a claim. By agreeing to this provision, however, stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. If a court were to find the choice of forum provisions 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, which could adversely affect our business and financial condition.

General Risk Factors

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Exchange Act, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, Sarbanes-Oxley, as well as rules subsequently adopted by the SEC and Nasdaq to implement provisions of Sarbanes-Oxley, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and certain corporate governance practices. Further, pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC has adopted additional rules and regulations in these areas, such as mandatory "say on pay" voting requirements that will apply to us when we cease to be an emerging growth company. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time consuming and costly. The increased costs will decrease our net income or increase our net loss, and may require us to reduce expenditures in other areas of our business or increase the prices of our products, if approved. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to comply with these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We could face criminal liability and other serious consequences for violations, which could harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls and anti-corruption and anti-money laundering laws and regulations, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, CROs, contractors and other collaborators

and partners from authorizing, promising, offering, providing, soliciting or receiving, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for clinical trials outside of the United States, to sell our products abroad if and when we enter a commercialization phase, and/or to obtain necessary permits, licenses, patent registrations and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, CROs, contractors and other collaborators and partners, even if we do not explicitly authorize or have actual knowledge of such activities, and any training or compliance programs or other initiatives we undertake to prevent such activities may not be effective. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Furthermore, U.S. export control laws and economic sanctions prohibit the provision of certain products and services to countries, governments, and persons targeted by U.S. sanctions. U.S. sanctions that have been or may be imposed as a result of military conflicts in other countries may impact our ability to continue activities at future clinical trial sites within regions covered by such sanctions. If we fail to comply with export and import regulations and such economic sanctions, penalties could be imposed, including fines and/or denial of certain export privileges. These export and import controls and economic sanctions could also adversely affect our supply chain.

Our third-party manufacturers or suppliers may use potent chemical agents and hazardous materials, and any claims relating to improper handling, storage or disposal of these materials could be time-consuming or costly.

Our third-party manufacturers or suppliers use, and potential future collaborators will use, biological materials, potent chemical agents and may use hazardous materials, including chemicals and biological agents and compounds that could be dangerous to human health and safety of the environment. The operations of our third-party manufacturers and suppliers also produce hazardous waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our product development efforts. In addition, our third-party manufacturers and suppliers cannot eliminate the risk of accidental injury or contamination from these materials or wastes. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. In the event of contamination or injury at our manufacturers' or suppliers' sites, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended. Although we maintain workers' compensation insurance for certain costs and expenses we may incur due to injuries to our employees resulting from work-related injuries, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for toxic tort claims that may be asserted against us in connection with our third-party manufacturers' and suppliers' storage or disposal of biologic, hazardous or radioactive materials.

In addition, our third-party manufacturers and suppliers may need to incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations, which have tended to become more stringent over time, which may increase the cost of their services to us. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions or liabilities for our third-party manufacturers and suppliers, which could in turn materially adversely affect our business, financial condition, results of operations and prospects. To the extent we develop our own manufacturing operations in the future, we may similarly incur substantial costs to ensure compliance with these laws, and all the foregoing risks will further apply to us, as well.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations and the operations of our suppliers, CROs, CMOs and clinical sites could be subject to earthquakes, power shortages, telecommunications or infrastructure failures, cybersecurity incidents, physical

security breaches, water shortages, floods, hurricanes, typhoons, blizzards and other extreme weather conditions, fires, public health pandemics or epidemics (including, for example, the COVID-19 pandemic) and other natural or manmade disasters or business interruptions, for which we are predominantly self-insured. We rely on third-party manufacturers or suppliers to produce MLS-101 and its components and on CROs and clinical sites to conduct our clinical trials, and do not have a redundant source of supply for all components of our product candidate. Our ability to obtain clinical or, if approved, commercial, supplies of MLS-101 or any future product candidates could be disrupted if the operations of these suppliers were affected by a man-made or natural disaster or other business interruption, and our ability to commence, conduct or complete our clinical trials in a timely manner could be similarly adversely affected by any of the foregoing. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

The global credit and financial markets have recently experienced extreme volatility and disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. The financial markets and the global economy may also be adversely affected by the current or anticipated impact of military conflict, including the conflict between Russia and Ukraine, terrorism or other geopolitical events. Sanctions imposed by the United States and other countries in response to such conflicts, including the one in Ukraine, may also adversely impact the financial markets and the global economy, and any economic countermeasures by the affected countries or others could exacerbate market and economic instability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves, or on less favorable terms than we would otherwise choose. In addition, if one or more of our current service providers, manufacturers and other partners may not survive an economic downturn, which could directly affect our ability to attain our clinical development goals on schedule and on budget.

Changes in tax law may materially adversely affect our financial condition, results of operations and cash flows, or adversely impact the value of an investment in our common stock.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, or interpreted, changed, modified or applied adversely to us, any of which could adversely affect our business operations and financial performance. We urge our investors to consult with their legal and tax advisors with respect to any changes in tax law and the potential tax consequences of investing in our common stock.

If securities or industry analysts do not publish research or reports or publish unfavorable research or reports 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 that securities or industry analysts publish about us, our business, our market or our competitors. We do not currently have and may never obtain research coverage by securities and industry analysts. If no securities or industry analysts commence coverage of our company, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if one or more of the analysts who covers us downgrades our stock, or if we fail to meet the expectations of one or more of these analysts, our stock price would likely decline. If one or more of these analysts ceases to cover us or fails to regularly publish reports on us, interest in our stock could decrease, which could cause our stock price or trading volume to decline.

If we fail to maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

Pursuant to Section 404 of Sarbanes-Oxley, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2023. When we lose our status as an “emerging growth company” and do not otherwise qualify as a “smaller reporting company” with less than \$100 million in annual revenue, our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we may need to upgrade our information technology systems; implement additional financial and management controls, reporting systems and procedures; and hire additional accounting and finance staff. If we or, if required, our auditors are unable to conclude that our internal control over financial reporting is effective, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting once that firm begins its Section 404 reviews, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

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 biotechnology and biopharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, even if ultimately decided in our favor, it could result in substantial costs and a diversion of our management’s attention and resources, which could harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, research and development plans, the anticipated timing, costs, design and conduct of our ongoing and planned preclinical studies and planned clinical trials for MLS-101 and any future product candidates, the timing and likelihood of regulatory filings and approvals for MLS-101 and any future product candidates, our ability to commercialize our product candidates, if approved, the impact of the COVID-19 pandemic on our business, the pricing and reimbursement of our product candidates, if approved, the potential to develop future product candidates, the potential benefits of strategic collaborations and our intent to enter into any strategic arrangements, the timing and likelihood of success, and plans and objectives of management for, future operations, and future results of anticipated product development efforts, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial and other trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we undertake no obligation to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See the section titled “Where You Can Find More Information.”

In addition, statements that “we believe” and similarly qualified 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 rely unduly upon them.

MARKET AND INDUSTRY DATA

We obtained the industry, market and competitive position data used throughout this prospectus from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. 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. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

In addition, while we are responsible for all of the disclosure contained in this prospectus and we believe the industry, market and competitive position data included in this prospectus is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the sections titled "Risk Factors" and "Special Note Regarding Forward-Looking Statements." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us. 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% 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 to us from this offering will be approximately \$ million (or approximately \$ million if the underwriters exercise their option to purchase additional shares in full), assuming an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the net proceeds to us from this offering by approximately \$ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase or decrease of 1.0 million shares in the number of shares of common stock offered by us would increase or decrease, as applicable, the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$ million, assuming the assumed initial public offering price stays the same. The information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

The principal purposes of this offering are to obtain additional capital to support our operations, to create a public market for our common stock and to facilitate our future access to the public equity markets. We intend to use approximately \$ million of the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund the research and development of MLS-101, and the remainder for working capital and general corporate purposes.

We may also use a portion of the remaining net proceeds and our existing cash, cash equivalents and marketable securities to in-license, acquire, or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

We believe, based on our current operating plan, that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will be sufficient to fund our operations for at least the next months from the date of this prospectus. In particular, we expect that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will allow us to . We have based these estimates on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Additionally, our expected use of existing cash, cash equivalents and marketable securities and our net proceeds from this offering represent our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress and costs of our development activities, the status of and results from clinical trials and preclinical studies, as well as any collaborations that we may enter into with third parties for MLS-101 and any future product candidates, and the amount of cash used in our operations and any unforeseen cash needs as well as other factors described in the sections of this prospectus titled "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Special Note Regarding Forward-Looking Statements." The net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities will not be sufficient to complete development of MLS-101, and after this offering, we will require substantial capital in order to advance MLS-101 and any future product candidates through clinical trials, regulatory approval and commercialization. Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of those net proceeds. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending the uses described above, we plan to invest the net proceeds in a

variety of capital preservation instruments, including short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit and direct or guaranteed obligations of the United States.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain future earnings, if any, to finance the operation of our business and do not anticipate paying any cash dividends on our capital stock in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, current and anticipated capital requirements, business prospects and other factors our board of directors deems relevant, and subject to applicable laws and the restrictions contained in any future financing instruments.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and marketable securities and capitalization as of September 30, 2022:

- 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 222,843,084 shares of our common stock and the related reclassification of the carrying value of the convertible preferred stock to permanent equity immediately prior to the closing of this offering, and (ii) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of _____ shares of our common stock in this offering at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only, and our cash, cash equivalents and marketable securities and capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our financial statements and related notes included in this prospectus and the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and other financial information contained in this prospectus.

(in thousands, except share and par value data)	As of September 30, 2022		
	Actual	Pro forma (unaudited)	Pro forma as adjusted ⁽¹⁾
Cash, cash equivalents and marketable securities	\$ 120,953	\$ —	\$ —
Series A convertible preferred stock, \$0.0001 par value, 86,332,216 shares authorized, 86,332,216 issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	40,987	—	—
Series B convertible preferred stock, \$0.0001 par value, 136,510,868 shares authorized, 136,510,868 shares issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	117,657	—	—
Stockholders’ equity (deficit):			
Common stock, \$0.0001 par value; 319,000,000 shares authorized, 69,315,006 shares issued and outstanding, actual; _____ shares authorized, _____ shares issued and outstanding, pro forma; _____ shares authorized, _____ shares issued and outstanding, pro forma, as adjusted	7	—	—
Additional paid-in capital	316	—	—
Accumulated deficit	(43,737)	—	—
Total stockholders’ equity (deficit)	\$ (43,414)	\$ —	\$ —
Total capitalization	\$ (43,414)	\$ —	\$ —

(1) Each \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted amount of each of our cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders’ equity (deficit) and total capitalization by approximately \$ _____, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase or decrease of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price of \$ _____ per share would increase or decrease, as applicable, the pro forma as adjusted amount of each of our cash, cash equivalents and marketable securities,

additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately \$, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' option to purchase additional shares is exercised in full, our pro forma as adjusted cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' equity (deficit), and total capitalization as of September 30, 2022, would be \$ million, \$ million, \$ million, and \$ million, respectively.

The number of shares of our common stock to be outstanding after this offering set forth above is based on 69,315,006 shares of our common stock outstanding as of September 30, 2022, including 13,260,785 shares subject to forfeiture or our right of repurchase, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering, and excludes:

- 14,263,474 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2022, with a weighted-average exercise price of \$0.08 per share;
- shares of common stock reserved for future issuance under the 2023 Plan, which will become effective in connection with this offering (which number includes 3,627,395 shares of common stock reserved for issuance under our 2020 Plan as of September 30, 2022, which shares will be added to the 2023 Plan upon its effectiveness, but does not include any potential evergreen increases pursuant to the terms of the 2023 Plan); and
- shares of common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

DILUTION

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

As of September 30, 2022, our historical net tangible book value (deficit) was \$(43.4) million, or (\$0.63) per share of our common stock, based on 69,315,006 shares of common stock issued and outstanding as of such date, including 13,260,785 shares subject to forfeiture or our right of repurchase as of such date. Our historical net tangible book value (deficit) per share represents total tangible assets less total liabilities and convertible preferred stock, which is not included within permanent equity, divided by the number of shares of common stock outstanding at September 30, 2022.

On a pro forma basis, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock and the related reclassification of the carrying value of the convertible preferred stock to permanent equity immediately prior to the closing of this offering, our pro forma net tangible book value (deficit) as of September 30, 2022 would have been approximately \$ million, or approximately \$ per share of our common stock.

After giving further effect to the sale of shares of our common stock in this offering at an assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2022 would have been approximately \$ million, or approximately \$ per share. This amount represents an immediate increase in pro forma net tangible book value of approximately \$ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately \$ per share to new investors purchasing shares of common stock in this offering.

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

Assumed initial public offering price per share	\$
Historical net tangible book value (deficit) per share as of September 30, 2022	\$ (0.63)
Pro forma increase in historical net tangible book value per share as of September 30, 2022 attributable to the pro forma adjustments described above	
Pro forma net tangible book value per share as of September 30, 2022	\$
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering	
Pro forma as adjusted net tangible book value per share after this offering	
Dilution per share to new investors participating in this offering	\$

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately \$, and dilution in pro forma as adjusted net tangible book value per share to new investors by approximately \$, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Each increase (decrease) of 1.0 million shares in the number of shares of common stock offered by us would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by approximately \$ per share and decrease (increase) the dilution to investors participating in this offering by approximately per share, assuming that the assumed initial public offering price of \$ per share remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

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

The dilution information above is for illustration purposes only. Our pro forma as adjusted net tangible book value following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing.

The following table summarizes on the pro forma as adjusted basis described above, as of September 30, 2022, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the average price per share paid by existing stockholders for shares issued prior to this offering and the price to be paid by new investors in this offering. The calculations below are based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares purchased		Total consideration		Weighted-average price per share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering		%	\$	%	\$
New investors participating in this offering					\$
Total		100 %		100 %	

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

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

The foregoing tables and calculations above (other than the historical net tangible book value calculations) are based on 69,315,006 shares of our common stock outstanding as of September 30, 2022, including 13,260,785 shares subject to forfeiture or our right of repurchase, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering, and exclude:

- shares of common stock issuable upon the exercise of outstanding stock options as of September 30, 2022, with a weighted-average exercise price of \$ per share;
- shares of common stock reserved for future issuance under the 2023 Plan, which will become effective in connection with this offering (which number includes shares of common stock reserved for issuance under our 2020 Plan, which shares will be added to the 2023 Plan upon its effectiveness, but does not include any potential evergreen increases pursuant to the terms of the 2023 Plan); and
- shares of common stock reserved for future issuance under the ESPP, which will become effective in connection with this offering (which number does not include any potential evergreen increases pursuant to the terms of the ESPP).

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

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

Overview

We are a clinical-stage biopharmaceutical company focused on developing medicines to target diseases driven by abnormally elevated aldosterone. Our product candidate, MLS-101, is a proprietary, orally administered, highly selective aldosterone synthase inhibitor (ASI) that we are initially developing for the treatment of patients with uncontrolled (uHTN) or resistant hypertension (rHTN). In the United States, there are over 115 million patients who have sustained elevated blood pressure (BP), or hypertension and more than half of this population fails to achieve their BP goals, defined as BP of below 130/80 mmHg, with currently available medications. There are over 30 million treated patients who do not achieve their BP goal, of whom approximately 20 million have systolic BP levels greater than 140 mmHg. Patients with hypertension that persists despite taking two or more medications have 1.8 and 2.5 times greater mortality risk due to either cardiovascular disease or stroke, respectively. In a Phase 2 clinical trial evaluating 200 subjects with uHTN and rHTN (Target-HTN), MLS-101 demonstrated a clinically meaningful and statistically significant reduction in BP with once-daily dosing and was well tolerated. In addition to hypertension, we intend to develop MLS-101 for the treatment of chronic kidney disease (CKD) and believe that our product candidate holds promise to be an innovative solution for the rapidly growing unmet need in multiple cardiorenal disorders.

MLS-101 has been developed to normalize the production of aldosterone, and we believe this mechanism can be applied to other indications where abnormal aldosterone biology plays a role. We intend to initiate a Phase 2 proof-of-concept trial for CKD. Uninhibited aldosterone is known to play a critical role in the progression of CKD, which affects over 23 million people in the United States. Furthermore, we may expand the development of MLS-101 into additional cardiorenal indications.

We commenced our operations in May 2019 and have devoted substantially all of our resources to date to organizing and staffing our company, business planning, raising capital, in-licensing our product candidate, MLS-101, establishing our intellectual property portfolio, conducting research, preclinical studies and clinical trials, and providing other general and administrative support for our operations. As of September 30, 2022, we had cash, cash equivalents, and marketable securities of \$121.0 million. From inception to September 30, 2022, we raised aggregate gross proceeds of approximately \$158 million from the issuance of convertible promissory notes (the Convertible Notes) and convertible preferred stock.

We do not have any products approved for sale, have not generated any revenue and have incurred net losses since our inception. Our operations to date have been limited to business planning, raising capital, in-licensing and developing MLS-101, conducting clinical trials, and other research and development activities. Our net losses for the years ended December 31, 2020 and 2021 were \$3.4 million and \$19.4 million, respectively and \$12.3 million and \$20.7 million for the nine months ended September 30, 2021 and 2022, respectively. As of December 31, 2021 and September 30, 2022, we had an accumulated deficit of \$23.0 million and \$43.7 million, respectively. Our net losses may fluctuate significantly from quarter to quarter and year to year, depending on the timing of our clinical development activities and other research and development activities. We expect our expenses and operating losses will increase substantially as we conduct our ongoing and planned clinical trials for MLS-101, potentially seek regulatory approval for MLS-101 and any future product candidates we may develop, expand our clinical, regulatory, quality, manufacturing and commercialization capabilities, obtain, maintain, protect and enforce our intellectual property, expand our general and administrative support functions, including hiring additional personnel, and incur additional costs associated with operating as a public company.

Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities, together with the estimated net proceeds from this offering, will be sufficient to meet our anticipated cash requirements through at least the next 12 months. We have never generated any revenue and do not expect to generate any revenue from product sales unless and until we successfully complete development of, and obtain regulatory approval for, MLS-101, which will not be for several years, if ever. Accordingly, until such time as we can generate significant revenue from sales of MLS-101, if ever, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses, and other similar

arrangements. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements when needed would have a negative impact on our financial condition and could force us to delay, limit, reduce, or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. For more information, see “*Liquidity and Capital Resources.*”

The global COVID-19 pandemic continues to evolve, and we will continue to monitor the COVID-19 situation closely. We have not experienced a material impact from the COVID-19 pandemic to date; however, the extent of the impact of the COVID-19 pandemic on our business, operations, and clinical development timelines and plans remains uncertain, and will depend on certain developments, including its impact on our clinical trial enrollment, trial sites, manufacturers, CROs, and other third parties with whom we do business, as well as its impact on regulatory authorities and our key scientific and management personnel. The ultimate impact of the COVID-19 pandemic, including the impact of new variants of the virus that causes COVID-19, or a similar health pandemic is highly uncertain and subject to change. To the extent possible, we are conducting business as usual, with necessary or advisable modifications to employee travel and most of our employees working remotely. We will continue to actively monitor the evolving situation related to COVID-19 and may take further actions that alter our operations, including those that may be required by federal, state, or local authorities, or that we determine are in the best interests of our employees and other third parties with whom we do business. At this point, the extent to which the COVID-19 pandemic may affect our business, operations, and development timelines and plans, including the resulting impact on our expenditures and capital needs, remains uncertain and is subject to change.

License Agreement with Mitsubishi Tanabe

In July 2020, we entered into a license agreement (the Mitsubishi License) with Mitsubishi Tanabe Pharma Corporation (Mitsubishi Tanabe), pursuant to which Mitsubishi Tanabe granted us an exclusive, worldwide, royalty-bearing, sublicensable license under Mitsubishi Tanabe’s patent and other intellectual property rights to exploit products incorporating MLS-101 (formerly MT-4129) (MLS-101 Products) for the prevention, treatment, diagnosis, detection, monitoring, or predisposition testing with respect to indications, diseases, and conditions in humans. We paid Mitsubishi Tanabe a \$1.0 million upfront fee, and we are obligated to pay Mitsubishi Tanabe development milestone payments of up to \$9.0 million in the aggregate and commercial milestone payments of up to \$155.0 million in the aggregate upon first commercial sale and upon meeting certain annual sales targets, as well as additional commercial milestone payments of up to \$10.0 million for a second indication. Additionally, we are obligated to pay Mitsubishi Tanabe tiered royalties at percentages ranging from the mid-single digits to ten percent (10%) of aggregate net sales of each MLS-101 Product on an MLS-101 Product-by-MLS-101 Product and country-by-country basis, until the later of (i) the expiration of the last-to-expire valid Mitsubishi Tanabe patent claim covering an MLS-101 Product, (ii) ten years from the first commercial sale of an MLS-101 Product, or (iii) the expiration of regulatory exclusivity in such country. Such royalties are subject to reduction under specified conditions, including lack of patent coverage and generic competition.

We are obligated to use commercially reasonable efforts to conduct and complete the development activities and to file for regulatory approval for at least one MLS-101 Product in a major market country and consider in good faith to develop at least one MLS-101 Product in a non-major market country. If we elect to sublicense our rights under the Mitsubishi License to a third party with respect to exploitation of MLS-101 or any MLS-101 Product in certain countries in Asia, Mitsubishi Tanabe has a right of first negotiation, for a specified period of time. We also agreed not to commercialize any competing product prior to three years following the first commercial sale of the first MLS-101 Product in any country without Mitsubishi Tanabe’s prior consent. For additional information regarding the Mitsubishi License, including termination provisions, see “*Business—Intellectual property—License agreement with Mitsubishi Tanabe.*”

Key Components of Results of Operations

Operating Expenses

Research and Development

Research and development expenses consist primarily of external and internal costs related to the development of MLS-101. Research and development expenses are recognized as incurred, and payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods are received or when the services are performed.

Research and development expenses include:

- salaries, bonuses, employee benefits, and stock-based compensation charges for those individuals involved in research and development efforts;
- external research and development expenses incurred under agreements with contract research organizations (CROs) and consultants to conduct and support our clinical trials of MLS-101, and payments made under the Mitsubishi License; and
- costs related to manufacturing MLS-101 for our clinical trials.

We plan to substantially increase our research and development expenses for the foreseeable future as we continue the development of MLS-101. We cannot determine with certainty the timing of initiation, the duration, or the completion costs of current or future clinical trials and preclinical studies of MLS-101 or any future product candidates due to the inherently unpredictable nature of clinical and preclinical development. Clinical and preclinical development timelines, the probability of success, and development costs can differ materially from expectations. In addition, we cannot forecast whether MLS-101 or any future product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Our future development costs may vary significantly based on factors such as:

- the initiation, type, number, scope, progress, expansions, results, costs, and timing of clinical trials and preclinical studies of MLS-101 and any future product candidates we may choose to pursue, including any modifications to clinical development plans based on feedback that we may receive from regulatory authorities;
- our ability and strategic decision to develop future product candidates other than MLS-101, and the timing of such development, if any;
- our ability to receive timely regulatory approvals for MLS-101, any future product candidates, and additional indications of MLS-101 and any future product candidates, in the jurisdictions in which we or any future partners apply for such approvals;
- the costs and timing of manufacturing MLS-101 or any future product candidates for use in our trials, including as a result of inflation, any supply chain issues or component shortages;
- any additional jurisdictions in which we may seek approval for MLS-101 and any future product candidates and timing of seeking approval in such jurisdictions;
- the drop-out or discontinuation rates of clinical trial patients;
- potential additional safety monitoring requested by regulatory agencies;
- the duration of patient participation in the trials and follow-up;
- the phase of development of the product candidate;

- the impact of any interruptions to our operations or to those of the third parties with whom we work due to the ongoing COVID-19 pandemic;
- the efficacy and safety profile of the relevant product candidate; and
- the extent to which we establish strategic collaborations or other arrangements.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related expenses, including employee salaries, bonuses, benefits, and stock-based compensation charges, for personnel in executive and administrative functions. Other significant general and administrative expenses include legal fees relating to intellectual property and corporate matters, professional fees for accounting, tax and consulting services, and insurance costs. We expect our general and administrative expenses will increase for the foreseeable future to support our increased research and development activities, manufacturing activities, and the increased costs associated with operating as a public company. These increased costs will likely include increased expenses related to hiring of additional personnel, audit, legal, regulatory, and tax-related services associated with maintaining compliance with exchange listing and Securities and Exchange Commission (SEC) requirements and requirements of the Sarbanes-Oxley Act of 2002 (SOX), director and officer insurance costs, and investor and public relations costs.

Other Income (Expense), Net

Interest Income (Expense)

Interest income during 2022 is associated with our investments in money market funds and U.S. treasuries. Interest expense during 2021 consisted of interest on our outstanding Convertible Notes described below prior to their conversion into shares of our Series A convertible preferred stock in February 2021.

Change in Fair Value of Convertible Notes

We issued Convertible Notes in 2019 and 2020 for which we elected the fair value option. We adjusted the carrying value of our Convertible Notes to their estimated fair value at each reporting date, with any change in fair value of the Convertible Notes recorded as an increase or decrease to change in fair value of Convertible Notes in our statements of operations. All outstanding Convertible Notes and related accrued interest converted into shares of our Series A convertible preferred stock in February 2021.

Results of Operations

Comparison of the Years Ended December 31, 2020 and 2021

	Year Ended December 31,	
	2020	2021
	(in thousands)	
Research and development expenses	\$ 2,411	\$ 16,308
General and administrative expenses	532	2,417
Other expense, net	483	683
Net loss	<u>\$ 3,426</u>	<u>\$ 19,408</u>

Research and Development Expenses

Research and development expenses increased by \$13.9 million for the year ended December 31, 2021, compared to the year ended December 31, 2020, which was primarily due to an increase of \$11.6 million in preclinical and clinical costs related to the research and development of MLS-101, an increase of \$1.7 million in personnel expenses upon hiring additional employees in 2021 to support research and development, and an increase of \$1.6 million for clinical supply, manufacturing and regulatory costs.

We acquired the licensed rights to MLS-101 in July 2020 and began a proof-of-concept Phase 2 clinical trial in the United States in 2021. Costs related to executing our clinical trial in 2021 was the primary driver of the increase in our research and development expense in 2021. This increase was partially offset by \$1.0 million in licensing fees as a result of the upfront payment in 2020 relating to the Mitsubishi License.

General and Administrative Expenses

General and administrative expenses increased by \$1.9 million for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase was primarily due to increases in professional fees of \$0.9 million related to accounting and legal support, compensation expense of \$0.8 million associated with additional employees hired in early 2021, and \$0.2 million in other general expenses.

Total Other Expense, Net

Total other expense, net increased by \$0.2 million for the year ended December 31, 2021 compared to the year ended December 31, 2020 and was related to our Convertible Notes, which were converted into Series A convertible preferred stock in February 2021. Specifically, during the year ended December 31, 2021 as compared to the year ended December 31, 2020, the expense associated with the change in fair value of the Convertible Notes increased by \$0.3 million, which was partially offset by a decrease in interest expense of \$0.1 million due to the short period of time in 2021 that the Convertible Notes were outstanding prior to their conversion in February 2021.

Results of Operations

Comparison of the Nine Months Ended September 30, 2021 and 2022

	Nine Months Ended September 30,	
	2021	2022
	(in thousands)	
Research and development expenses	\$ 9,692	\$ 18,432
General and administrative expenses	1,950	3,039
Other income (expense), net	683	(745)
Net loss	\$ 12,325	\$ 20,726

Research and Development Expenses

Research and development expenses increased by \$8.7 million for the nine months ended September 30, 2022, compared to the nine months ended September 30, 2021, which was primarily due to increases of \$6.8 million in preclinical and clinical costs related to the research and development of MLS-101, \$1.4 million for clinical supply, manufacturing and regulatory costs, and \$0.5 million in personnel expenses for additional employees to support research and development.

We began a proof-of-concept Phase 2 clinical trial in the United States in 2021. Costs related to executing our clinical trial was the primary driver of the increase in our research and development expense.

General and Administrative Expenses

General and administrative expenses increased by \$1.1 million for the nine months ended September 30, 2022, compared to the nine months ended September 30, 2021. The increase was primarily due to higher compensation expenses of \$0.6 million associated with additional employees and professional fees of \$0.4 million related to accounting, legal and other support.

Total Other Income (Expense), Net

Total other income, net increased by \$1.4 million for the nine months ended September 30, 2022, compared to total other expense, net for the nine months ended September 30, 2021 and was primarily attributable to an

increase in interest income of \$0.7 million related to interest earned on our investments in money market funds and U.S. treasuries during the nine months ended September 30, 2022 and \$0.7 million of expense for changes in fair value of our Convertible Notes during the nine months ended September 30, 2021. The Convertible Notes were converted into Series A convertible preferred stock in February 2021, and no changes in fair value were recorded subsequent to that date.

Liquidity and Capital Resources

We have incurred net losses and negative cash flows from operations since our inception and anticipate we will continue to incur net losses and have negative cash flows from operations for the foreseeable future as we continue the development of, seek regulatory approval for and potentially commercialize MLS-101, seek to identify, assess, acquire and in-license intellectual property related to or develop additional product candidates and become a public company. From inception to September 30, 2022, we raised aggregate gross proceeds of approximately \$158 million from the issuance of Convertible Notes and convertible preferred stock. As of September 30, 2022, we had cash, cash equivalents, and marketable securities of \$121.0 million.

Funding Requirements

Based on our current operating plan, we believe that our existing cash, cash equivalents and marketable securities, together with the estimated net proceeds from this offering, will be sufficient to meet our anticipated cash requirements through at least the next months. 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 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 product 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, but not limited to:

- the initiation, type, number, scope, progress, expansions, results, costs, and timing of clinical trials and preclinical studies of MLS-101 and any future product candidates we may choose to pursue, including any modifications to clinical development plans based on feedback that we may receive from regulatory authorities;
- our ability and strategic decision to develop future product candidates other than MLS-101, and the timing of such development, if any;
- our ability to receive timely regulatory approvals for MLS-101, any future product candidates, and additional indications of MLS-101 and any future product candidates, in the jurisdictions in which we or any future partners apply for such approvals;
- the costs and timing of manufacturing for MLS-101, or any future product candidate, including commercial manufacture at sufficient scale, if any product candidate is approved, including as a result of inflation, any supply chain issues or component shortages;
- any additional jurisdictions in which we may seek approval for MLS-101 and any future product candidates and timing of seeking approval in such jurisdictions;
- the costs, timing, and outcome of regulatory meetings and reviews of MLS-101 or any future product candidates;
- any delays and cost increases that may result from the COVID-19 or any future pandemic;
- the costs of obtaining, maintaining, enforcing, and protecting our patents and other intellectual property and proprietary rights;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal control over financial reporting;

- the costs associated with hiring additional personnel and consultants as our business grows, including additional executive officers and clinical development, regulatory, CMC, quality and commercial personnel;
- the timing and amount of the milestone, royalty, or other payments we must make to Mitsubishi Tanabe, from whom we have in-licensed MLS-101, or any future licensors;
- the costs and timing of establishing or securing sales and marketing capabilities if MLS-101 or any future product candidate is approved;
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors, and adequate market share and revenue for any approved products;
- patients' willingness to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors;
- the terms and timing of establishing and maintaining collaborations, licenses, and other similar arrangements;
- costs associated with any products or technologies that we may in-license or acquire; and
- the other risks and uncertainties described in "Risk Factors," "Special Note Regarding Forward-Looking Statements" and elsewhere in this prospectus.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses, and other similar arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders may 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. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from factors that include but are not limited to, inflation, the conflict between Russia and Ukraine and other factors, diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. If the equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. If we raise additional funds through future collaborations, licenses, or other similar arrangements with third parties, we may have to relinquish valuable rights to our future revenue streams, product candidates, research programs intellectual property or proprietary technology, or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed or on terms acceptable to us, 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 product candidates even if we would otherwise prefer to develop and market such product candidates ourselves, or on less favorable terms than we would otherwise choose.

Cash Flows

Comparison of the Years Ended December 31, 2020 and 2021

Since inception, we have primarily used our available cash to fund expenditures related to the in-license and development of MLS-101. The following table sets forth a summary of cash flows for the periods presented:

	Year Ended December 31,	
	2020	2021
(in thousands)		
Net cash provided by (used in):		
Operating activities	\$ (2,463)	\$ (14,559)
Financing activities	3,830	23,812
Net	<u>\$ 1,367</u>	<u>\$ 9,253</u>

Operating Activities

Net cash used in operating activities of \$14.6 million during the year ended December 31, 2021 increased, compared to \$2.5 million during the year ended December 31, 2020, which was primarily attributable to an increase in cash used to support our operating activities, including but not limited to, the development of MLS-101 and related clinical trial expenses, personnel and compensation expense, and general working capital requirements. The \$12.1 million increase in cash used was also attributable to an increase in net loss of \$16.0 million, partially offset by the net effect of changes in working capital of \$3.6 million and an increase in non-cash operating expenses of \$0.3 million.

Financing Activities

Net cash provided by financing activities of \$23.8 million during the year ended December 31, 2021 increased by \$20.0 million from \$3.8 million during the year ended December 31, 2020. In 2021, we received \$23.8 million in net proceeds from the issuance and sale of our Series A convertible preferred stock. In 2020, we received net proceeds of approximately \$3.9 million from the sale of Convertible Notes.

Comparison of the Nine Months Ended September 30, 2021 and 2022

The following table sets forth a summary of cash flows for the periods presented:

	Nine Months Ended September 30,	
	2021	2022
(in thousands)		
Net cash provided by (used in):		
Operating activities	\$ (9,669)	\$ (19,035)
Investing activities	—	(71,759)
Financing activities	23,812	129,087
Net	<u>\$ 14,143</u>	<u>\$ 38,293</u>

Operating Activities

Net cash used in operating activities of \$19.0 million during the nine months ended September 30, 2022 increased, compared to \$9.7 million during the nine months ended September 30, 2021, which was primarily attributable to an increase in cash used to support our operating activities, including but not limited to, the development of MLS-101 and related clinical trial expenses, personnel and compensation expense, legal and professional fees to support our operations, and general working capital requirements. The \$9.4 million increase in

cash used was attributable to an increase in net loss of \$8.4 million, a decrease in non-cash operating expenses of \$0.8 million, and the net effect of changes in working capital of \$0.2 million.

Investing Activities

Net cash used in investing activities of \$71.8 million during the nine months ended September 30, 2022 increased, compared to zero during the nine months ended September 30, 2021, which was attributable to our investments in money market funds and U.S. treasuries during the nine months ended September 30, 2022 subsequent to our receipt of cash proceeds from the issuance of Series A and B convertible preferred stock in 2022.

Financing Activities

Net cash provided by financing activities of \$129.1 million during the nine months ended September 30, 2022 increased, compared to \$23.8 million during the nine months ended September 30, 2021. During the nine months ended September 30, 2022, we received \$129.6 million in aggregate net proceeds from the issuance of our Series A and B convertible preferred stock and made \$0.6 million in payments for professional fees and other costs associated with this offering. During the nine months ended September 30, 2021, we received \$23.8 million in net proceeds from the issuance and sale of our Series A convertible preferred stock.

Contractual Obligations and Commitments

Under the Mitsubishi License, we have milestone payment obligations that are contingent upon the achievement of certain development milestones and specified levels of product sales and are required to make certain royalty payments in connection with the sale of products developed under the agreement. We are currently unable to estimate the timing or likelihood of achieving the milestones or making future product sales. See above and Note 4. “Commitments and Contingencies” to our financial statements included elsewhere in this prospectus for additional information regarding the Mitsubishi License. For additional information regarding the Mitsubishi License, see “Business—Intellectual property—License agreement with Mitsubishi Tanabe.”

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.

Critical Accounting Policies and Significant Judgments and Estimates

We have prepared the financial statements in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates, assumptions, and judgments that affect the reported amounts of assets, liabilities, expenses, and related disclosures at the date of the financial statements, and the reported amounts of expenses during the reporting period. On an ongoing basis, management evaluates its critical estimates, including those related to accrued research and development expenses. We base our estimates on our historical experience and on assumptions that we believe are reasonable; however, actual results may differ materially from these estimates under different assumptions or conditions.

For information on our significant accounting policies, please refer to Note 2. “*Summary of Significant Accounting Policies*” of the notes to our financial statements included elsewhere in this prospectus.

Prepaid and Accrued Research and Development Expenses

As part of the process of preparing our financial statements, we are required to estimate our prepaid and accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost. The majority of our service providers provide us invoices monthly in arrears for services performed. We make estimates of our prepaid and accrued research and development expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us at the time. We confirm

the accuracy of estimates with the service providers and make adjustments if necessary. Examples of estimated prepaid and accrued research and development expenses include expenses for:

- CROs in connection with clinical trials;
- investigative sites in connection with clinical trials;
- vendors in connection with preclinical development activities; and
- vendors related to product manufacturing, development, and distribution of clinical materials.

Prepaid and expense accruals related to clinical trials are based on our estimates of services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical trials on our behalf. The financial terms of these agreements vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the enrollment of patients and the completion of clinical trial milestones. In accruing costs, we estimate the period over which services will be performed and the level of effort to be expended in each period based upon patient enrollment, clinical site activations, or information provided to us by our vendors on their actual costs incurred. Any estimates of the level of services performed or the costs of these services could differ from actual results.

To date, we have not experienced significant changes in our estimates of accrued research and development expenses after a reporting period. However, due to the nature of estimates, we cannot assure that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical trials and other research activities.

Fair Value Option for Convertible Notes

We elected to account for our Convertible Notes at fair value in order to measure those liabilities at amounts that more accurately reflected the current economic environment in which the Company operates. We recorded the Convertible Notes at fair value at the date of each issuance with changes in fair value recorded in earnings at each reporting period until their conversion into Series A convertible preferred stock in February 2021. The fair value of the Convertible Notes was determined using a guideline transaction method valuation model. Significant assumptions used to determine the fair value of the put feature include the estimated probability of exercise of the put option and the discount rate used to calculate fair value. The estimated probability of exercise is based on management's expectation for future equity financing transactions. The discount rate is based on the weighted-average effective yield of notes previously issued by the Company, adjusted for changes in market yields of biotechnology sector CCC-rated debt.

Determination of the Fair Value of our Common Stock

Historically for all periods prior to this offering, since there has been no public market for our common stock, we have been required to estimate the fair value of the common stock underlying our equity awards when performing fair value calculations. The fair value of the common stock underlying our equity awards was determined on each grant date by our board of directors, taking into consideration input from management and independent third-party valuation analyses. 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. Prior to obtaining the Mitsubishi License in July 2020, the fair value of our common stock was nominal because we were not sufficiently capitalized and held no assets that could be used to generate future revenues. Subsequent to obtaining the Mitsubishi License, we considered various objective and subjective factors to determine the fair value of our common stock, including:

- valuations of our common stock performed with the assistance of independent third-party valuation specialists;
- our stage of development and business strategy, including the status of research and development efforts of MLS-101, and the material risks related to our business and industry;

- our results of operations and financial position, including our levels of available capital resources;
- the valuation of publicly-traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- the lack of marketability of our common stock as a private company;
- the prices of our convertible preferred stock sold to investors in arm’s length transactions and the rights, preferences, and privileges of our convertible preferred stock relative to those of our common stock; and
- 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.

There are significant judgments and estimates inherent in the determination of the fair value of our common stock. These judgments and estimates include assumptions regarding our future operating performance, the time to complete an initial public offering or other liquidity event, and the determination of the appropriate valuation methods. If we had made different assumptions, our net loss and net loss per common share could have been significantly different.

Following the completion of this offering, the fair value of our common stock will be based on the closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Stock-Based Compensation Expense

Stock-based compensation expense represents the cost of the grant date fair value of equity awards recognized over the requisite service period of the awards (generally the vesting period) on a straight-line basis with forfeitures recognized as they occur. We have not recognized any material amount of stock-based compensation and do not have any material amounts of unrecognized stock-based compensation related to those awards.

We estimate the fair value of option grants using the Black-Scholes option pricing model. Estimating the fair value of equity awards as of the grant date using valuation models, such as the Black-Scholes option pricing model, is affected by assumptions regarding a number of variables, including the risk-free interest rate, the expected stock price volatility, the expected term of stock options, the expected dividend yield and the fair value of the underlying common stock on the date of grant. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation expense is recognized. These inputs are subjective and generally require significant analysis and judgment to develop. See Note 2. “*Summary of Significant Accounting Policies*” of the notes to our financial statements included elsewhere in this prospectus for 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 granted during 2021.

JOBS Act and Smaller Reporting Company Status

As an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act), we can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for complying with new or revised accounting standards and as a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of Sarbanes-Oxley.

We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.235 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if, among other factors, the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last

business day of the second fiscal quarter of such year (subject to certain conditions), or (iv) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

Recent Accounting Pronouncements

We have reviewed all recently issued accounting pronouncements and have determined that, other than as disclosed elsewhere in this prospectus, such standards do not have a material impact on our financial statements or do not otherwise apply to our operations.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to market risk related to changes in interest rates of our investment portfolio of cash equivalents and marketable securities. As of September 30, 2022, our cash equivalents and marketable securities consisted of money market funds and U.S. treasury securities. As of December 31, 2020 and 2021, we had no cash equivalents or 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. The fair value of our short-term cash equivalents and marketable securities is subject to change as a result of potential changes in market interest rates, including changes resulting from the impact of the COVID-19 pandemic. Due to the nature of our cash equivalents and marketable securities, we believe an immediate hypothetical 10% change in interest rates would not have had a material effect on our results of operations during the periods presented.

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 these arrangements. To date, these fluctuations have not been significant, and we have not had a formal hedging program with respect to foreign currency. We believe an immediate hypothetical 10% change in exchange rates would not have had a material effect on our results of operations during the periods presented.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and research and development contract costs. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, we may experience some effect in the near future (especially if inflation rates continue to rise) due to an impact on the costs to conduct clinical trials, labor costs we incur to attract and retain qualified personnel, and other operational costs. Inflationary costs could adversely affect our business, financial condition and results of operations.

BUSINESS

Business Overview

We are a clinical-stage biopharmaceutical company focused on developing medicines to target diseases driven by abnormally elevated aldosterone. Our product candidate, MLS-101, is a proprietary, orally administered, highly selective aldosterone synthase inhibitor (ASI) that we are initially developing for the treatment of patients with uncontrolled hypertension (uHTN), defined as individuals who are unable to achieve BP of below 130/80 mmHg despite taking two or more lines of antihypertensive medication or resistant hypertension (rHTN). In the United States, there are over 115 million patients who have sustained elevated blood pressure (BP), or hypertension and more than half of this population fails to achieve their BP goals, defined as BP of 130/80 mmHg with currently available medications. There are over 30 million treated patients who do not achieve their BP goal, of whom approximately 20 million have systolic BP levels greater than 140 mmHg. Patients with hypertension that persists despite taking two or more medications have 1.8 and 2.5 times greater mortality risk due to either cardiovascular disease or stroke, respectively. In a Phase 2 clinical trial evaluating 200 subjects with uHTN and rHTN (Target-HTN), MLS-101 demonstrated a clinically meaningful and statistically significant reduction in BP with once-daily dosing and was well tolerated. In addition to hypertension, we intend to develop MLS-101 for the treatment of chronic kidney disease (CKD) and believe that our product candidate holds promise to be an innovative solution for the rapidly growing unmet need in multiple cardiorenal disorders.

Hypertension is one of the most common medical conditions globally, afflicting approximately 1.3 billion people and resulting in an estimated average of \$130 billion annual economic burden in the United States alone between 2003 and 2014. Despite the availability of multiple treatment options, including thiazide diuretics, angiotensin-converting enzyme (ACE)-inhibitors, angiotensin II receptor blockers (ARBs), calcium channel blockers, beta blockers, and mineralocorticoid receptor antagonists (MRAs), the prevalence of uHTN continues to grow, further exacerbated by the rapidly rising rate of obesity. Over 30 million hypertensive patients in the United States are unable to achieve their BP goal despite treatment. Within this population there are approximately 10.3 million patients suffering from rHTN, defined as individuals who are unable to achieve BP of below 130/80 mmHg, despite taking three or more antihypertensive medications. Multiple large-scale studies have demonstrated that patients who fail to achieve their BP goal have a significantly elevated risk of developing heart disease, stroke and kidney disease (Wright JT Jr, et al. A randomized trial of intensive versus standard blood-pressure control. *N Engl J Med.* 2015;373(22):2103-2116; and Zhou, et al., Uncontrolled Hypertension Increases Risk of All-Cause and Cardiovascular Disease Mortality in US Adults: the NHANES III Linked Mortality Study. *Scientific Reports*, 2018;8(1):1-7). Patients with rHTN have a 1.5 and 2.3 times higher risk than normotensive patients for composite cardiovascular events and end-stage renal disease, respectively. Notwithstanding this significant and growing unmet need, there has been a lack of U.S. Food and Drug Administration (FDA)-approved novel therapies targeting hypertension, with no new class of antihypertensive treatment approved within the last fifteen years.

Abnormally elevated aldosterone levels are a key factor in driving hypertension in approximately 25% of hypertensive patients. Developing an effective hypertension therapy that targets aldosterone synthase remains a significant challenge, given the tight homology between the enzymes that regulate aldosterone and cortisol synthesis, as well as aldosterone's role in potassium retention. Several large pharmaceutical companies have tried to develop ASIs, but their efforts have been hampered due to insufficient selectivity for aldosterone, resulting in off-target toxicities associated with cortisol inhibition. These challenges have led to the discontinuation of many ASIs in development to date.

Our Product Candidate, MLS-101

Our product candidate, MLS-101, is a proprietary, orally administered, highly selective ASI that is designed to reduce aldosterone levels by inhibiting CYP11B2, the enzyme responsible for producing the hormone. We licensed MLS-101 from Mitsubishi Tanabe Pharmaceutical Company (Mitsubishi Tanabe), who discovered the compound and provided the early foundational work, including demonstrating the selectivity of MLS-101, and progressing the asset through Phase 1 clinical development. We completed the Target-HTN trial, a Phase 2 proof-of-concept trial for MLS-101 in the treatment of uHTN and rHTN in 2022. Given that hypertension and abnormal

aldosterone biology can lead to cardiorenal disease, we intend to further develop MLS-101 across other indications such as the treatment of CKD.

	Indication	Preclinical	Phase 1*	Phase 2	Phase 3
MLS-101	uHTN & rHTN				
	Chronic Kidney Disease				

*The first-in-human Phase 1 clinical trial of MLS-101 was conducted by Mitsubishi Tanabe. See “Phase 1 Clinical Trial Results” beginning on page 07 for additional details regarding this trial.

We may rely on the data from MLS-101’s completed Phase 1 trial in healthy volunteers and intend to use the observations from that trial and the Phase 2 trial in uHTN and rHTN to inform the development of MLS-101 for the treatment of CKD.

Target-HTN was a randomized, double-blind, placebo-controlled trial conducted in the United States across 200 subjects with uHTN and rHTN to evaluate the efficacy of MLS-101 at various doses either once or twice a day. All subjects were required to remain on background medications.

Target-HTN Key Clinical Results

BP Lowering Metrics (Observed Mean)	Associated BP Reduction	
	100mg QD Part 1	50mg QD
Placebo-adjusted Systolic BP*	-8.7 mmHg	-10.0 mmHg
Placebo-adjusted 24-hour Systolic ABPM	-8.3 mmHg	-10.7 mmHg**
Placebo-adjusted 24-hour Systolic ABPM Nighttime	-8.2 mmHg	-4.3 mmHg**
Placebo-adjusted 24-hour Central Systolic BP	-11.6 mmHg	-11.9 mmHg**

*Mixed effects model with repeated measures (MMRM) results for 100mg QD Part1 and 50mg QD were -7.9mmHg and -9.7mmHg, respectively.

**Results from post-hoc sensitivity analysis reflecting subjects who passed Quality Control criteria and in whom both baseline AOBP and ABPM > 130mmHg

The results of the Target-HTN trial demonstrated a clinically meaningful and statistically significant placebo-adjusted reduction in systolic BP, as measured by automated office blood pressure (AOBP), of 9.7 mmHg (p<0.01) and 7.9 mmHg (p<0.04) in the 50 mg and 100 mg once-daily (QD) cohorts, respectively. A p-value is the probability that the reported result was achieved purely by chance, such that a p-value of less than or equal to 0.05

means that there is a less than or equal to 5% probability that the difference between the control group and the treatment group is purely due to chance. A p-value of 0.05 or less typically represents a statistically significant result. The FDA's evidentiary standard when evaluating the results of a clinical trial generally relies on a p-value of less than or equal to 0.05. In a meta-analysis of 147 randomized trials, a 10 mmHg reduction of systolic BP or a 5 mmHg reduction in diastolic BP has been shown to reduce the risk of stroke by 41% and coronary heart disease by 22%. The reduction in systolic BP, as measured by AOBP, was validated and confirmed by comparable reductions in systolic BP with MLS-101, as measured by 24-hour mean ambulatory blood pressure monitoring (ABPM). The ABPM data further demonstrated the benefits of MLS-101 on both central and nighttime BP reduction, which have been strongly linked to cardiovascular health risk. The trial results also highlighted that patients with a body mass index (BMI) greater than 30, or obese patients, who are at an elevated risk of cardiorenal diseases, exhibited a 13.2 or 16.6 mmHg placebo-adjusted reduction in systolic BP with a 100 mg QD or 50 mg QD dose, respectively. Treatment-emergent serious adverse events (SAEs) were reported in three subjects, one of which was deemed to be possibly related to MLS-101 in a subject with worsening of preexisting hyponatremia, which reversed after discontinuation. The two active, once-daily doses saw modest increases in potassium levels across the cohorts of 0.25 mmol/L with the 50 mg QD and 0.35 mmol/L with the 100 mg QD dose. Six subjects experienced transient elevated serum potassium greater than 6.0 mmol/L, none of which were considered an SAE, and all rapidly resolved after discontinuation or dose adjustment, which is consistent with the short half-life of MLS-101. One of the events was assessed as erroneous due to sample misprocessing. As anticipated, and in a manner similar to ACE-inhibitors and ARBs, the BP lowering effect of MLS-101 led to a beneficial, reversible dose-dependent reduction in estimated glomerular filtration rate (eGFR), a measure of kidney function. Finally, the selectivity of MLS-101 for aldosterone inhibition was confirmed as cortisol levels were not observed to be inhibited across the range of doses.

Our Strategy

Our strategy is to develop and commercialize MLS-101 for the treatment of diseases driven by abnormally elevated aldosterone, initially focused on hypertension, with the goal of eventually expanding to other cardiorenal diseases. Key elements of our strategy include:

- **Advance MLS-101, our ASI product candidate, through clinical development for the treatment of uHTN and rHTN.** uHTN and rHTN represent a significant unmet need within the 115 million patients in the United States who have hypertension. More than half of hypertensive patients fail to achieve their BP goals despite treatment, and approximately 20 million treated patients have systolic BP greater than 140 mmHg. Topline data from our Target-HTN Phase 2 trial demonstrated that MLS-101 lowered the systolic BP of patients with uHTN and rHTN at a clinically meaningful and statistically significant level, with a mean placebo-adjusted reduction in systolic BP of 9.7 or 7.9 mmHg with a 50 or 100 mg QD dose, respectively. Additionally, treatment with MLS-101 demonstrated a robust effect in obese patients, who, studies show, tend to have abnormal aldosterone biology. We believe our approach of normalizing aldosterone levels can provide an effective and more targeted approach for the control of hypertension. We plan to continue to advance the development of MLS-101 in hypertension.
- **Expand the development of MLS-101 into additional indications where abnormally elevated aldosterone is a driver in the disease pathology, including CKD and potentially other cardiorenal indications.** MLS-101 has been developed to normalize the production of aldosterone, and we believe this mechanism can be applied to other indications where abnormal aldosterone biology plays a role. We intend to initiate a Phase 2 proof-of-concept trial for CKD. Uninhibited aldosterone is known to play a critical role in the progression of CKD, which affects over 23 million people in the United States. Furthermore, we may expand the development of MLS-101 into additional cardiorenal indications.
- **Opportunistically evaluate strategic partnerships to maximize the value of MLS-101.** We have worldwide development and commercialization rights to MLS-101. Given the potential of aldosterone inhibition to treat multiple cardiorenal conditions, we may opportunistically explore partnerships with other biopharmaceutical companies that could provide expertise and resources to expand the development and commercialization of MLS-101.

- ***Continue to evaluate opportunities to selectively expand our pipeline beyond MLS-101.*** Our team has experience in various aspects of drug discovery, clinical development, business development and commercialization. We will continue to leverage our team's expertise to selectively evaluate potential strategic partnerships, collaborations, licenses and acquisitions to expand our pipeline, particularly in cardiorenal indications.

Background of Hypertension

In healthy individuals, normal BP, also known as peripheral blood pressure, is below 130 over 80, meaning the pressure measurement is lower than 130 mmHg when the heart is contracting (systolic BP) and at or below 80 mmHg when the heart is relaxed (diastolic BP). Sustained, elevated BP, or hypertension, can result in increased chances of life-threatening complications such as heart disease, stroke or kidney disease, among others.

The prevalence of hypertension has been increasing in recent decades. A comprehensive study published in The Lancet journal shows that in patients aged 30 to 79, total hypertension cases nearly doubled worldwide from 1990 to 2019. Furthermore, obesity, especially when associated with increased visceral adiposity, is a major cause of hypertension, accounting for 65% to 75% of the risk for developing human primary (essential) hypertension. Despite hypertension being one of the most common preventable risk factors for premature death, approximately 1.3 billion people worldwide have hypertension, with hypertension as a primary or contributing cause to more than 670,000 deaths in the United States in 2020 alone. The costs of hypertension and related health issues are a major burden on already strained healthcare systems, with an estimated average of \$130 billion annual economic burden in the United States alone between 2003 and 2014. While there are multiple therapeutic options available, most of which are generic and accessible, more than half of all treated hypertensive patients fail to achieve their BP goal.

The current standard-of-care for patients newly diagnosed with hypertension is based on a set of guidelines set forth by the American College of Cardiology and the American Heart Association. A hypertensive patient's target BP is defined as below 130/80 mmHg. Depending on baseline BP levels, these guidelines recommend the patient typically begin with lifestyle modifications and then, assuming BP does not achieve the desired target, initiate treatment with antihypertensive agents selected primarily from the following five drug classes, which may later be combined with each other if the patient's target BP is not successfully achieved with the initial therapy:

- Thiazide diuretics, which increase fluid excretion from the kidney by blocking reabsorption of sodium and chloride in the nephron;
- ACE inhibitors, which inhibit the renin-angiotensin aldosterone system axis by blocking the action of ACE in the lungs, which converts angiotensin I to angiotensin II;
- ARBs, which block the effects of angiotensin II at the level of the angiotensin receptor;
- Calcium channel blockers, which slow cardiac contractions and relax arteries by preventing calcium from entering the cells of the heart and arteries; and
- Beta blockers, which cause the heart to beat more slowly and with less force, which lowers BP.

Despite numerous available treatment options, the majority of hypertensive patients require multiple therapies to achieve their target BP. Evidence demonstrates that adding a second- or third-line antihypertensive agent typically provides an additional 6 to 7 mmHg reduction in systolic BP. However, the incremental reduction in systolic BP provided by successive lines of treatment does not always adequately enable patients to reach their BP goal. Therefore, many patients require three, four or more antihypertensive agents in an attempt to achieve their target BP. In addition, while hypertension is an asymptomatic disease, many of the currently available treatments have side effects and tolerability issues, which may limit their use. For example, patients taking ACE inhibitors often develop a chronic cough and those taking beta blockers often experience lethargy.

In a meta-analysis of 147 randomized trials, a 10 mmHg reduction in systolic BP or a 5 mmHg reduction in diastolic BP has been shown to reduce the risk of stroke by 41% and coronary heart disease by 22%. The Systolic BP Intervention Trial (SPRINT) study further demonstrated that in adults with hypertension but without diabetes,

lowering systolic BP below 120 mmHg reduced cardiovascular events by 25% and reduced the overall risk of death by 27% compared to those with a systolic BP of 140 mmHg or higher. The importance of nighttime BP as a predictor of cardiovascular risk is increasingly recognized. Evidence has demonstrated that higher nighttime systolic BP has a strong association with increased cardiovascular risk. The study's findings stress the importance of targeting a reduction in nighttime systolic BP when considering treatment approaches.

Over 30 million hypertensive patients in the United States are unable to achieve their BP goal despite treatment, and within this population, 10.3 million suffer from rHTN. Treatment options are limited for rHTN patients, and the current standard-of-care is to introduce an MRA agent, which blocks the effect of aldosterone, to their existing antihypertensive regimen.

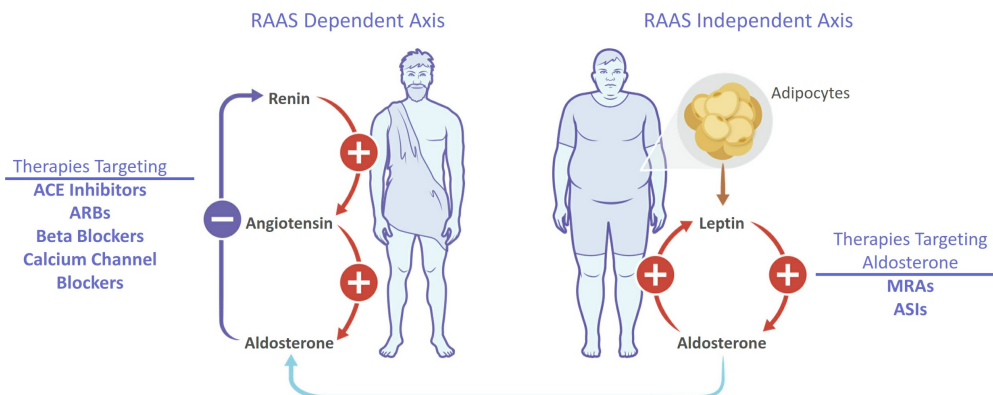
Background of Aldosterone and its Role in Hypertension

Aldosterone is a mineralocorticoid steroid hormone primarily made in the outer layer of the adrenal gland called the adrenal cortex, which plays an important role in controlling the balance of water and salts by keeping sodium in and releasing potassium from the body. This maintenance of homeostasis ensures the body can maintain normal BP.

In a healthy person, homeostatic balance is maintained via a feedback loop called the renin-angiotensin aldosterone system (RAAS). Renin is a key enzyme that is released by the kidneys when they sense changes in BP to control the production of aldosterone, in order to help the kidneys regulate water and salt levels in the body. In a normal physiological state, aldosterone production increases when BP is too low and decreases when BP is too high. This is considered renin-dependent hypertension due to the linkage of renin levels to aldosterone production.

In addition to the self-regulated RAAS, there are other pathways that drive aldosterone production. Evolving information about hormone regulation of visceral adipocytes and the adrenal gland support the hypothesis that adipokines, specifically elevated leptin and reduced adiponectin, can affect aldosterone and renin, respectively. The net result is an increase in aldosterone and prevention of the normal feedback inhibition of renin. This is considered renin-independent aldosterone production and is due to dysregulated systems biology, which is often prevalent in an obese population.

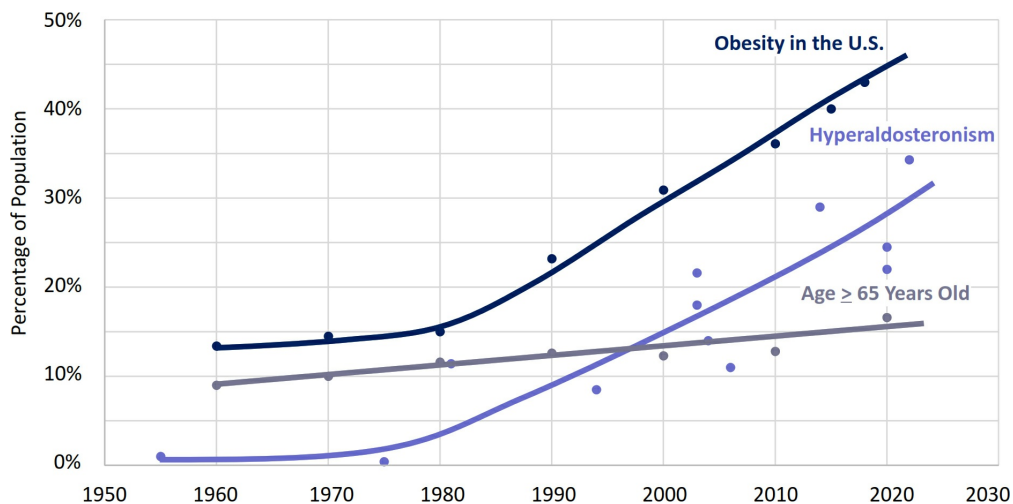
Overview of Renin-Dependent and Renin-Independent Aldosterone Production



Elevated aldosterone also causes insulin resistance, inflammation and fibrosis of the heart, fibrosis and remodeling of blood vessels, and tubulointerstitial fibrosis and glomerular injury in the kidney. Aldosterone excess is believed to lead to a higher risk of stroke, kidney damage, congestive heart failure and heart attack, compared to high BP alone. Many of these symptoms are often comorbidities in an obese population.

Many of the therapies designed to address hypertension, such as ACE inhibitors, ARBs, beta blockers, calcium channel blockers and diuretics, were developed and introduced several decades ago, when the incidence of obesity was below 20% and abnormal aldosterone production affected less than 10% of the U.S. population. The increasing prevalence of obesity and hypertension, driven by the renin-independent axis, has resulted in higher incidences of uHTN and rHTN. Currently available therapies are generally effective in managing renin-dependent hypertension, however they fail to adequately address the shifting biology of hypertension today. For example, ACE inhibitors and ARBs indirectly reduce aldosterone levels, but up to 40% of treated patients experience “aldosterone breakthrough,” whereby their aldosterone levels return to normal or higher levels and result in elevated BP.

Growing Epidemic of Obesity Correlated to Rise in Hyperaldosteronism



MRAs, which were initially introduced in the 1950s, are designed to work by blocking the effect of aldosterone, whether renin-dependent or renin-independent, from the mineralocorticoid receptor (MR) but do not inhibit aldosterone production. There are two well-known MRAs available in the United States for the treatment of hypertension, spironolactone and eplerenone, which are both available as generic medicines. MRAs are known to be effective in lowering BP; however, they have demonstrated side effects that have limited their use. Specifically, spironolactone, the most commonly prescribed MRA, is known for inducing hyperkalemia as well as gynecomastia in men and fertility issues in women. Additionally, when aldosterone is blocked from binding to the MR, circulating aldosterone levels increase two- to three-fold and may cause other harmful non-MR-related effects in the body.

More recently, several pharmaceutical companies have tried to develop ASIs. The approach of blocking the synthesis of aldosterone and reducing plasma aldosterone levels is thought to be a preferable approach versus the use of MRAs that block the action of aldosterone at the MR. However, the task of creating a safe and effective ASI proved to be technically challenging. The major enzymes in the synthesis of aldosterone and cortisol share a high degree of amino acid sequence similarity. Therefore, an ASI needs to be very selective in inhibiting the synthesis of aldosterone without impacting the synthesis of cortisol. Initial attempts to develop ASIs failed in either preclinical or clinical development due to their inability to selectively inhibit aldosterone, which resulted in such ASIs inhibiting cortisol levels and leading to related harmful effects.

Our Product Candidate, MLS-101

Our product candidate, MLS-101, is a proprietary, orally administered, highly selective ASI designed to reduce aldosterone levels by inhibiting CYP11B2, the enzyme responsible for producing the hormone. We are initially developing MLS-101 for the treatment of hypertension and have recently completed Target-HTN, our initial Phase 2 proof-of-concept clinical trial. In this trial, MLS-101 was well tolerated and demonstrated compelling

clinical results, and once-daily dosing flexibility. The observed 10 to 12 hour half-life of MLS-101 has the potential to normalize aldosterone levels to provide a clinically meaningful reduction in BP, and to flexibly manage the challenges of elevated serum potassium. Some of the key differentiators that we have observed to date for MLS-101, relative to initially developed ASIs, include:

- **Compelling Clinical Results:** Target-HTN demonstrated a statistically significant 9.7 mmHg and 7.9 mmHg reduction in systolic BP in the 50 mg and 100 mg QD cohorts, respectively, which we believe to be clinically meaningful. The reduction in systolic BP was validated and confirmed by 24-hour mean ABPM, which further demonstrated that MLS-101 provides both central and nighttime BP reduction;
- **High Selectivity:** Phase 1 and Phase 2 clinical data demonstrated high aldosterone selectivity with no cortisol suppression, as anticipated by the 374 to 1 inhibitory effect on the CYP11B2 enzyme compared to the CYP11B1 enzyme, which is responsible for synthesizing cortisol;
- **Optimal Half-Life:** A majority of our clinical trial subjects maintained a serum potassium in the normal range. There were modest incidences of hyperkalemia requiring dose adjustment or discontinuation. Six subjects experienced transient elevated serum potassium greater than 6.0 mmol/L, none of which were considered an SAE and all rapidly resolved after discontinuation or dose adjustment. One of the events was assessed as erroneous due to sample misprocessing. MLS-101's observed 10 to 12 hour half-life may be viewed more favorably by physicians compared to compounds with longer half-lives, which may have greater risk of sustained potassium elevation; and
- **Convenient Dosing and Well Tolerated:** Target-HTN demonstrated clinically meaningful results on a once-daily dosing regimen. Furthermore, MLS-101 was well-tolerated.

Target-HTN Phase 2 Clinical Trial

Target-HTN was a two-part Phase 2 randomized, double-blind, placebo-controlled, dose-ranging, multi-center trial designed to evaluate the safety, efficacy and tolerability of orally administered MLS-101 for the treatment of uHTN and rHTN, when used as an add-on therapy to stable background treatment of two or more antihypertensive medications in 200 males and females. The trial was conducted in the United States.

The objectives of the Target-HTN trial were the following:

- Proof-of-concept for the use of MLS-101 in patients with uHTN and rHTN;
- Establishing the dose range and regimen for late-stage development;
- Determining whether clinical results support a once-a-day dosing regimen;
- Evaluating hypothesized predictors of clinical response, specifically obesity and plasma renin activity, as potentially useful strategies for prioritizing the use of MLS-101 as a targeted therapy for hypertension;
- Characterizing safety and establishing an initial estimate of the benefit/risk profile; and
- Evaluating exploratory endpoints that may be predictive of future utility of MLS-101 in associated cardiorenal indications such as congestive heart failure and CKD.

The trial was conducted in two parts. In Part 1, subjects were initially pre-screened for a period of up to two weeks with a requirement for their systolic/diastolic BP to be over 130/80 mmHg with the use of two or more background medications indicated for hypertension such as ACE inhibitors, ARBs, calcium channel blockers or diuretics. Subjects in Part 1 were also required to have low-renin hypertension defined as hypertension with a plasma renin activity level of 1.0 ng/mL/h or less. Subjects were excluded if they were taking an MRA or sodium channel blocker. Once subjects met the prescreening criteria, they were followed for two weeks during a blinded, placebo run-in period where their elevated BP was reconfirmed while compliant on background medication and

placebo. If patients were compliant on their background medication and continued to have BP above 130/80 mmHg, subjects were randomized in five active cohorts and one placebo cohort. Subjects were dosed for eight weeks, then, upon withdrawal of study medication, followed for another four weeks.

Baseline Demographics of the Patients Enrolled in Target-HTN

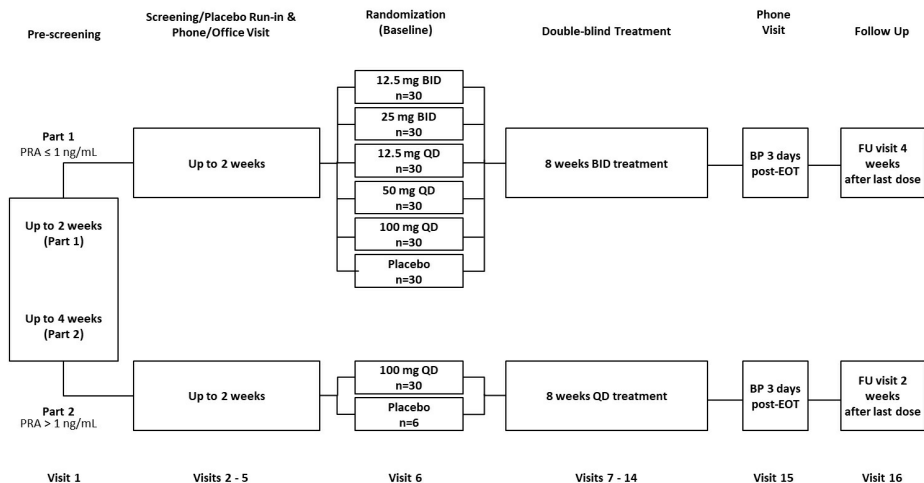
Category	Mean ± SEM of Baseline
Systolic BP (mmHg)	143.3 ± 0.85
Diastolic BP (mmHg)	81.6 ± 0.68
Body Mass Index (kg/m ²)	31.1 ± 0.41
Mean Baseline eGFR	77.4 ± 2.55
Race % Black or African American	39.3%
Gender % Male	41.7%
Ethnicity % Hispanic or Latino	46.6%
Diabetes	37.4%
Heart Failure	3.0%
Previous Myocardial Infarction	6.7%
Number of Background Antihypertensive Medications	2 medications = 52.8% 3 or more medications = 47.2%
Use of Thiazide or Thiazide-like Diuretic	56.4%
Use of ACE or ARB	77.9%

We conducted a pre-planned interim analysis for Part 1 of the trial when approximately one-third (65 subjects) of the planned enrollment had completed a minimum of four weeks of treatment, representing approximately 10-12 subjects per cohort. To preserve the blinding of the trial, the interim analysis was conducted by a small team that was not involved in operational aspects of the trial and no results of the analysis were shared with the operational team at clinical trial sites. The primary purpose of the interim analysis was to assess whether the chosen dose range appeared to adequately span the range from sub-therapeutic to maximum therapeutic response determined by change in systolic BP at week 4 relative to baseline. As a result of the interim analysis, we discontinued further enrollment in two of the lower dose cohorts (12.5 mg QD and 12.5 mg BID) due to the modest efficacy and projected benefit/risk ratio and initiated Part 2 of the trial.

Part 2 was designed to study the effect of MLS-101 in subjects with normal-to-high renin levels, and we selected 100 mg QD as the dose to study based on its efficacy and safety as demonstrated in the interim analysis. Subjects enrolled in Part 2 were randomized to either 100 mg of MLS-101 once-daily (n=31) or placebo (n=6) to preserve the blinded randomization of the trial. The Part 2 subjects followed the same study conduct as Part 1 subjects, with the exception of the follow up period, which was shortened from four weeks to two weeks.

The primary endpoint of Target-HTN was change in seated, pre-dose morning systolic BP at week 8 versus baseline reading as measured by AOBP. The pre-planned analysis of the primary endpoint was an MMRM. Between Part 1 and Part 2, 100 mg QD, the pre-planned comparison of the primary endpoint was an unpaired, two-tailed T-test, using the observed change from baseline to week 8. Secondary endpoints included 24-hour ABPM change at week 8 versus baseline, diastolic BP change at week 8 versus baseline and proportion of subjects achieving BP goal at week 8. For the purpose of evaluating safety, findings from the 100 mg QD cohorts from Parts 1 and 2 were pooled.

Phase 2 Target-HTN Clinical Trial Design



BID = twice-daily; EOT = end of treatment; FU = follow up; PRA = plasma renin activity; QD = once-daily

Efficacy

The outcomes of the Phase 2 proof-of-concept study of MLS-101, as shown in the chart below, demonstrated efficacy across defined endpoints and was well tolerated in once-daily dosing.

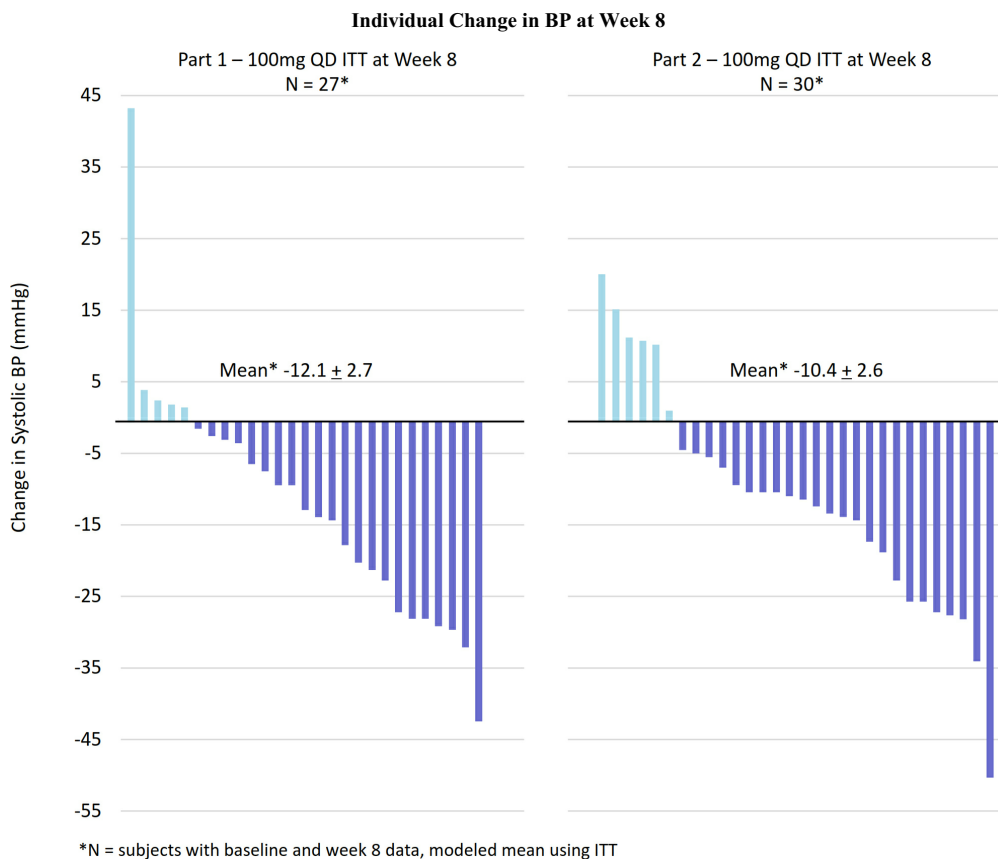
The primary endpoint for Part 1 of Target-HTN was the change in systolic BP at week 8 relative to baseline. As indicated in the table below, in an intent-to-treat analysis, MLS-101 showed a statistically significant reduction in systolic BP, which we believe to be clinically meaningful, in a dose-dependent manner. The once-daily doses of 50 mg and 100 mg of MLS-101 demonstrated comparable reduction in systolic BP, as compared to the twice-daily dosing of MLS-101 with either 12.5 mg or 25 mg of MLS-101. The higher doses of both once-daily and twice-daily MLS-101 also generated a reduction in diastolic BP over the course of the trial, which we believe to be clinically meaningful.

Target-HTN Efficacy Data, as Measured by AOBP

BP Lowering Metric (Mixed Model Repeated Measures)	Placebo n=30	12.5 mg QD n=22	50 mg QD n=28	100 mg QD n=30	12.5 mg BID n=22	25 mg BID n=30
Systolic BP, mmHg	-4.3 ± 2.6	-5.6 ± 3.1	-13.9 ± 2.6	-12.2 ± 2.7	-11.3 ± 3.1	-11.0 ± 2.6
Placebo-adjusted Systolic BP, mmHg		-1.4 p=0.731	-9.7 p=0.010	-7.9 p=0.037	-7.1 p=0.082	-6.8 p=0.067
Diastolic BP, mmHg	-1.3 ± 1.8	-1.8 ± 2.6	-8.1 ± 1.7	-4.8 ± 1.5	-6.1 ± 1.8	-3.8 ± 2.1

We believe the difference between BP reduction in the 50 mg and 100 mg cohorts was not statistically significant and confirmed that this was predominantly the result of a single outlier in the 100 mg cohort who discontinued study drug after less than two weeks of treatment, yet remained in the study.

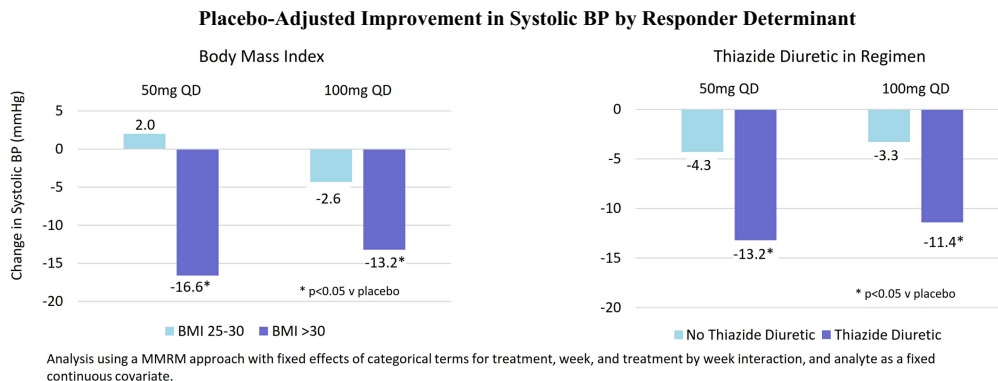
In Part 2, 31 subjects with normal or elevated renin were treated with once-daily MLS-101 at 100 mg QD and assessed similarly to those in Part 1. The reduction in systolic BP in Part 2 of this trial was not statistically different from the reduction seen in Part 1 (see figure below). As a result, we believe that MLS-101 has the potential to be effective across the entire range of renin levels.



A further predefined objective of this trial was to evaluate potential predictors of clinical response to MLS-101. There was no consistent difference in clinical response to MLS-101 observed based on gender, race, age, or number of baseline antihypertensive medicines. Our analysis of the clinical results demonstrated the following determinants to be positively correlated to clinical response:

- Obesity. Hypertensive subjects with a BMI ≥ 30 kg/m² demonstrated a significant reduction of systolic BP with a placebo-adjusted reduction of 16.6 mmHg with 50 mg QD and a reduction of 13.2 mmHg with 100 mg QD in Part 1 of the study. The obesity finding, in particular, (i) lends support to our hypothesis of the linkage between obesity-leptin-aldosterone axis and hypertension and (ii) serves as an important rationale for the design of our proposed pivotal validation program; and

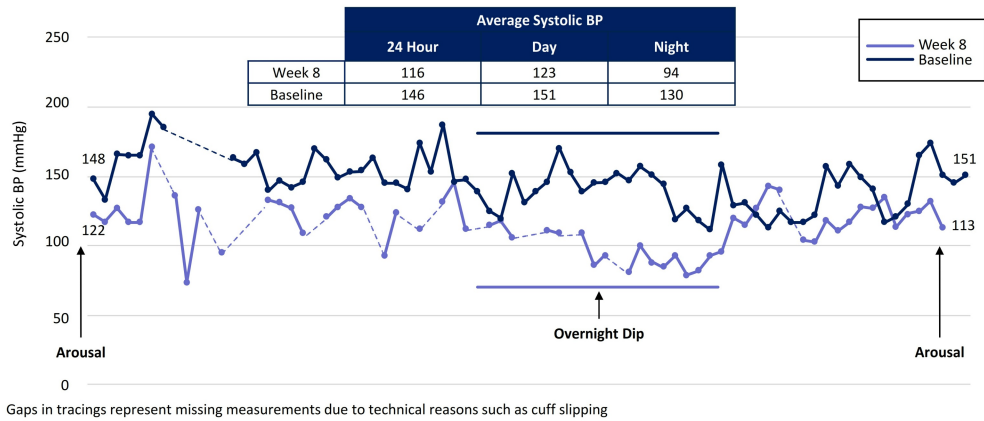
- Use of diuretics. Subjects taking a diuretic as a part of their background regimen demonstrated a significant reduction of systolic BP with a placebo-adjusted reduction of 13.2 mmHg with 50 mg QD, 11.4 mmHg with 100 mg QD and 5.3 mmHg with 12.5 mg QD in Part 1 of the study.



Subjects were required to wear a device that captures BP readings multiple times per hour over a 24 hour period. This measurement provides a more complete picture of the patient’s hypertension status than in-office measurements and eliminates the impact of the phenomenon known as “white coat” hypertension, which occurs when BP readings at a healthcare provider’s office are higher than in other settings such as at home. The change in 24-hour systolic ABPM from baseline to week 7 or 8 for the Part 1 100 mg QD cohort, demonstrated an 8.3 mmHg observed mean placebo-adjusted reduction in systolic BP. The ABPM response in the 50 mg QD was complicated by evidence of “white coat” hypertension, but after eliminating data from individuals who were not hypertensive, as measured by ABPM, there was evidence of a 10.7 mmHg observed mean placebo-adjusted reduction in systolic BP in individuals who were hypertensive as measured by ABPM (the 50mg QD hypertensive ABPM set). The average overnight BP reduction in the 100 mg QD cohort was an observed mean placebo-adjusted reduction of 8.2 mmHg in the 100 mg QD cohort and in the 50 mg QD hypertensive ABPM set there was an observed mean placebo-adjusted reduction of 4.3 mmHg.

The reduction in overnight BP and restoration of dipping that was also observed in the 100 mg QD cohort are of potential importance to the objective of reducing morbidity and mortality from uHTN, as the link between elevated nighttime BP and risk for cardiovascular risk has been long established in the medical literature.

**Single Subject in Part 1 of Target-HTN Demonstrated Reduction in Average 24-Hour BP
Reduction and Restoration of Normal Nocturnal Dipping Patterns Versus Baseline**



The above reflects a single subject in Part 1 receiving MLS-101 100 mg QD (black tracing) versus baseline (gray tracing) showing average 24-hour BP reduction and restoration of normal nocturnal dipping pattern. Gaps in tracings represent missing measurements due to technical reasons, such as cuff slipping off. Although not every patient will experience similar results, we believe the above data is indicative of a patient who has responded favorably to MLS-101.

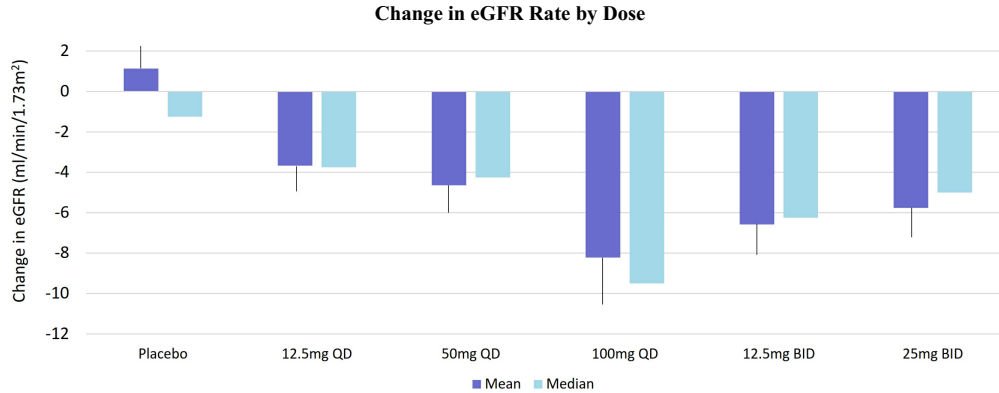
Central BP is the pressure in the aorta, the large artery that sends blood from the heart throughout the body. Many experts believe that central BP is a useful measurement because central BP may be a more accurate way of predicting if a person will have heart disease or stroke. The central BP reading in this trial was captured using the 24-hour ABPM via an integrated software package that measures the pulse waveform and thus obtains central BP measurements. As indicated below, MLS-101 at doses of 100 mg and 50 mg once-daily demonstrated relevant reductions in central BP, which we believe to be clinically meaningful, with placebo-adjusted reductions in central systolic BP of 11.6 mmHg for 100 mg QD and 11.9 mmHg for the 50 mg QD hypertensive ABPM set. The placebo-adjusted reductions in central diastolic BP were 6.7 mmHg for 100 mg QD and 5.8 mmHg for the 50 mg QD hypertensive ABPM set.

MLS-101 Effect on Systolic and Central Systolic BP

BP Lowering Metric (Observed Mean)	Associated BP Reduction				
	Placebo	100mg Part 1		50mg QD*	
		Absolute	Placebo-Adjusted	Absolute	Placebo-Adjusted
Systolic BP (AOBP), mmHg	-3.2	-11.9	-8.7	-13.2	-10.0
24-hour Average Systolic BP (ABPM), mmHg	-0.6	-8.9	-8.3	-11.3	-10.7
Average Night-time Systolic BP (ABPM), mmHg	-3.3	-11.5	-8.2	-7.6	-4.3
24-hour Average Central Systolic BP (ABPM), mmHg	-1.3	-10.3	-11.6	-10.6	-11.9

*Results from post-hoc sensitivity analysis reflecting subjects who passed Quality Control criteria and in whom both baseline AOBP and ABPM > 130mmHg.

The eGFR measures how well an individual's kidneys are filtering waste and extra water from the body via the urine. In hypertensive patients, the eGFR will progressively decline and individuals may begin to exhibit signs and symptoms of CKD at eGFR levels below 45mL/min/1.73m². As demonstrated in previous studies with antihypertensives, such as ACE inhibitors and ARBs, an initial reduction of eGFR in treated hypertensive patients may represent a positive benefit as it indicates an alleviation of pressure on the glomerulus and potentially slows or arrests the progression to CKD. In this trial, a dose-dependent reduction in eGFR was demonstrated (as seen below), which we believe is clinically meaningful and has the potential to provide a renal protection benefit that we intend to further assess in future clinical trials.

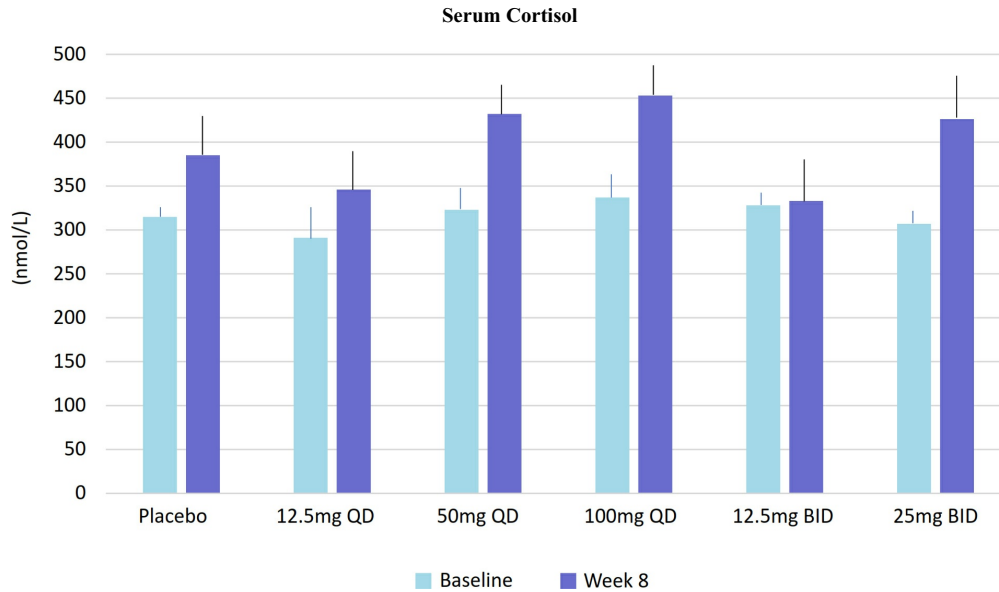


Safety

MLS-101 has been observed to be well-tolerated, specifically in four key measures that we believe to be of special interest when evaluating the safety of MLS-101:

- Cortisol Inhibition:** No evidence of suppression of cortisol production was observed. The chart below shows baseline and week 8 measurements of cortisol for placebo and all five active cohorts from Part 1 of the trial. We believe the slight increase in all cohorts, including placebo, is not meaningful, as it is below the upper limit of the normal range, which is 552 nmol/L;

No Meaningful Inhibition of Cortisol Observed in Target-HTN

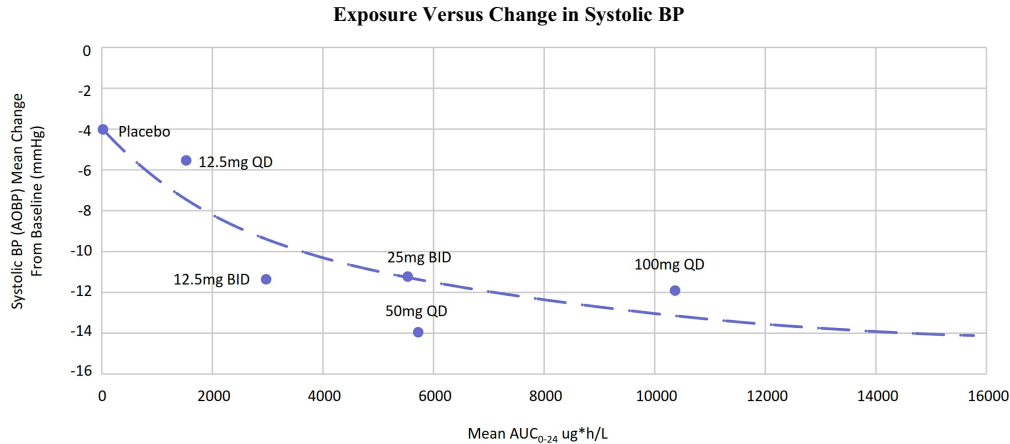


- **Hypotension (sitting systolic BP < 100 mmHg):** Hypotension and orthostatic hypotension was seen in three and three subjects, respectively, and was reversible, likely related to study medication and expected based on MLS-101's mechanism of action;
- **Hyponatremia (serum sodium < 135 mmol/L):** Severe hyponatremia, possibly related to study medication, was seen in one subject with preexisting hyponatremia, and was reversible after drug discontinuation; and
- **Hyperkalemia (serum potassium > 5.1 mmol/L):** There was an expected, dose-dependent increase in serum potassium, though the majority of subjects maintained a serum potassium in the normal range. The two active, once-daily doses saw modest increases in potassium levels across the cohorts of 0.25 mmol/L with the 50 mg QD and 0.35 mmol/L with the 100 mg QD dose. Six subjects across the five active dose cohorts experienced an isolated instance of elevated potassium above 6 mmol/L (two were deemed to be a factitious reading, three worsening of pre-existing hyperkalemia and one was a confirmed de-novo episode of hyperkalemia). Consistent with the short terminal elimination half-life of MLS-101, all episodes were rapidly reversible after per protocol dose reduction, temporarily holding study medication or treatment discontinuation. An independent data safety monitoring board expressed no concerns about the effect of MLS-101 on serum potassium in the MLS-101-201 trial.

Based on the totality of available data, there have been no safety concerns that prompted changes to the IB or protocol. Three SAEs, including one event of chest pain, one event of metastases to peritoneum and one event of hyponatremia, were reported and treatment discontinued. Hyponatremia was assessed as possibly related to the study drug. The other two events were assessed as unrelated to the study drug. To date, the most frequent non-serious AEs reported, defined as events with five or more affected subjects, including the placebo group, were related to hyperkalemia – all determinations above upper limit of normal of 5.1 mmol/L (20.0%), decreased glomerular filtration (5.5%), urinary tract infections (4.5%), diarrhea (3.0%), hypertension (2.5%) and COVID infection (2.5%). In some of the hyperkalemia events, study treatment was dose adjusted temporarily or permanently discontinued according to safety guidelines in the protocol.

Pharmacokinetics

The 24-hour exposure/response relationship for systolic BP at week 8 across treatment groups suggests QD dosing up to 100 mg. The trial results suggest a minimal effective dose between 12.5 mg/24 hours and 25 mg/24 hours (12.5mg BID) and a maximum efficacious dose of 50 mg to 100 mg QD for MLS-101. All doses in excess of 12.5 mg QD are active doses, which is to be expected. Given the relatively short half-life of MLS-101, the group mean exposure in the 25 mg BID and 50 mg QD cohorts was similar, suggesting little drug accumulation. The comparable efficacy of the 25 mg BID and 50 mg QD cohorts suggests that once-daily dosing is sufficient to achieve maximum blood pressure reduction.



Phase 1 Clinical Trial Results

The Phase 1 program of MLS-101 consisted of a randomized, double-blind, placebo-controlled, first-in-human trial to determine the safety, tolerability, pharmacokinetics and pharmacodynamics of single and multiple ascending doses of MLS-101 in healthy subjects, including the effect of gender and age on the pharmacokinetics of a single dose of MLS-101 in healthy subjects. This trial was conducted by Mitsubishi Tanabe in the Netherlands and the trial data was used to support our open IND, under which our current MLS-101 development program is being conducted.

MLS-101 was well-tolerated at single and multiple doses in the first-in-human trial. No deaths or other SAEs were observed. One subject in the Part 2 Multiple Ascending Dose trial, 360 mg dose group discontinued treatment due to a treatment-emergent AE of sinus tachycardia. Across all cohorts, dizziness/dizziness postural was reported by 9 out of 87 (10.3%) MLS-101-treated subjects compared to 1 out of 29 (3.4%) placebo subjects.

The high selectivity of MLS-101 was demonstrated in both the single ascending dose (SAD) and multiple ascending dose (MAD) parts of this trial. It was shown that MLS-101 decreased plasma aldosterone concentration in a dose-dependent manner in the SAD portion of the trial with a 36-77% reduction in 24-hour serum aldosterone at doses ranging from 5 mg to 800 mg. This finding was further validated in the MAD part of the trial with 40 mg, 120 mg and 360 mg reducing 24-hour serum aldosterone in a dose dependent manner. In the SAD trial MLS-101 did not inhibit cortisol production across the range of doses and in the MAD study cortisol was not inhibited even with adrenocorticotrophic hormone (ACTH) cortisol stimulation challenge on day six. The results of this trial demonstrated the selectivity for aldosterone synthase with MLS-101.

The impact on age and gender was also evaluated in the Phase 1 program for MLS-101. It was demonstrated that neither of these sub-groups exhibited differentiated exposure levels to MLS-101.

A Phase 1, open-label, randomized, 2-sequence study to evaluate the effect of food on the pharmacokinetics of MLS-101 in healthy subjects has been completed. Based on the results of this trial, MLS-101 can be administered without regard to meals in all ongoing and future clinical trials as well as upon approval in hypertensive patients.

We have also completed drug interaction studies with MLS-101 with metformin and esomeprazole. The metformin study was completed based on the possible inhibition of the MATE1 metabolic pathway by MLS-101. MATE1 is one of four pathways for metformin metabolism. This trial demonstrated that MLS-101 has little effect on metformin and based on the minimal increases in metformin concentrations, MLS-101 is not expected to be viewed as even a weak inhibitor of metformin based on FDA definitions. The DDI study with esomeprazole was to evaluate the effect of varying gastric pH levels on the absorption and availability of MLS-101. As anticipated for MLS-101, which is a weak base, there was reduced absorption in the alkaline gastric environment produced by the proton pump inhibitors (PPI). Further studies will be performed to provide labeling guidelines for timing vis-à-vis meals or dose-adjustment of MLS-101 for individuals using a PPI.

Preclinical Data

The pharmacological profile for MLS-101 was assessed via in vitro pharmacology studies that demonstrated a selectivity ratio of 374 times more selective for aldosterone inhibition over cortisol inhibition. MLS-101 inhibited hCYP11B2, the synthetic pathway for aldosterone, and hCYP11B1, the synthetic pathway of cortisol with inhibition constant values of 1.27 nmol/L and 475 nmol/L, respectively.

Single-dose oral administration of MLS-101 significantly decreased plasma aldosterone concentration (PAC) in a sodium-depleted non-human primate model. However, single-dose oral administration of MLS-101 did not affect PACs in ACTH-loaded non-human primates even at a dose 100-fold higher than those required to reduce PAC. These results indicate that MLS-101 inhibits CYP11B2 with higher selectivity over CYP11B1, an enzyme responsible for cortisol production.

Additional Indications

We also plan to expand the development of MLS-101 into additional indications where abnormally elevated aldosterone is a driver in the disease pathology, including CKD. Uninhibited aldosterone is known to play a critical role in the progression of CKD, which affects over 23 million people in the United States. We intend to initiate a Phase 2 proof-of-concept trial for CKD and in the future may expand into other cardiorenal indications driven by abnormally elevated aldosterone.

Our Team and Investors

Founded by Catalys Pacific in 2019, we are led by an experienced management team with diverse backgrounds and significant experience in drug discovery, development and company building. Our management team consists of industry veterans with extensive experience at pharmaceutical companies such as Amgen, Aventis, Cephalon, Novartis, ProQR, Sanifit, Teva and Vertex. Together, our team has a proven track record in the discovery, development and commercialization of numerous approved therapeutics.

Since our inception, we have raised approximately \$158 million of capital from various investors.

Minerals' License Agreement with Mitsubishi Tanabe Pharma Corporation

In July 2020, we entered into a license agreement (the Mitsubishi License) with Mitsubishi Tanabe Pharma Corporation (Mitsubishi Tanabe), pursuant to which Mitsubishi Tanabe granted us an exclusive, worldwide, royalty-bearing, sublicensable license under Mitsubishi Tanabe's patent and other intellectual property rights to exploit products incorporating MLS-101 (formerly MT-4129) (MLS-101 Products) for the prevention, treatment, diagnosis, detection, monitoring or predisposition testing with respect to indications, diseases and conditions in humans (the Field). We paid Mitsubishi Tanabe a \$1.0 million upfront fee, and we are obligated to pay Mitsubishi Tanabe development milestone payments of up to \$9.0 million in the aggregate and commercial milestone payments of up to \$155.0 million in the aggregate upon first commercial sale and upon meeting certain annual sales targets, as well as additional commercial milestone payments of up to \$10.0 million for a second indication. Additionally, we are

obligated to pay Mitsubishi Tanabe tiered royalties at percentages ranging from the mid-single digits to ten percent (10%) of aggregate net sales of each MLS-101 Product on a MLS-101 Product-by-MLS-101 Product and country-by-country basis, until the later of (i) the expiration of the last-to-expire valid Mitsubishi Tanabe patent claim covering an MLS-101 Product, (ii) ten years from the first commercial sale of an MLS-101 Product, or (iii) the expiration of regulatory exclusivity in such country. Such royalties are subject to reduction under specified conditions, including lack of patent coverage and generic competition.

We are obligated to use commercially reasonable efforts to conduct and complete the development activities and to file for regulatory approval for at least one MLS-101 Product in a major market country and consider in good faith to develop at least one MLS-101 Product in a non-major market country. If we elect to sublicense our rights under the Mitsubishi License to a third party with respect to exploitation of MLS-101 or any MLS-101 Product in certain countries in Asia, Mitsubishi Tanabe has a right of first negotiation, for a specified period of time. We also agreed not to commercialize any competing product prior to three years following the first commercial sale of the first MLS-101 Product in any country without Mitsubishi Tanabe's prior consent.

Unless terminated earlier, the Mitsubishi License will continue until the expiration of all of our royalty obligations to Mitsubishi Tanabe. We may terminate the Mitsubishi License for any or no reason upon 90 or 180 days' prior written notice to Mitsubishi Tanabe depending on whether the MLS-101 Product has received regulatory approval. Mitsubishi Tanabe may terminate the Mitsubishi License if we have not initiated regulatory consultation for the first global clinical trials of MLS-101 in at least one major market country within a specified amount of time or if we or our affiliates or sublicensees initiate a challenge to the patent rights licensed to us by Mitsubishi Tanabe. In addition, either party may terminate the Mitsubishi License in the event of an uncured material breach by or bankruptcy of the other party, subject to certain notice and cure periods, or upon the other party's bankruptcy or insolvency.

Manufacturing

We do not own or operate manufacturing facilities for the production of MLS-101, nor do we have plans to develop our own manufacturing operations in the foreseeable future. We currently depend on third-party contract manufacturers for our required raw materials, active pharmaceutical ingredients, and finished product candidates for our clinical trials. We do not have any current contractual arrangements for the manufacture of commercial supplies of MLS-101. We currently employ internal resources and third-party consultants to manage our manufacturing contractors.

Sales and Marketing

We have not yet defined our sales, marketing or product distribution strategy for MLS-101 because it is still in clinical development. Our commercial strategy may include the use of strategic partners, distributors, a contract sales force, or the establishment of our own commercial sales force. We plan to further evaluate these alternatives as we approach approval for MLS-101, if any.

Competition

The biopharmaceutical industry is characterized by rapid advancing technologies, intense competition and a strong emphasis on proprietary and novel products and product candidates. MLS-101, if approved, may address multiple markets. Ultimately, the disease(s) MLS-101 targets and for which it may receive marketing authorization will determine our competition. There are competing programs under development by other companies for our initially targeted indication of hypertension. MLS-101, if approved, will have to compete with existing therapies and new therapies that may become available in the future. We face potential competition from many different sources, including larger and better-funded pharmaceutical, biopharmaceutical, biotechnological and therapeutics companies. In many cases, the companies with competing programs will have access to greater financial, technical, manufacturing, marketing, sales and supply resources, will have more expertise and experience than us, and may be more advanced in those programs. Moreover, we may also compete with universities and other research institutions that may be active in research in our target indications and could be in direct competition with us. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

We believe our current and future competition can be grouped into three broad categories:

- Companies working to develop ASIs, including Boehringer Ingelheim, CinCor, Damian Pharma and PhaseBio;
- Companies with product candidates with other mechanisms of action, including Alnylam, Idorsia, Ionis, KBP BioSciences, Sihuan Pharmaceutical Holdings Group and Quantum Genomics; and
- Companies commercializing standard-of-care antihypertensive agents, such as ACE inhibitors, ARBs, thiazide diuretics and calcium channel blockers, many of which are available as generic medicines at very low prices including AstraZeneca, Johnson & Johnson, Merck, Novartis and Pfizer.

If we successfully obtain approval for MLS-101 or any future product candidate, we believe that the key competitive factors that will affect the success of MLS-101 will be efficacy, safety, tolerability, convenience, price and the availability of reimbursement from government and other third-party payors relative to such competing products. Our commercial opportunity could be reduced or eliminated if its competitors have products that are superior in one or more of these categories.

Intellectual Property

Intellectual property, including patents, trade secrets, trademarks and copyrights, is important to our business. Our commercial success depends in part on our ability to obtain and maintain proprietary intellectual property protection for our clinical-stage product candidate, MLS-101, as well as for future product candidates and novel discoveries, product development technologies, and know-how. Our commercial success also depends in part on our ability to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to develop and maintain protection of our proprietary position by, among other methods, licensing or filing U.S. and foreign patents and applications relating to our product candidates, technology, inventions, and improvements that are important to the development and implementation of our business.

Our patent portfolio is built with a goal of establishing broad protection that generally includes, for the product candidate compound, claims directed to composition of matter, pharmaceutical compositions or formulations, methods of synthesis, and methods of treatment using such pharmaceutical compositions or formulations. We are seeking and maintaining patent protection in the United States and key foreign jurisdictions where we intend to market MLS-101. Our patent portfolio includes a combination of patents and patent applications solely owned by us, patents and pending patent applications licensed from Mitsubishi Tanabe Pharma Corporation, or Mitsubishi Tanabe, and pending patent applications jointly owned with Mitsubishi Tanabe. As of December 2, 2022, our patent portfolio comprises 9 distinct patent families protecting our technology relating to MLS-101 and its synthetic intermediates, methods of synthesizing MLS-101 and related compounds, various formulations of MLS-101 products, as well as methods of treating diseases with MLS-101 and related compounds. As of December 2, 2022, our portfolio of exclusively licensed patents and pending patent applications consists of four granted U.S. patents; one granted European patent that has been validated in Austria, Belgium, Czechia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Turkey, and the United Kingdom; one granted European patent that has been validated in France, Germany, Italy, Spain, and the United Kingdom; one pending European application; four granted Japanese patents; one granted Canadian patent; one granted Australian patent; one pending Brazilian application; one granted Chinese patent; one granted Indian patent; one granted Indonesian patent; one granted Korean patent; one granted Malaysian patent; one granted Mexican patent; two granted Russian patents; one granted Singaporean patent; one granted Taiwanese patent; one pending Thai application; one granted Vietnamese patent; and one pending PCT International Application.

Our portfolio of wholly owned pending patent applications consists of one pending PCT International Application and three pending U.S. provisional patent applications.

Our portfolio of jointly owned pending patent applications consists of one pending PCT International Application and two pending U.S. provisional patent applications.

Granted patents and pending applications in our portfolio of exclusively licensed patents and pending patent applications, if granted, have nominal expiration dates ranging from 2035 to about 2042, without accounting for any available patent term adjustments or extensions. Pending applications in our portfolio of wholly and jointly owned pending patent applications have nominal expiration dates ranging from 2041 to about 2042, without accounting for any available patent term adjustments or extensions. If filed and subsequently granted, patent applications claiming priority to pending U.S. Provisional Applications in our portfolio of wholly and jointly owned pending patent applications will have expiration dates ranging from 2042 to 2043, without accounting for any available patent term adjustments or extensions.

The term of individual patents in our portfolio depends upon the legal term of patents in the countries in which they are obtained. In most countries in which we file, including the United States, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, the term of a patent may be eligible for patent term adjustment, which permits patent term restoration as compensation for delays incurred at the USPTO during the patent prosecution process. In addition, for patents that cover an FDA-approved drug, the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, permits a patent term extension of up to five years beyond the expiration of the patent. While the length of the patent term extension is related to the length of time the drug is under regulatory review, patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, and only one patent per approved drug may be extended under the Hatch-Waxman Act. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our products receive FDA approval, we expect to apply for patent term extensions on patents covering those products. We plan to seek any available patent term extension to any granted patents we may be granted in any jurisdiction where such extensions are available; however, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. The relevant patent laws and their interpretation outside of the United States are also uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our technology or product candidates and could affect the value of such intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. We cannot guarantee that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications we may file in the future, nor can we be sure that any patents that may be granted to us in the future will be commercially useful in protecting our products, the methods of use or manufacture of those products. Moreover, granted patents do not guarantee the right to practice our technology in relation to the commercialization of our products. Granted patents only allow us to block potential competitors from practicing the claimed inventions of the granted patents.

Further, patents and other intellectual property rights in the pharmaceutical and biotechnology space are evolving and involve many risks and uncertainties. For example, third parties may have blocking patents that could be used to prevent us from commercializing our product candidates and practicing our proprietary technology, and our granted patents may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products or could limit the term of patent protection that otherwise may exist for our product candidates. In addition, the scope of the rights granted under any granted patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies that are outside the scope of the rights granted under any granted patents. For these reasons, we may face competition with respect to our product candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any patent protection for such product may expire or remain in force for only a short period following commercialization, thereby reducing the commercial advantage the patent provides.

We may also rely on trade secrets relating to our discovery programs and product candidates, and seek to protect and maintain the confidentiality of proprietary information to protect aspects of our business that are not

amenable to, or that we do not consider appropriate for, patent protection. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us, and for employees and consultants to enter into invention assignment agreements with us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Where applicable, the agreements provide that all inventions to which the individual contributed as an inventor shall be assigned to us, and as such, will become our property. There can be no assurance, however, that these agreements will provide meaningful protection or adequate remedies for our trade secrets in the event of unauthorized use or disclosure of such information.

Further, we have and will continue to pursue trademark protection for our company name and brand. As of December 2, 2022, we owned four registered trademarks in the United States and foreign jurisdictions relating to the registered trademark "MINERALYS."

Government Regulation

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing and export and import of products such as those we are developing. A new drug must be approved by the FDA through the New Drug Application (NDA) process before it may be legally marketed in the United States.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the federal Food, Drug, and Cosmetic Act (FDCA) and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state and local statutes and regulations require the expenditure of substantial time and financial resources. The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies in accordance with Good Laboratory Practice regulations (GLPs) and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent institutional review board (IRB), or ethics committee at each clinical site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with Good Clinical Practice regulations (GCPs) to evaluate the safety and efficacy of the product candidate for its intended use;
- submission to the FDA of an NDA after completion of all pivotal trials;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current Good Manufacturing Practices (cGMPs) requirements to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity, and of potential inspection of selected clinical investigation sites to assess compliance with GCPs; and
- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States.

Once a product candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational drug product to humans. An IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated, if the trial includes an efficacy evaluation. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, 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. Clinical holds also may be imposed by the FDA at any time before or during clinical trials due to safety concerns about ongoing or proposed clinical trials or non-compliance with specific FDA requirements, and the trials may not begin or continue until the FDA notifies the sponsor that the hold has been lifted.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Clinical trials must be conducted under protocols detailing the objectives of the trial, dosing procedures, subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND, and a separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. While the IND is active, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report, among other information, must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or in vitro testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

Furthermore, an independent IRB at each institution participating in the clinical trial must review and approve each protocol before a clinical trial commences at that institution and must also approve the information regarding the trial and the consent form that must be provided to each trial subject or his or her legal representative, monitor the study until completed and otherwise comply with IRB regulations. The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. In addition, some clinical trials are overseen by an independent group of qualified experts organized by the sponsor, known as a data safety monitoring board or committee. Depending on its charter, this group may determine whether a trial may move forward at designated check points based on access to certain data from the trial. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries, including clinicaltrials.gov.

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

- *Phase 1:* The product candidate is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain an early indication of its effectiveness.
- *Phase 2:* The product candidate is administered to a limited patient population with a specified disease or condition to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product candidate for specific targeted diseases and to determine dosage tolerance and appropriate dosage.
- *Phase 3:* The product candidate is administered to an expanded patient population to further evaluate dosage, to provide substantial evidence of efficacy and to further test for safety, generally at multiple

geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk-benefit ratio of the product candidate and provide an adequate basis for product labeling.

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

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach agreement on the next phase of development.

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 cGMPs. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Process

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

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once filed, the FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality and purity. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. This review typically takes twelve months from the date the NDA is submitted to FDA because the FDA has approximately two months to make a "filing" decision after it the application is submitted.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. Before approving an NDA, the FDA will typically inspect the facility or facilities where the product is manufactured. Additionally, before approving an NDA, the FDA may inspect one or more clinical trial sites to assure compliance with GCPs.

After the FDA evaluates an NDA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter (CRL). An approval letter authorizes commercial marketing of the drug with prescribing information for specific indications. A CRL indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A CRL usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, such as an additional clinical trial or other significant

and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. If a CRL is issued, the sponsor must resubmit the NDA to address all of the deficiencies identified in the letter or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. In addition, the FDA may require a sponsor to conduct Phase 4 testing, which involves clinical trials designed to further assess a drug's safety and effectiveness after NDA approval, and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized. The FDA may also place other conditions on approval including the requirement for a risk evaluation and mitigation strategy (REMS), to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS. The FDA will not approve the NDA without an approved REMS, if required. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products.

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

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

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same disease or condition for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity or inability to manufacture the product in sufficient quantities. The designation of such drug also entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. However, competitors may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan exclusivity also could block the approval of a competing product for seven years if a competitor obtains approval of the "same drug," as defined by the FDA, or if a product candidate is determined to be contained within the competitor's product for the same disease or condition. In addition, if an orphan-designated product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan exclusivity.

Expedited Development and Review Programs

The FDA has a number of programs intended to expedite the development or review of a marketing application for a new drug. For example, the fast track designation program is intended to expedite or facilitate the process of developing and reviewing product candidates that meet certain criteria. Specifically, investigational drugs are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. The sponsor of a fast track product candidate has opportunities for more frequent interactions with the applicable FDA review team during product development and, once an NDA is submitted, the product candidate may be eligible for priority review. With regard to a fast track product candidate, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product candidate can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product candidate, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any product candidate submitted to the FDA for approval, including a product candidate with a fast track designation or breakthrough designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. An NDA is eligible for priority review if the product candidate is designed to treat a serious condition, and if approved, would provide a significant improvement in safety or efficacy compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. The FDA endeavors to review applications with priority review designations within six months of the filing date as compared to ten months for review of new molecular entity NDAs under its current PDUFA review goals.

In addition, a product candidate may be eligible for accelerated approval. Drug products intended to treat serious or life-threatening diseases or conditions may be eligible for accelerated approval upon a determination that the product candidate has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. Drugs receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing trials or if such trials fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition of accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Fast track designation, breakthrough therapy designation, priority review, and accelerated approval do not change the standards for approval but may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Post-Approval Requirements

Any products manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting

of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications, certain manufacturing changes and additional labeling claims, are subject to further FDA review and approval. Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs and other laws and regulations. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMPs and other aspects of regulatory compliance.

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

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

In addition, the FDA closely regulates the marketing, labeling, advertising and promotion of drug products. A company can make only those claims relating to safety and efficacy that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe 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. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturers' communications on the subject of off-label use of their products.

Marketing Exclusivity

Market exclusivity provisions under the FDCA can delay the submission or the approval of certain marketing applications. The FDCA provides a five-year period of non-patent data 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 accept for review an abbreviated new drug application (ANDA), or an NDA submitted under Section 505(b)(2) (505(b)(2) NDA) submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovative drug or for another indication, where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder.

The FDCA alternatively provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct, or obtain a right of reference to, all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of marketing exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children in response to a written request from the FDA. The issuance of a written request does not require the sponsor to undertake the described clinical trials.

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business and may constrain the financial arrangements and relationships through which we research as well as sell, market and distribute any products for which we obtain marketing approval. Such laws include, without limitation, federal and state anti-kickback, fraud and abuse, false claims, data privacy and security and physician and other healthcare provider transparency laws and regulations. If our significant operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and imprisonment.

Coverage and Reimbursement

Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. The coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained. These third-party payors are increasingly reducing reimbursements for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Healthcare Reform

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, each as amended, collectively known as the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and changes to fraud and abuse laws. By way of example, the ACA:

- increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the average manufacturer price;
- required collection of rebates for drugs paid by Medicaid managed care organizations;
- required manufacturers to participate in a coverage gap discount program, under which they must agree to offer 70 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D; and
- imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" to specified federal government programs.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On March 11, 2021, the American Rescue Plan Act of 2021 was signed into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100% of a drug's average manufacturer price, or AMP, beginning January 1, 2024. Most recently, on August 16, 2022, the Inflation Reduction Act of 2022, or IRA, was signed into law. Among other things, the IRA requires manufacturers of certain drugs to engage in price negotiations with Medicare (beginning in 2026), with prices that can be negotiated subject to a cap; imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation (first due in 2023); and replaces the Part D coverage gap discount program with a new discounting program (beginning in 2025). The IRA permits the Secretary of the Department of Health and Human Services (HHS) to implement many of these provisions through guidance, as opposed to regulation, for the initial years. For that and other reasons, it is currently unclear how the IRA will be effectuated.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries, proposed and enacted legislation and executive orders issued by the President designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. It is also possible that additional governmental action is taken in response to the COVID-19 pandemic. Individual states in the United States have also become increasingly active in implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Employees

As of September 30, 2022, we had 12 full-time employees, of whom eight were primarily engaged in research and development. None of our employees are represented by a labor union, and we consider our employee relations to be good.

Legal Proceedings

We are not currently a party to any material 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.

Corporate Information

We were incorporated under the laws of the State of Delaware in May 2019 as Catalys SC1, Inc. and we subsequently changed our name to Mineralys Therapeutics, Inc. Our mailing address is 150 N. Radnor Chester Rd, Suite F200, Radnor, PA 19087 and our telephone number is 888-378-6240. We also maintain a website at www.mineralystx.com. The information contained in, or accessible through, our website does not constitute part of this prospectus. We have included our website address as an inactive textual reference only.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the name, age and position of each of our executive officers and directors as of November 30, 2022:

Name	Age	Position
Executive Officers		
Jon Congleton	59	Chief Executive Officer & Director
Adam Levy	44	Chief Financial Officer & Chief Business Officer
David Rodman, M.D.	67	Chief Medical Officer
Directors		
Brian Taylor Slingsby, M.D., Ph.D., M.P.H.	46	Chairman & Founder
Srinivas Akkaraju, M.D., Ph.D. ⁽¹⁾	54	Director
Alexander Asam, Ph.D. ⁽²⁾	57	Director
Derek DiRocco, Ph.D. ⁽²⁾	42	Director
Olivier Litzka, Ph.D. ⁽²⁾	54	Director
Takeshi Takahashi, M.B.A. ⁽¹⁾	47	Director

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

(3) Member of the Nominating and Governance Committee.

Executive Officers

Jon Congleton has served as our Chief Executive Officer and as a member of our Board since November 2020. Prior to joining us, Mr. Congleton was the Chief Executive Officer of Impel NeuroPharma, Inc. from September 2017 to May 2020. Prior to that, he served as the Chief Executive Officer and as a director of Nivalis Therapeutics, Inc. from January 2015 to February 2017. Mr. Congleton was previously at Teva Pharmaceutical Industries, Ltd. (Teva) where over 18 years he held positions in general management and global strategic marketing, including Senior Vice President of Teva's Global Central Nervous System Disorders from April 2013 to December 2014, Senior Vice President of the Global Medicine Group from November 2011 to April 2013, and General Manager of Teva Neuroscience, Inc. in the United States. Prior to joining Teva, Mr. Congleton spent ten years in a variety of commercial roles with predecessor companies of Sanofi. Mr. Congleton earned a B.S. in marketing from Kansas State University. Mr. Congleton's knowledge of our business and his extensive executive experience at multiple biopharmaceutical companies contributed to our board of directors' conclusion that he should serve as a director of our company.

Adam Levy has served as our Chief Financial Officer and Chief Business Officer since March 2022. Prior to joining Mineralys, he was the Chief Financial Officer at Sanifit Therapeutics until the company was acquired by Vifor Pharma in 2022. Previously, Adam served as the Chief Business Officer at Brickell Biotech from 2019 to 2020 and led the organization's financial operations transition as it became a publicly listed company on Nasdaq. Prior to that, he served as the Chief Business Officer at miRagen Therapeutics from 2016 to 2019, where he was responsible for a variety of functions including financial strategy, investor relations, business development, legal affairs, intellectual property, project and program management, and human resources. Between 2000 and 2016, Mr. Levy held multiple investment banking positions at Merrill Lynch, Jefferies Group and Wedbush Securities. Mr. Levy received a B.S. in Business Management and Marketing from Cornell University.

David Rodman, M.D. has served as our Chief Medical Officer since January 2021. Previously, Dr. Rodman served in various roles at miRagen, Vertex Pharmaceuticals Inc., and Novartis Institutes for BioMedical Research. Dr. Rodman was elected to the American Society for Clinical Investigation and named an Established Investigator and Fellow of the American Heart Association. Dr. Rodman received his medical degree from the University of

Pennsylvania and was subsequently Board Certified in Internal Medicine, Pulmonary Medicine and Critical Care Medicine at the University of Colorado.

Non-Employee Directors

Brian Taylor “BT” Slingsby, M.D., Ph.D., M.P.H. founded Mineralys on May 31, 2019 and has served on our board of directors since that time and as Chairman. Dr. Slingsby is Founder & Managing Partner at Catalys Pacific, a venture capital firm focused on life sciences. In addition to serving as founding CEO of Mineralys during its inception and incubation, Dr. Slingsby has served as founding CEO of Pathalys Pharma, Inc., Kirilys Therapeutics, Inc. and Aculys Pharma, KK. Previous to Catalys Pacific, he founded the Global Health Innovative Technology Fund, the world’s first public-private fund focused on the development of new medicines for low- and middle-income countries. Dr. Slingsby graduated from Brown University with honors, earned his M.P.H. and Ph.D. from Kyoto University and the University of Tokyo, and received his M.D. with honors from the George Washington University. Dr. Slingsby’s investment experience in the biopharmaceutical industry, as well as his academic background and experience on numerous public and private company boards of directors, contributed to our board of directors’ conclusion that he should serve as a director of our company.

Srinivas Akkaraju, M.D., Ph.D. has served on our board of directors since February 2021. Dr. Akkaraju has served as Managing General Partner of Samsara BioCapital, a venture capital firm, since he founded the firm in 2017. From April 2013 to March 2017, Dr. Akkaraju was a General Partner and then a Senior Advisor of Sofinnova Ventures, a venture capital firm focused on the life sciences industry. From January 2009 until April 2013, Dr. Akkaraju was a Managing Director of New Leaf Venture Partners, an investment firm focused on the healthcare technology sector. From 2006 to 2008, Dr. Akkaraju served as a Managing Director of Panorama Capital, a venture capital firm that he co-founded along with other members of the former venture capital investment team of J.P. Morgan Partners, a private equity division of JPMorgan Chase & Co. Prior to co-founding Panorama Capital, Dr. Akkaraju was with J.P. Morgan Partners, which he joined in 2001 and of which he became a partner in 2005. From 1998 to 2001, Dr. Akkaraju worked in business and corporate development at Genentech, Inc. (now a member of the Roche Group), a biotechnology company. Dr. Akkaraju has been a director of publicly-traded biopharmaceutical companies Intercept Pharmaceuticals since October 2012, Jiya Acquisition Corp. (where he also serves as Chairman) since November 2020, and Syros Pharmaceuticals, Inc. since June 2017. Dr. Akkaraju also serves on the board of directors of a number of private companies. During the past five years, Dr. Akkaraju previously served as a director of Aravive, Inc. (formerly Versartis, Inc.), aTyr Pharma, Inc., Principia Biopharma Inc., and Seattle Genetics, Inc. (now Seagen Inc.). Dr. Akkaraju received his M.D. and a Ph.D. in Immunology from Stanford University and holds undergraduate degrees in Biochemistry and Computer Science from Rice University. Dr. Akkaraju’s extensive investment experience in the biopharmaceutical industry, as well as his scientific background and experience on numerous public and private company boards of directors, contributed to our board of directors’ conclusion that he should serve as a director of our company.

Alexander Asam, Ph.D. has served on our board of directors since February 2021. Since 2007, Dr. Asam has been an Investment Advisor of HBM Partners and brings more than 20 years of experience in the life sciences and private equity businesses. He was a former managing director and partner of Deutsche Venture Capital / Deutsche Bank from 2001 to 2007 and held various positions at Hoechst AG, Aventis S.A. (now: Sanofi) and LION Bioscience AG, among others, as well as a member of the IPO Core Team (dual listing Germany and USA). He is a board member of 1000Farmacia Research, as well as a board observer at Swixx Biopharma and Aculys. Dr. Asam served on the board of directors of publicly-traded Arcutis Biotherapeutics from October 2019 until October 2020. Dr. Asam holds an M.B.A. degree from Aston Business School, Birmingham and a M.Sc. and Ph.D. in chemistry from University of Heidelberg. Dr. Asam’s extensive experience in the life sciences industry, including as an investor and board member, contributed to our board of directors’ conclusion that he should serve as a director of our company.

Derek DiRocco, Ph.D. has served on our board of directors since June 2022. Dr. DiRocco has been a partner at RA Capital Management, L.P., a multi-stage investment manager dedicated to evidence-based investing in healthcare and life science companies that are developing drugs, medical devices and diagnostics, since December 2020 and was previously a principal from December 2017 until December 2020, an analyst from June 2015 to December 2017 and an associate from July 2013 to June 2015. Dr. DiRocco has served on the board of directors of

iTeos Therapeutics, Inc. since March 2020 and 89bio, Inc. since April 2018, each of which is a publicly-traded biotechnology company. Dr. DiRocco also serves on the board of directors of several privately held biotechnology companies. Dr. DiRocco holds a B.A. in biology from College of the Holy Cross and a Ph.D. in pharmacology from the University of Washington. He conducted his postdoctoral research at Brigham and Women's Hospital/Harvard Medical School. Dr. DiRocco's extensive investment experience in biopharmaceutical companies, as well as his academic background and public company board experience, contributed to our board of directors' conclusion that he should serve as a director of our company.

Olivier Litzka, Ph.D. has served on our board of directors since June 2022. Dr. Litzka has served as a partner at Andera Partners, a venture capital firm, since 2006 and started his business career in 1998 with Mercer Management Consulting. In 2000, he joined 3i Group plc with a focus on biopharma and medtech investments. Dr. Litzka currently serves on the boards of MMI Microsystems, T-Knife, Allegra Therapeutics, HighLife Medical, MedLumics, Tricare and JenaValve. He was also a board member of Corvidia, Sapiens, Endosome, Novoxel, Supersonic Imagine and Arvelle Therapeutics, up until their respective acquisitions. Dr. Litzka has a Ph.D. in molecular microbiology from the Institut für Genetik und Mikrobiologie in Munich. Dr. Litzka's extensive investment experience in the biopharmaceutical industry contributed to our board of directors' conclusion that he should serve as a director of our company.

Takeshi Takahashi, M.B.A. has served on our board of directors since May 2020. Mr. Takahashi is the Managing Partner at Catalys Pacific, a position he has held since 2019. Prior to Catalys Pacific, he was an investment banker with Morgan Stanley for 12 years. Prior to working for Morgan Stanley, he worked at Merrill Lynch's asset management division. Mr. Takahashi graduated from Waseda University with a degree in Political Science and Economics and holds an M.B.A. from Kellogg School of Management at Northwestern University. Mr. Takahashi's extensive investment experience in the biopharmaceutical industry contributed to our board of directors' conclusion that he should serve as a director of our company.

Family Relationships

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

Board Composition and Election of Directors

Director Independence

Our board of directors currently consists of seven members. Our board of directors has determined that all of our directors, other than Mr. Congleton, are independent directors in accordance with the listing requirements of the Nasdaq Global Market (Nasdaq). The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our board of directors has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of the director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Classified Board of Directors

In accordance with the terms of our amended and restated certificate of incorporation that will go into effect immediately prior to the closing 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 directors whose terms then expire will be eligible for reelection until the third annual meeting following reelection. Effective upon the closing of this offering, our directors will be divided among the three classes as follows:

- the Class I directors will be _____, and their terms will expire at our first annual meeting of stockholders following this offering;

- the Class II directors will be _____, and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be _____, and their terms will expire at our third annual meeting of stockholders following this offering.

Our amended and restated certificate of incorporation that will go into effect immediately prior to the closing of this offering will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our board of directors or a change in control of our company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock then entitled to vote in an election of directors.

Board Leadership Structure

Our board of directors is currently chaired by Dr. Slingsby. Our board of directors recognizes that it is important to determine an optimal board leadership structure to ensure the independent oversight of management as the company continues to grow. We separate the roles of chief executive officer and chairman of the board of directors in recognition of the differences between the two roles. The chief executive officer is responsible for setting the strategic direction for our company and the day-to-day leadership and performance of our company, while the chairman of the board of directors provides guidance to the chief executive officer and presides over meetings of the full board of directors. We believe that this separation of responsibilities provides a balanced approach to managing the board of directors and overseeing our company. Our board of directors has concluded that our current leadership structure is appropriate at this time. However, 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 Board in Risk Oversight Process

Our board of directors has responsibility for the oversight of our risk management processes and, either as a whole or through its committees, regularly discusses with management our major risk exposures, their potential impact on our business and the steps we take to manage them. The risk oversight process includes receiving regular reports from board committees and members of senior management to enable our board of directors to understand our risk identification, risk management and risk mitigation strategies with respect to areas of potential material risk, including operations, finance, legal, regulatory, strategic and reputational risk.

The audit committee reviews information regarding liquidity and operations and oversees our management of financial risks. Periodically, the audit committee reviews our policies with respect to risk assessment, risk management, loss prevention and regulatory compliance. Oversight by the audit committee includes direct communication with our external auditors, and discussions with management regarding significant risk exposures and the actions management has taken to limit, monitor or control such exposures. The compensation committee is responsible for assessing whether any of our compensation policies or programs has the potential to encourage excessive risk-taking. The nominating and corporate governance committee manages risks associated with the independence of the board of directors, corporate disclosure practices and potential conflicts of interest. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board of directors is regularly informed through committee reports about such risks. Matters of significant strategic risk are considered by our board of directors as a whole.

Board Committees and Independence

Our board of directors has established three standing committees – audit, compensation and nominating and corporate governance – each of which operates under a charter that has been approved by our board of directors.

Audit Committee

The audit committee's main function is to oversee our accounting and financial reporting processes and the audits of our financial statements. This committee's responsibilities include, among other things:

- appointing our independent registered public accounting firm;
- evaluating the qualifications, independence and performance of our independent registered public accounting firm;
- approving the audit and non-audit services to be performed by our independent registered public accounting firm;
- reviewing the design, implementation, adequacy and effectiveness of our internal accounting controls and our critical accounting policies;
- discussing with management and the independent registered public accounting firm the results of our annual audit and the review of our quarterly unaudited financial statements;
- reviewing, overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;
- reviewing on a periodic basis, or as appropriate, any investment policy and recommending to our board of directors any changes to such investment policy;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding our results of operations;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and approving any related party transactions and reviewing and monitoring compliance with our code of conduct and ethics; and
- reviewing and evaluating, at least annually, the performance of the audit committee and its members including compliance of the audit committee with its charter.

The members of our audit committee are Mr. DiRocco, Mr. Litzka and Dr. Asam. Mr. DiRocco serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and Nasdaq. Our board of directors has determined that is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq listing standards. Our board of directors has determined each of Mr. DiRocco, Mr. Litzka and Dr. Asam is independent under the applicable rules of the SEC and Nasdaq. Upon the listing of our common stock on Nasdaq, the audit committee will operate under a written charter that satisfies the applicable standards of the SEC and Nasdaq.

Compensation Committee

Our compensation committee approves policies relating to compensation and benefits of our officers and employees. The compensation committee approves corporate goals and objectives relevant to the compensation of our Chief Executive Officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and approves the compensation of these officers based on such evaluations. The compensation committee also approves the issuance of stock options and other awards under our equity plans. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members, including compliance by the compensation committee with its charter.

The members of our compensation committee are Dr. Akkaraju, Mr. Takahashi and . Dr. Akkaraju serves as the chairperson of the committee. Our board of directors has determined that each of Dr. Akkaraju and Mr. Takahashi is independent under the applicable Nasdaq listing standards and is a "non-employee director" as defined

in Rule 16b-3 promulgated under the Exchange Act. Upon the listing of our common stock on Nasdaq, the compensation committee will operate under a written charter, which the compensation committee will review and evaluate at least annually.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for assisting our board of directors in discharging the board of directors' responsibilities regarding the identification of qualified candidates to become board members, the selection of nominees for election as directors at our annual meetings of stockholders (or special meetings of stockholders at which directors are to be elected), and the selection of candidates to fill any vacancies on our board of directors and any committees thereof. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies, reporting and making recommendations to our board of directors concerning governance matters, reviewing and assisting the Board with oversight of matters relating to environmental, social and governance matters affecting the Company and oversight of the evaluation of our board of directors. The members of our nominating and corporate governance committee are . serves as the chairperson of the committee. Our board of directors has determined that each of is independent under the applicable Nasdaq listing standards. Upon the listing of our common stock on Nasdaq, the nominating and corporate governance committee will operate under a written charter, which the nominating and corporate governance committee will review and evaluate at least annually.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been one of our officers or employees. None of our executive officers currently serves, or has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Board Diversity

Upon the closing of this offering, our nominating and corporate governance committee will be responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members) for election or appointment, the nominating and corporate governance committee and the board of directors will take into account many factors, including the following:

- personal and professional integrity, ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly-held company;
- experience as a board member or executive officer of another publicly-held company;
- strong finance experience;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- diversity of background and perspective, including, but not limited to, with respect to age, gender, race, place of residence and specialized experience;
- experience relevant to our business industry and with relevant social policy concerns; and
- relevant academic expertise or other proficiency in an area of our business operations.

Currently, our board of directors evaluates, and following the closing of this offering will evaluate, each individual in the context of the board of directors as a whole, with the objective of assembling a group that can best

maximize the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas.

Code of Business Conduct and Ethics

We plan to adopt a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, which will be effective upon the closing of this offering. Upon the closing of this offering, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.mineralystx.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of Nasdaq concerning any amendments to, or waivers from, any provision of the code. We have included our website address in this prospectus solely as an inactive textual reference. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

Overview

Our named executive officers for 2021, which consist of each person who served as our principal executive officer during 2021 and our next most highly compensated executive officer during 2021, were:

- Jon Congleton, Chief Executive Officer; and
- David Rodman, MD, Chief Medical 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 closing of this offering may differ materially from the currently planned programs summarized in this discussion.

The following table sets forth information regarding compensation earned with respect to the fiscal year ended December 31, 2021 by our named executive officers.

2021 Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (\$) ⁽¹⁾	Option Awards (\$) ⁽²⁾	Non-Equity Incentive Plan Compensation (\$) ⁽³⁾	All Other Compensation (\$) ⁽⁴⁾	Total (\$)
Jon Congleton <i>Chief Executive Officer</i> ⁽⁵⁾	2021	346,484	175,342	9,536	133,000	10,267	674,629
David Rodman, MD <i>Chief Medical Officer</i> ⁽⁶⁾	2021	342,153	240,041	95,359	131,338	10,533	819,424

(1) Amount reflects one-time bonuses awarded to our named executive officers per the terms of their offer letters with the Company.

(2) The amounts reported in the “Option Awards” column represent the aggregate grant date fair value of the stock options awarded to our named executive officers during fiscal year 2021, calculated in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718. The assumptions used in calculating the grant date fair value of the awards reported in this column are set forth in Notes 2 and 8 to our audited financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for the stock options and do not reflect the actual economic value that will be realized by Mr. Congleton or Dr. Rodman upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such awards. See “—Narrative to Summary Compensation Table—Equity-Based Incentive Awards.”

(3) Amounts reflect performance bonuses earned by each executive in 2021, which were paid in early 2022.

(4) Amounts reflect company matching contributions to a 401(k) savings plan.

(5) Pursuant to the terms of his offer letter with the Company, Mr. Congleton was not entitled to a base salary until the closing of a qualifying Series A financing, and therefore the base salary amount set forth in the table above reflects the amount earned for the portion of 2021 in which he was entitled to a base salary. Mr. Congleton had an annual base salary rate of \$400,000 in 2021.

(6) Dr. Rodman joined as Chief Medical Officer in January 2021, and pursuant to the terms of his offer letter with the Company, Dr. Rodman was not entitled to a base salary until the closing of a qualifying Series A financing, and therefore the base salary amount set forth in the table above reflects the amount earned for the portion of 2021 in which he was entitled to a base salary. Dr. Rodman had an annual base salary rate of \$395,000 in 2021.

Narrative to Summary Compensation Table

Annual Base Salary

The compensation of our named executive officers is generally determined and approved by our board of directors. The 2021 base salaries of each of our named executive officers are described below under the subsection titled “Employment Arrangements with our Executive Officers.”

Annual Bonus

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual

corporate goals and to reward our executives for individual achievement towards these goals. The annual performance-based bonus each named executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our board of directors establishes each year. At the end of the year, our board of directors reviews our performance against each corporate goal and determines the extent to which we achieved each of our corporate goals.

Our board of directors will generally consider each named executive officer's individual contributions towards reaching our annual corporate goals. For 2021, Mr. Congleton and Dr. Rodman were each eligible to receive a target annual bonus for 2021 equal to 25% of their respective annual base salaries.

The corporate goals the board of directors established for 2021 related to clinical, nonclinical, regulatory, CMC, business development and financing milestones. In February 2022, our board of directors determined that the 2021 goals were achieved as to 133%. The board of directors awarded cash bonuses to Mr. Congleton and Dr. Rodman in the amounts of \$133,000 and \$131,338, respectively.

Series A Financing Bonus

For 2021, Mr. Congleton and Dr. Rodman were also eligible to earn one-time bonuses upon the completion of the Company's Series A financing pursuant to the terms of their offer letters with the Company. In February 2021, Mr. Congleton and Dr. Rodman were awarded cash bonuses in the amounts of \$175,342 and \$240,041, respectively.

Equity-Based Incentive Awards

Our equity-based incentive awards are designed to align our interests and those of our stockholders with those of our employees, including our executive officers. The board of directors or an authorized committee thereof is responsible for approving equity grants.

Prior to this offering, we have granted stock options and issued restricted stock pursuant to our 2020 Plan. Following this offering, we will grant equity awards under the terms of our 2023 Plan. The terms of our equity plans are described below under the subsection titled "Equity Incentive Plans."

In March 2021, our board of directors granted options under our 2020 Plan to purchase 260,045 shares and 2,600,453 shares to each of Mr. Congleton and Dr. Rodman, respectively. Each option has an exercise price of \$0.05 per share, the fair market value on the date of grant as determined by our board of directors. The options granted to Mr. Congleton may be early exercised. The options vest with respect to 25% of the shares on the one-year anniversary of the March 1, 2021 and January 11, 2021 vesting commencement dates, respectively, and the remaining shares vest in substantially equal monthly installments thereafter for 36 months, subject to the respective named executive officer's continuous service with us as of each such vesting date. The options granted to Dr. Rodman will vest in full upon a change in control (as defined in the 2020 Plan) and the options granted to both Mr. Congleton and Dr. Rodman are also subject to potential acceleration of vesting in connection with a qualifying termination of employment or, for Mr. Congleton, a change in control, as described below under the subsection titled "Employment Arrangements with our Executive Officers."

Outstanding Equity Awards at 2021 Fiscal Year-End

The following table presents information regarding the outstanding stock options and shares of restricted stock held by each of our named executive officers as of December 31, 2021.

Name	Grant Date	Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price ^(d)	Option Expiration Date	Number of Shares of Stock that Have Not Vested	Market Value of Shares that Have Not Vested ^(d)
Jon Congleton	10/09/20	—	—	—	—	3,645,834 ⁽²⁾⁽³⁾	291,667
	03/12/21	—	260,045 ⁽³⁾⁽⁴⁾	0.05	03/11/31	—	—
David Rodman, MD	03/12/21	—	2,600,453 ⁽³⁾⁽⁴⁾	0.05	03/11/31	—	—

- (1) The market value is calculated by multiplying the number of unvested restricted stock outstanding under the award by \$0.08, which was the fair market value of our common stock as of December 31, 2021 based on an independent third-party valuation.
- (2) On October 9, 2020, our board of directors granted Mr. Congleton 5,000,000 shares of restricted stock under our 2020 Plan, with 25% of such shares vesting on the first anniversary of the date on which Mr. Congleton commenced full-time employment with us (November 1, 2020), and the remaining shares vesting in equal monthly installments over the 36 months thereafter, subject to Mr. Congleton's continued status as a service provider through each such vesting date.
- (3) These awards are subject to potential acceleration of vesting in connection with a qualifying termination of employment or a change in control, as described below under the subsection titled "Employment Arrangements with our Executive Officers." Dr. Rodman's stock option granted on March 12, 2021 is subject to accelerated vesting in connection with a change in control, as described above under the subsection titled "Equity-Based Incentive Awards."
- (4) On March 12, 2021, our board of directors granted Mr. Congleton and Dr. Rodman options under our 2020 Plan to purchase 260,045 shares and 2,600,453 shares, respectively, with 25% of such shares vesting on the first anniversary of the March 1, 2021 and January 11, 2021 vesting commencement dates, respectively, and the remaining shares vesting in equal monthly installments over the 36 months thereafter, subject to the respective named executive officer's continued status as a service provider through each such vesting date. The stock option granted to Mr. Congleton has an early exercise feature that allows Mr. Congleton to exercise the option while unvested and receive restricted shares of our common stock that are subject to forfeiture until the vesting requirement is met. Our 2020 Plan specifically authorizes this early exercise concept and states that employees who exercise unvested options will receive shares of restricted stock with a vesting period that corresponds to the vesting period that remained in the exercised option. Due to this early exercise feature, these options are reflected in the "Exercisable" column as of December 31, 2021.

Employment Arrangements with our Executive Officers

Mr. Congleton. We have entered into an offer letter with Mr. Congleton which governs the terms of his employment with us. Pursuant to his agreement, Mr. Congleton was entitled to an annual base salary of \$400,000 effective as of February 16, 2021 (which was increased to \$420,000 effective as of March 1, 2022). He is eligible to receive an annual bonus at a target amount of 25% of his base salary actually paid for the year to which such annual bonus relates, based on the achievement of performance objectives as determined by our board of directors.

Mr. Congleton's offer letter provides for a one-time bonus, earned upon the closing of a qualifying Series A financing, equal to (i) \$400,000 divided by 365, and multiplied by (ii) the number of days elapsed from Mr. Congleton's employment start date through and including the date of such qualifying Series A financing.

Regardless of the manner in which Mr. Congleton's employment terminates, he is entitled to receive amounts previously earned during his employment, including unpaid salary, reimbursement of expenses owed, and accrued but unpaid paid time off and any continuation of benefits required by applicable law. In addition, Mr. Congleton is entitled to certain severance benefits under his offer letter (as described below), subject to his execution of a release of claims and compliance with the post-termination obligations set forth in his proprietary information and inventions assignment agreement.

Mr. Congleton's offer letter provides for severance benefits for certain terminations that arise during and outside a change in control period. Upon a termination without cause or a resignation for good reason outside of a change in control period (as such terms are defined below), Mr. Congleton is entitled to (i) base salary continuation for six months, (ii) a cash lump sum payment amount equal to Mr. Congleton's then target annual bonus, pro-rated based on the total number of days elapsed in the calendar year as of Mr. Congleton's date of termination, (iii) accelerated vesting of such number of Mr. Congleton's unvested equity awards as would have vested had Mr.

Congleton remained employed by us during the six-month period following the date of termination, and (iv) payment or reimbursement of the COBRA premiums for Mr. Congleton and his eligible dependents, or if COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) six months from Mr. Congleton's date of termination, or (b) the date Mr. Congleton becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

Upon a termination without cause or a resignation for good reason within 12 months after a change in control (such period, the change in control period), Mr. Congleton is entitled to (i) base salary continuation for 12 months, (ii) a cash lump sum payment amount equal to Mr. Congleton's then target annual bonus, pro-rated based on the total number of days elapsed in the calendar year as of Mr. Congleton's date of termination, (iii) accelerated vesting of such number of Mr. Congleton's unvested equity awards as would have vested had Mr. Congleton remained employed by us during the 12 month period following the date of termination, and (iv) payment or reimbursement of the COBRA premiums for Mr. Congleton and his eligible dependents, or if coverage under COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) 12 months from Mr. Congleton's date of termination, or (b) the date Mr. Congleton becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

For purposes of Mr. Congleton's offer letter:

"cause" means (i) a commission of an act of fraud, embezzlement or dishonesty, or the commission of some other illegal act, that has a demonstrable adverse impact on us or any successor or affiliate; (ii) a conviction of, or plea of "guilty" or "no contest" to, a felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (iii) any intentional, unauthorized use or disclosure by Mr. Congleton of confidential information or trade secrets of us or any successor or affiliate; (iv) gross negligence, insubordination or material violation of any duty of loyalty to us or any successor or affiliate, or any other demonstrable material misconduct on Mr. Congleton's part; (v) ongoing and repeated failure or refusal to perform or neglect of Mr. Congleton's duties as required by his offer letter or ongoing and repeated failure or refusal to comply with the instructions given to him by our board of directors, which failure, refusal or neglect continues for 15 days following his receipt of written notice from our board of directors stating with specificity the nature of such failure, refusal or neglect; or (vi) willful, material breach of any of our material policies or any material provision of Mr. Congleton's offer letter or his proprietary information and inventions assignment agreement.

"change in control" will have the meaning given to such term in the 2020 Plan.

"good reason" means any of the following without Mr. Congleton's written consent: (i) a material diminution in authority, duties or responsibilities; (ii) a material diminution (that is, a diminution of 10% or more) in base compensation, regardless of whether such diminution occurs due to a single reduction or a series of reductions in base compensation, unless such a reduction is imposed across-the-board to our senior management; (iii) a material change in the geographic location at which Mr. Congleton must perform his duties; or (iv) any other action or inaction by us or a successor or affiliate that constitutes a material breach of the obligations to Mr. Congleton under his offer letter, provided, that, in each case, Mr. Congleton will not be deemed to have good reason unless: (a) Mr. Congleton provides written notice of the occurrence of any of the foregoing events or conditions without his written consent within 60 days of the occurrence of such event; (b) we or any successor or affiliate fails to cure such condition within 30 days after receipt of written notice of such event from Mr. Congleton; and (c) Mr. Congleton's resignation based on such good reason is effective within 30 days after expiration of our 30-day cure period.

Dr. Rodman. We have entered into an offer letter with Dr. Rodman which governs the terms of his employment with us. Pursuant to his agreement, Dr. Rodman was entitled to an annual base salary of \$395,000 effective as of February 16, 2021 (which was increased to \$414,750 effective as of March 1, 2022). He is eligible to receive an annual bonus at a target amount of 25% of his base salary actually paid for the year to which such annual bonus relates, based on the achievement of performance objectives as determined by our board of directors.

Dr. Rodman's offer letter provides for two one-time bonuses, each earned upon the closing of a qualifying Series A financing, equal to (i) \$200,000 and (ii) \$395,000 divided by (x) 365, and multiplied by (y) the number of

days elapsed from Dr. Rodman's employment start date through and including the date of such qualifying Series A financing.

Regardless of the manner in which Dr. Rodman's employment terminates, he is entitled to receive amounts previously earned during his employment, including unpaid salary, reimbursement of expenses owed, and accrued but unpaid paid time off and any continuation of benefits required by applicable law. In addition, Dr. Rodman is entitled to certain severance benefits under his offer letter (as described below), subject to his execution of a release of claims and compliance with the post-termination obligations set forth in his proprietary information and inventions assignment agreement.

Dr. Rodman's offer letter provides for severance benefits for certain terminations that arise during and outside a change in control period. Upon a termination without cause or a resignation for good reason outside of a change in control period (as such terms are defined below), Dr. Rodman is entitled to (i) base salary continuation for six months, (ii) accelerated vesting of such number of Dr. Rodman's unvested equity awards as would have vested had Dr. Rodman remained employed by us during the nine-month period following the date of termination, and (iii) payment or reimbursement of the COBRA premiums for Dr. Rodman and his eligible dependents, or if COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) six months from Dr. Rodman's date of termination, or (b) the date Dr. Rodman becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

Upon a termination without cause or a resignation for good reason within 12 months after a change in control (such period, the change in control period), Dr. Rodman is entitled to (i) base salary continuation for 12 months, (ii) accelerated vesting of such number of Dr. Rodman's unvested equity awards as would have vested had Dr. Rodman remained employed by us during the 9 month period following the date of termination, and (iii) payment or reimbursement of the COBRA premiums for Dr. Rodman and his eligible dependents, or if coverage under COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) 12 months from Dr. Rodman's date of termination, or (b) the date Dr. Rodman becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

For purposes of Dr. Rodman's offer letter, "cause," "change in control" and "good reason" have the same meaning as given to the terms in Mr. Congleton's offer letter, as described above.

Mr. Levy. We have entered into an offer letter with Adam Levy, our Chief Financial Officer and Chief Business Officer, which governs the terms of his employment with us. Pursuant to his agreement, Mr. Levy was entitled to an annual base salary of \$415,000. He is eligible to receive an annual bonus at a target amount of 40% of his base salary actually paid for the year to which such annual bonus relates, based on the achievement of performance objectives as determined by our board of directors.

Regardless of the manner in which Mr. Levy's employment terminates, he is entitled to receive amounts previously earned during his employment, including unpaid salary, reimbursement of expenses owed, and accrued but unpaid paid time off and any continuation of benefits required by applicable law. In addition, Mr. Levy is entitled to certain severance benefits under his offer letter, subject to his execution of a release of claims and compliance with post-termination obligations.

Mr. Levy's offer letter provides for severance benefits for certain terminations that arise during and outside a change in control period. Upon a termination without cause or a resignation for good reason outside of a change in control period (as such terms are defined below), Mr. Levy is entitled to (i) a cash lump sum payment equal to nine months of Mr. Levy's current annual base salary, (ii) a cash lump sum payment equal to the amount of the annual cash performance bonus earned but unpaid for the calendar year preceding Mr. Levy's termination (if such termination is between January 1 and the payment date of such annual cash bonus), (iii) a cash lump sum payment amount equal to Mr. Levy's then target annual bonus, pro-rated based on the total number of days elapsed in the calendar year as of Mr. Levy's date of termination, (iv) accelerated vesting of such number of Mr. Levy's unvested equity awards as would have vested had Mr. Levy remained employed by us during the nine-month period following the date of termination, and (v) payment or reimbursement of the COBRA premiums for Mr. Levy and his eligible

dependents, or if COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) nine months from Mr. Levy's date of termination, or (b) the date Mr. Levy becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

Upon a termination without cause or a resignation for good reason within three months prior to or 12 months after a change in control (such period, the change in control period), Mr. Levy is entitled to (i) a cash lump sum payment equal to 12 months of Mr. Levy's current annual base salary, (ii) a cash lump sum payment amount equal to Mr. Levy's then target annual bonus, pro-rated based on the total number of days elapsed in the calendar year as of Mr. Levy's date of termination, (iii) accelerated vesting of Mr. Levy's unvested equity awards, (iv) a lump sum cash payment in an amount equal to (a) 100% of Mr. Levy's then target annual bonus, less (b) the pro-rated target bonus to be paid as described in clause (ii), and (v) payment or reimbursement of the COBRA premiums for Mr. Levy and his eligible dependents, or if coverage under COBRA is not available under our group health plan, a cash amount equal to such payments or reimbursements, until the earliest of (a) 12 months from Mr. Levy's date of termination, or (b) the date Mr. Levy becomes eligible for comparable health insurance coverage under a subsequent employer's group health plan.

For purposes of Mr. Levy's offer letter, "cause," "change in control," and "good reason" have the same meaning as given to the terms in Mr. Congleton's offer letter, as described above, except that "good reason" for Mr. Levy's offer letter includes a material diminution (that is, a diminution of 10% or more) in Mr. Levy's annual cash target bonus opportunity (in addition to a material diminution in base compensation), regardless of whether such diminution occurs due to a single reduction or a series of reductions in Mr. Levy's base compensation, unless such a reduction is imposed across-the-board to our senior management.

Each executive officer has entered into our standard proprietary information and inventions assignment agreement which contains a one-year post-termination non-solicitation covenant. Each of our executive officers' stock options and restricted stock, as applicable, granted prior to the execution of the underwriting agreement for this offering are subject to the terms of the 2020 Plan; a description of the termination and change in control provisions in the 2020 Plan and the form of stock option agreement and form of restricted stock agreement granted thereunder is provided below under "—Equity Incentive Plans."

Health and Welfare and Retirement Benefits; Perquisites

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of our other employees. We generally do not provide perquisites or personal benefits to our named executive officers, except in limited circumstances. Our board of directors may elect to adopt qualified or non-qualified benefit plans in the future if it determines that doing so is in our best interests.

401(k) Plan

Our named executive officers are eligible to participate in a defined contribution retirement plan that provides eligible employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may defer eligible compensation on a pre-tax or after-tax (Roth) basis, up to the statutorily prescribed annual limits on contributions under the Code. Contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan (except for Roth contributions) and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan. Our board of directors may elect to adopt qualified or nonqualified benefit plans in the future, if it determines that doing so is in our best interests.

Equity Incentive Plans

The principal features of our equity incentive plans are summarized below. These summaries are qualified in their entirety by reference to the actual text of the applicable plan, each of which is or will be filed as an exhibit to the registration statement of which this prospectus is a part.

2023 Incentive Award Plan

Prior to this offering, we intend to adopt and ask our stockholders to approve the 2023 Plan, which would become effective in connection with this offering. Under the 2023 Plan, we may grant cash and equity incentive awards to eligible service providers in order to attract, motivate and retain the talent for which we compete. The material terms of the 2023 Plan, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the 2023 Plan and, accordingly, this summary is subject to change.

Eligibility and administration. Our employees, consultants and directors, and employees and consultants of our subsidiaries, will be eligible to receive awards under the 2023 Plan. Following our initial public offering, the 2023 Plan will generally be administered by our board of directors with respect to awards to non-employee directors and by our compensation committee with respect to other participants, each of which may delegate its duties and responsibilities to committees of our directors and/or officers (referred to collectively as the plan administrator below), subject to certain limitations that may be imposed under the 2023 Plan, Section 16 of the Exchange Act and/or stock exchange rules, as applicable. The plan administrator will have the authority to make all determinations and interpretations under, prescribe all forms for use with, and adopt rules for the administration of, the 2023 Plan, subject to its express terms and conditions. The plan administrator will also set the terms and conditions of all awards under the 2023 Plan, including any vesting and vesting acceleration conditions.

Limitation on awards and shares available. The number of shares initially available for issuance under awards granted pursuant to the 2023 Plan will be the sum of (1) approximately % of the shares of our common stock outstanding upon the closing of this offering, plus (2) any shares of our common stock which, as of the effective date of the 2023 Plan, remain available for issuance under the 2020 Plan, plus (3) any shares subject to outstanding awards under the 2020 Plan as of the effective date of the 2023 Plan that become available for issuance under the 2023 Plan thereafter in accordance with its terms. The number of shares initially available for issuance will be increased on January 1 of each calendar year beginning in 2024 and ending in 2033, by an amount equal to the lesser of (a) % of the shares of common stock outstanding on the final day of the immediately preceding calendar year and (b) such smaller number of shares as determined by our board of directors. No more than shares of common stock may be issued upon the exercise of incentive stock options under the 2023 Plan. Shares issued under the 2023 Plan may be authorized but unissued shares, shares purchased on the open market or treasury shares.

If an award under the 2023 Plan or the 2020 Plan expires, lapses or is terminated, exchanged for or settled in cash, surrendered, repurchased, cancelled without having been fully exercised or forfeited, in any case, in a manner that results in the Company acquiring shares covered by the award at a price not greater than the price paid by the participant for such shares or not issuing any shares covered by the award, any shares subject to such award will, as applicable, become or again be available for new grants under the 2023 Plan. Awards granted under the 2023 Plan upon the assumption of, or in substitution for, awards authorized or outstanding under a qualifying equity plan maintained by an entity with which we enter into a merger or similar corporate transaction will not reduce the shares available for grant under the 2023 Plan.

Awards. The 2023 Plan provides for the grant of stock options, including incentive stock options, or ISOs within the meaning of Section 422 of the Code, and nonqualified stock options, or NSOs; restricted stock; dividend equivalents; restricted stock units, or RSUs; stock appreciation rights, or SARs; and other stock or cash-based awards. Certain awards under the 2023 Plan may constitute or provide for a deferral of compensation, subject to Section 409A of the Code, which may impose additional requirements on the terms and conditions of such awards. All awards under the 2023 Plan will be set forth in award agreements, which will detail the terms and conditions of the awards, including any applicable vesting and payment terms and post-termination exercise limitations. Awards other than cash awards generally will be settled in shares of our common stock, but the plan administrator may provide for cash settlement of any award. A brief description of each award type follows.

- *Stock options.* Stock options provide for the purchase of shares of our common stock in the future at an exercise price set on the grant date. ISOs, by contrast to NSOs, may provide tax deferral beyond exercise and favorable capital gains tax treatment to their holders if certain holding period and other requirements of the Code are satisfied. The exercise price of a stock option will not be less than 100%

of the fair market value of the underlying share on the date of grant (or 110% in the case of ISOs granted to certain significant stockholders), except with respect to certain substitute options granted in connection with a corporate transaction. The term of a stock option may not be longer than ten years (or five years in the case of ISOs granted to certain significant stockholders). Vesting conditions determined by the plan administrator may apply to stock options and may include continued service, performance and/or other conditions. ISOs generally may be granted only to our employees and employees of our parent or subsidiary corporations, if any.

- *SARs.* SARs entitle their holder, upon exercise, to receive from us an amount equal to the appreciation of the shares subject to the award between the grant date and the exercise date. The exercise price of a SAR will not be less than 100% of the fair market value of the underlying share on the date of grant (except with respect to certain substitute SARs granted in connection with a corporate transaction), and the term of a SAR may not be longer than ten years. Vesting conditions determined by the plan administrator may apply to SARs and may include continued service, performance and/or other conditions.
- *Restricted stock and RSUs.* Restricted stock is an award of nontransferable shares of our common stock that remain forfeitable unless and until specified conditions are met, and which may be subject to a purchase price. RSUs are contractual promises to deliver shares of our common stock in the future, which may also remain forfeitable unless and until specified conditions are met. Delivery of the shares underlying RSUs may be deferred under the terms of the award or at the election of the participant, if the plan administrator permits such a deferral. Conditions applicable to restricted stock and RSUs may be based on continuing service, the attainment of performance goals and/or such other conditions as the plan administrator may determine.
- *Other stock or cash-based awards.* Other stock or cash-based awards are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash-based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of base salary, bonus, fees or other cash compensation otherwise payable to any individual who is eligible to receive awards. The plan administrator will determine the terms and conditions of other stock or cash-based awards, which may include vesting conditions based on continued service, performance and/or other conditions.
- *Dividend equivalents.* RSUs or other stock and cash-based awards may be accompanied by the right to receive the equivalent value of dividends paid on shares of our common stock prior to the delivery of the underlying shares. Such dividend equivalents will only be paid out to the extent that any vesting conditions are subsequently satisfied, unless otherwise determined by the plan administrator. No dividend equivalents will be payable on stock options or SARs.

Performance awards. Performance awards include any of the foregoing awards that are granted subject to vesting and/or payment based on the attainment of specified performance goals or other criteria the plan administrator may determine, which may or may not be objectively determinable. Performance criteria upon which performance goals are established by the plan administrator may include: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization and non-cash equity-based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including, but not limited to, gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders' equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial or strategic milestones or developments; market share; economic value or economic value added

models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human capital management (including diversity and inclusion); supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales-related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to our performance or the performance of a subsidiary, division, business segment or business unit, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies.

Director compensation. The 2023 Plan provides that the plan administrator may establish compensation for non-employee directors from time to time subject to the 2023 Plan's limitations. Prior to this offering, our stockholders will approve the initial terms of our non-employee director compensation program, which is described below under the heading "Director Compensation." Our board of directors or its authorized committee may modify the non-employee director compensation program from time to time in the exercise of its business judgment, taking into account such factors, circumstances and considerations as it deems relevant from time to time, provided that the sum of any cash compensation or other compensation and the grant date fair value (as determined in accordance with FASB ASC 718, or any successor thereto) of any equity awards granted as compensation for services as a non-employee director during any calendar year may not exceed \$ _____, increased to \$ _____ in the calendar year of a non-employee director's initial service as a non-employee director or during which a non-employee director serves as chair of our board of directors or lead independent director (which limits will not apply to the compensation for any non-employee director who serves in any capacity in addition to that of a non-employee director for which he or she receives additional compensation or any compensation paid to any non-employee director prior to the calendar year following the calendar year in which this offering occurs). The plan administrator may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the plan administrator may determine in its discretion, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation or in other contemporaneous compensation decisions involving non-employee directors.

Certain transactions. In connection with certain transactions and events affecting our common stock, including a change in control (as defined below), or change in any applicable laws or accounting principles, the plan administrator has broad discretion to take action under the 2023 Plan to prevent the dilution or enlargement of intended benefits, facilitate such transaction or event, or give effect to such change in applicable laws or accounting principles. This includes canceling awards in exchange for either an amount in cash or other property with a value equal to the amount that would have been obtained upon exercise or settlement of the vested portion of such award or realization of the participant's rights under the vested portion of such award, accelerating the vesting of awards, providing for the assumption or substitution of awards by a successor entity, adjusting the number and type of shares available, replacing awards with other rights or property or terminating awards under the 2023 Plan. In the event of a change in control where the acquirer does not assume awards granted under the 2023 Plan, awards issued under the 2023 Plan will be subject to accelerated vesting such that 100% of the awards will become vested and exercisable or payable, as applicable. In addition, in the event of certain non-reciprocal transactions with our stockholders (an equity restructuring) the plan administrator will make equitable adjustments to the 2023 Plan and outstanding awards as it deems appropriate to reflect the equity restructuring.

For purposes of the 2023 Plan, a "change in control" means and includes each of the following:

- a transaction or series of transactions whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than our company or our subsidiaries or any employee benefit plan maintained by us or any of our subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, us) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of our securities possessing more than 50% of the total combined voting power of our securities outstanding immediately after such acquisition; or

- during any period of two consecutive years, individuals who, at the beginning of such period, constitute our board of directors together with any new directors (other than a director designated by a person who has entered into an agreement with us to effect a change in control transaction) whose election by our board of directors or nomination for election by our stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or
- the consummation by us (whether directly or indirectly) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of our assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction;
- which results in our voting securities outstanding immediately before the transaction continuing to represent either by remaining outstanding or by being converted into voting securities of the company or the person that, as a result of the transaction, controls, directly or indirectly, the company or owns, directly or indirectly, all or substantially all of our assets or otherwise succeeds to our business, directly or indirectly, at least a majority of the combined voting power of the successor entity's outstanding voting securities immediately after the transaction; and
- after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the successor entity; provided, however, that no person or group will be treated as beneficially owning 50% or more of the combined voting power of the successor entity solely as a result of the voting power held in our company prior to the consummation of the transaction.

Foreign participants, clawback provisions, transferability and participant payments. With respect to foreign participants, the plan administrator may modify award terms, establish subplans and/or adjust other terms and conditions of awards, subject to the share limits described above. All awards will be subject to the provisions of any clawback policy implemented by our company and to the extent set forth in such clawback policy or in the applicable award agreement. With limited exceptions for estate planning, domestic relations orders, certain beneficiary designations and the laws of descent and distribution, awards under the 2023 Plan are generally nontransferable prior to vesting and are exercisable only by the participant. With regard to tax withholding obligations arising in connection with awards under the 2023 Plan and exercise price obligations arising in connection with the exercise of stock options under the 2023 Plan, the plan administrator may, at its discretion, accept cash, wire transfer, or check, shares of our common stock that meet specified conditions (a market sell order) or such other consideration as it deems suitable or any combination of the foregoing.

Plan amendment and termination. Our board of directors may amend, suspend or terminate the 2023 Plan at any time; however, except in connection with certain changes in our capital structure, stockholder approval will be required for any amendment that increases the number of shares available under the 2023 Plan. The plan administrator will have the authority, without the approval of our stockholders, to amend any outstanding stock option or SAR to reduce its exercise price per share. No award may be granted pursuant to the 2023 Plan after the tenth anniversary of the date on which our board of directors adopts the 2023 Plan.

2020 Equity Incentive Plan

On July 7, 2020, our board of directors and our stockholders approved the adoption of the 2020 Equity Incentive Plan, which was amended and restated effective June 1, 2022.

A total of 37,205,875 shares of our common stock are reserved for issuance under the 2020 Plan. As of September 30, 2022, 13,260,785 shares of our common stock were subject to outstanding restricted stock awards under the 2020 Plan, 14,263,474 options to purchase shares of our common stock have been granted under the 2020 Plan, and 3,627,395 shares of our common stock remained available for future issuance under the 2020 Plan.

After the effective date of the 2023 Plan, no additional awards will be granted under the 2020 Plan. However, the 2020 Plan will continue to govern the terms and conditions of the outstanding awards granted under it. Shares of our common stock subject to awards granted under the 2020 Plan that expire, lapse or are terminated, exchanged for cash, surrendered, repurchased or forfeited following the effective date of the 2020 Plan will be available for issuance under the 2023 Plan in accordance with its terms.

Administration. Our board of directors administers the 2020 Plan, unless it delegates authority for administration of the plan. Subject to the terms and conditions of the 2020 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the type or types of awards to be granted to each person, determine the number of awards to grant, determine the number of shares to be subject to such awards, and the terms and conditions of such awards, and make all other determinations and decisions and to take all other actions necessary or advisable for the administration of the 2020 Plan. The plan administrator is also authorized to establish, adopt, amend or revise rules relating to administration of the 2020 Plan, subject to certain restrictions.

Eligibility. Awards under the 2020 Plan may be granted to individuals who are then our employees, consultants and members of our board of directors and our subsidiaries. Only employees may be granted ISOs.

Awards. The 2020 Plan provides that our administrator may grant or issue stock options (including NSOs and ISOs), restricted stock, RSUs, other stock-based awards, or any combination thereof. Each award is set forth in a separate agreement with the person receiving the award and indicates the type, terms and conditions of the award.

Certain Transactions. The plan administrator has broad discretion to equitably adjust the provisions of the 2020 Plan and the terms and conditions of existing and future awards, including with respect to aggregate number and type of shares subject to the 2020 Plan and awards granted pursuant to the 2020 Plan, to prevent the dilution or enlargement of intended benefits and/or facilitate necessary or desirable changes in the event of certain transactions and events affecting our common stock, such as stock dividends, stock splits, mergers, acquisitions, consolidations and other corporate transactions. The plan administrator may also provide for the acceleration, cash-out, termination, assumption, substitution or conversion of awards in the event of a change in control or certain other unusual or nonrecurring events or transactions. In addition, in the event of certain non-reciprocal transactions with our stockholders, or an "equity restructuring," the plan administrator will make equitable adjustments to the 2020 Plan and outstanding awards as it deems appropriate to reflect the equity restructuring.

In the event of a change of control where awards granted under the 2020 Plan are not continued, converted, assumed or replaced, the plan administrator may provide that awards issued under the 2020 Plan held by persons who have not experienced a termination of service will be subject to accelerated vesting such that 100% of the awards will become vested and exercisable or payable, as applicable, immediately prior to the change in control. Under the 2020 Plan, a change of control is generally defined as: (1) a merger or consolidation of our company with or into any other corporation or other entity or person; (2) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of our company's assets; or (3) any other transaction, including the sale by us of new shares of our capital stock or a transfer of existing shares of our capital stock, the result of which is that a third party that is not an affiliate of us or our stockholders (or a group of third parties not affiliated with us or our stockholders) immediately prior to such transaction acquires or holds capital stock representing a majority of our outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "change in control" under the 2020 Plan: (a) a transaction (other than a sale of all or substantially all of our assets) in which the holders of our voting securities immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (b) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of our assets to an affiliate of ours; (c) an initial public offering of any of our securities or any other transaction principally for bona fide equity financing purposes; (d) a reincorporation solely to change our jurisdiction; or (e) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held our securities immediately before such transaction.

Plan Amendment and Termination. Our board of directors may terminate, suspend or amend the 2020 Plan; provided that no amendment of the 2020 Plan may materially adversely affect an outstanding award at the time of

the amendment without the consent of the award recipient. However, stockholder approval of any amendment to the 2020 Plan must be obtained to the extent necessary and desirable to comply with any applicable law, regulation or stock exchange rule.

2023 Employee Stock Purchase Plan

Effective the day prior to the first public trading date of our common stock, we intend to adopt and ask our stockholders to approve the ESPP, the material terms of which, as it is currently contemplated, are summarized below. Our board of directors is still in the process of developing, approving and implementing the ESPP and, accordingly, this summary is subject to change.

The ESPP is comprised of two distinct components in order to provide increased flexibility to grant options to purchase shares under the ESPP to U.S. and to non-U.S. employees. Specifically, the ESPP authorizes (1) the grant of options to U.S. employees that are intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Code, (Section 423 Component), and (2) the grant of options that are not intended to be tax-qualified under Section 423 of the Code to facilitate participation for employees located outside of the U.S. who do not benefit from favorable U.S. federal tax treatment and to provide flexibility to comply with non-U.S. law and other considerations (Non-Section 423 Component). Where permitted under local law and custom, we expect that the Non-Section 423 Component will generally be operated and administered on terms and conditions similar to the Section 423 Component.

Shares available for awards; administration. A total of shares of our common stock will initially be reserved for issuance under the ESPP. In addition, the number of shares available for issuance under the ESPP will be annually increased on January 1 of each calendar year beginning in 2024 and ending in and including 2033, by an amount equal to the lesser of (A) % of the shares outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by our board of directors, provided that no more than shares of our common stock may be issued under the Section 423 Component. Our board of directors or a committee of our board of directors will administer and will have authority to interpret the terms of the ESPP and determine eligibility of participants. We expect that the compensation committee will be the initial administrator of the ESPP (referred to as the plan administrator below).

Eligibility. We expect that all of our employees will be eligible to participate in the ESPP. However, an employee may not be granted rights to purchase stock under the ESPP if the employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power or value of all classes of our stock.

Grant of rights. Stock will be offered under the ESPP during offering periods. The length of the offering periods under the ESPP will be determined by the plan administrator and may be up to twenty-seven months long. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The purchase dates for each offering period will be the final trading day in the offering period. Offering periods under the ESPP will commence when determined by the plan administrator. The plan administrator may, at its discretion, modify the terms of future offering periods. In non-U.S. jurisdictions where participation in the ESPP through payroll deductions is prohibited, the plan administrator may provide that an eligible employee may elect to participate through contributions to the participant's account under the ESPP in a form acceptable to the plan administrator in lieu of or in addition to payroll deductions.

The ESPP permits participants to purchase common stock through payroll deductions of up to a specified percentage of their eligible compensation. The plan administrator will establish a maximum number of shares that may be purchased by a participant during any offering period. In addition, no employee will be permitted to accrue the right to purchase stock under the Section 423 Component at a rate in excess of \$25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of our common stock. The option will expire at the end of the applicable offering period and will be exercised at that time to the extent of the payroll deductions accumulated during the offering period. The purchase

price of the shares, in the absence of a contrary designation, will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the purchase date. Participants may voluntarily end their participation in the ESPP at any time during a specified period prior to the end of the applicable offering period and will be paid their accrued payroll deductions that have not yet been used to purchase shares of common stock. Participation ends automatically upon a participant's termination of employment.

A participant may not transfer rights granted under the ESPP other than by will or the laws of descent and distribution, and such rights are generally exercisable only by the participant.

Certain transactions. In the event of certain non-reciprocal transactions or events affecting our common stock, the plan administrator will make equitable adjustments to the ESPP and outstanding rights. In the event of certain unusual or non-recurring events or transactions, including a change in control, the plan administrator may provide for (1) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (2) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, if any, (3) the adjustment in the number and type of shares of stock subject to outstanding rights, (4) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (5) the termination of all outstanding rights.

Plan amendment. The plan administrator may amend, suspend or terminate the ESPP at any time. However, stockholder approval will be obtained for any amendment that increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the ESPP or changes the corporations or classes of corporations whose employees are eligible to participate in the ESPP.

Non-Employee Director Compensation

We did not provide any cash, equity or other compensation to our non-employee directors in the year ended December 31, 2021. We have a policy of reimbursing all of our non-employee directors for their reasonable out-of-pocket expenses in connection with attending board of directors and committee meetings.

Post-IPO Director Compensation Program

In connection with this offering, we intend to adopt and ask our stockholders to approve the initial terms of our non-employee director compensation program. The material terms of the non-employee director compensation program, as it is currently contemplated, are summarized below.

The non-employee director compensation program will provide for annual retainer fees and/or long-term equity awards for our non-employee directors. We expect each non-employee director will receive an annual retainer of \$. The non-employee directors serving as the chairs of the audit, compensation and nominating and corporate governance committees will receive additional annual retainers of \$, \$ and \$, respectively. Non-employee directors serving as members of the audit, compensation and nominating and corporate governance committees will receive additional annual retainers of \$, \$ and \$, respectively. The non-employee directors will also receive initial grants of options to purchase shares of our common stock, vesting over three years, upon election to the board of directors, and thereafter annual grants of options to purchase shares of our common stock, vesting in substantially equal monthly installments over the 12 months following the date of grant (or, in the event the next annual meeting of our stockholders occurs prior to the first anniversary of the date of grant, any remaining unvested portion of the annual award will vest on the date of such annual meeting of our stockholders). Awards to our non-employee directors will also vest in the event of a change in control.

Compensation under our non-employee director compensation program will be subject to the annual limits on non-employee director compensation set forth in the 2023 Plan, as described above. Our board of directors or its authorized committee may modify the non-employee director compensation program from time to time in the exercise of its business judgment, taking into account such factors, circumstances and considerations as it shall deem relevant from time to time, subject to the annual limit on non-employee director compensation set forth in the 2023 Plan (which limits will not apply to any non-employee director that serves in any additional capacity with the

company for which he or she receives compensation or any compensation paid to any non-employee director prior to the calendar year following the calendar year in which this offering occurs). As provided in the 2023 Plan, our board of directors or its authorized committee may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the board of directors or its authorized committee may determine in its discretion, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation or in other compensation decisions involving non-employee directors.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following includes a summary of transactions since our inception in May 2019 to which we have been a party in which the amount involved exceeded or will exceed the lesser of \$120,000 and one percent of the average of our total assets as of December 31, 2020 and 2021, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under the section titled “Executive and Director Compensation.” We also describe below certain other transactions with our directors, executive officers and stockholders.

Convertible Notes

Between May 2019 and July 2020, we issued and sold in a private placement an aggregate of approximately \$4.0 million in Convertible Notes to Catalys Pacific Fund, LP (Catalys Pacific), a beneficial owner of more than 5% of our capital stock. The notes accrued interest at a rate of 6% per annum. The Convertible Notes were automatically converted into 10,868,432 shares of our Series A preferred stock in the February 2021 Series A preferred stock financing described below.

Preferred Stock Financings

Series A Convertible Preferred Stock Financings. In February 2021, we entered into a Series A preferred stock purchase agreement, as amended in April 2021, pursuant to which we sold to investors in an initial closing in February 2021 and subsequent closings in April 2021 and January 2022 in private placements an aggregate of 86,332,216 shares of Series A convertible preferred stock, which included conversion of the Convertible Notes described above. The per-share purchase price was \$0.477, and we received gross proceeds of approximately \$40.0 million, which included the conversion of the Convertible Notes described above at a discounted price of \$0.3816 per share.

Series B Convertible Preferred Stock Financings. In June 2022, we entered into a Series B preferred stock purchase agreement, pursuant to which in June 2022 we sold to investors, in private placements, an aggregate of 136,510,868 shares of Series B convertible preferred stock. The per-share purchase price was \$0.8644, and we received gross proceeds of approximately \$118.0 million.

The following table sets forth the aggregate number of shares acquired by the listed directors, executive officers or holders of more than 5% of our capital stock, or their affiliates. Each outstanding share of convertible preferred stock, including the shares identified in the table below, will convert into shares of common stock at a ratio of one-for-one immediately prior to the closing of this offering.

Participants	Series A Convertible Preferred Stock	Series B Convertible Preferred Stock
5% or greater stockholders⁽¹⁾		
Catalys Pacific Fund, LP	23,446,169	23,137,436
Samsara BioCapital, L.P.	23,059,184	15,617,769
HBM Healthcare Investments (Cayman) Ltd.	20,962,895	10,411,846
BioDiscovery 6 FPCI	—	20,823,692
Entities affiliated with RA Capital Management, L.P. ⁽²⁾	—	20,823,692
Entities affiliated with Adams Street Partners ⁽³⁾	18,654,370	5,784,359

(1) Additional details regarding these stockholders and their equity holdings are provided in “Principal Stockholders.”

(2) Represents securities acquired by RA Capital Healthcare Fund, L.P. and RA Capital Nexus Fund III, L.P.

(3) Represents securities acquired by Adams Street 2016 Direct Venture/Growth Fund LP, Adams Street 2017 Direct Venture/Growth Fund LP, Adams Street 2018 Direct Venture/Growth Fund LP, Adams Street 2019 Direct Venture/Growth Fund LP, Adams Street 2020 Direct Venture/Growth Fund LP, Adams Street 2021 Direct Venture/Growth Fund LP, and Adams Street Growth Equity Fund VII LP.

Public Offering Participation Rights

We entered into letter agreements in June 2022 with Catalys Pacific, Samsara BioCapital, L.P., HBM Healthcare Investments (Cayman) Ltd., BioDiscovery 6 FPCI, entities affiliated with RA Capital Management, L.P., and entities affiliated with Adams Street Partners, LLC, each a beneficial owner of more than 5% of our capital stock. The letter agreements grant each of such investors a participation right to purchase a specified, pro rata percentage of shares of common stock in this offering at the public offering price, subject to compliance with applicable securities laws. The letter agreement further provides that, under certain circumstances in which any such investor is unable to participate in this offering, we are required to offer such investors shares of our common stock through a separate private placement to be concurrent with this offering.

Investors' Rights Agreement

We entered into an investors' rights agreement in February 2021, as amended and restated in June 2022 (the Investors' Rights Agreement), with the holders of our convertible preferred stock and certain holders of our common stock, including the holders of more than 5% of our capital stock listed above as well as entities with which certain of our directors are affiliated. This agreement provides for certain rights relating to the registration of their shares of common stock issuable upon conversion of their convertible preferred stock and certain additional covenants made by us. Except for the registration rights (including the related provisions pursuant to which we have agreed to indemnify the parties to the Investors' Rights Agreement), all rights under this agreement will terminate upon closing of this offering. The registration rights will continue following this offering and will terminate five years after the closing of this offering. See the section titled "Description of Capital Stock—Registration Rights" for more information regarding these registration rights.

Voting Agreement

We entered into a voting agreement in February 2021, as amended and restated in June 2022 (the Voting Agreement), with the holders of our convertible preferred stock and certain holders of our common stock, including the holders of more than 5% of our capital stock listed above as well as entities with which certain of our directors are affiliated, pursuant to which the following directors were each elected to serve as members on our board of directors and, as of the date of this prospectus, continue to so serve: Srinivas Akkaraju, M. D., Ph.D., Alexander Asam, Ph.D., Jon Congleton, Derek DiRocco, Ph.D., Olivier Litzka, Ph.D., Brian Taylor Slingsby, M.D., Ph.D., M.P.H., and Takeshi Takahashi, M.B.A. Pursuant to the Voting Agreement, Mr. Congleton, as our Chief Executive Officer, serves on our board of directors as the CEO director. Mr. Takahashi was initially selected to serve on our board of directors as representative of the holders of our common stock, Dr. Akkaraju, Dr. Asam and Dr. Slingsby were initially selected to serve on our board of directors as representatives of the holders of our Series A convertible preferred stock and Dr. DiRocco and Dr. Litzka and were initially selected to serve on our board of directors as a representative of the holders of our Series B convertible preferred stock.

The Voting Agreement will terminate upon the closing of this offering, and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by holders of our common stock. The composition of our board of directors after this offering is described in more detail under the section titled "Management—Board Composition and Election of Directors."

Right of Refusal and Co-Sale Agreement

We entered into a right of first refusal and co-sale agreement in February 2021, as amended and restated in June 2022 (the ROFR Agreement), with holders of our common stock affiliated with our executive officers and Catalys Pacific, which entities are referred to in the ROFR Agreement as key holders, and certain other holders of convertible preferred stock, including the holders of more than 5% of our capital stock listed above. Pursuant to the ROFR Agreement, we have a right of first refusal on certain transfers of our shares by the key holders, holders of our convertible preferred stock have a secondary right of first refusal on such transfers, and such convertible preferred stockholders have a right of co-sale in respect of such transfers. The ROFR Agreement will terminate upon the completion of this offering.

Equity Grants to Executive Officers and Directors

We have granted restricted stock to certain of our executive officers and non-employee directors, as more fully described in the section titled “Executive and Director Compensation.”

Employment Arrangements

We have entered into offer letter agreements with our executive officers. For more information regarding these letter agreements with our executive officers, see the section titled “Executive and Director Compensation—Employment Arrangements with our Executive Officers.”

Director and Officer Indemnification

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us or will require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys’ fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person’s services as a director or executive officer.

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify each of our directors and officers to the fullest extent permitted by the Delaware General Corporation Law. Further, we have purchased a policy of directors’ and officers’ liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment under certain circumstances. For further information, see “Executive and Director Compensation—Limitations of Liability and Indemnification Matters.”

Policies and Procedures for Related Person Transactions

Our board of directors will adopt a written related person transaction policy, to be effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds the lesser of \$120,000 or one percent of the average of our total assets at year-end for the last two completed fiscal years, and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee will be tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm’s length transaction and the extent of the related person’s interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of November 30, 2022, and as adjusted to reflect the sale of shares of common stock in this offering, by:

- our 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 known by us to beneficially own more than 5% of our common stock.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which a person has sole or shared voting power or investment power. Applicable percentage ownership is based on 292,158,090 shares of common stock outstanding as of November 30, 2022, which gives effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering and includes 13,052,451 shares subject to forfeiture or a right of repurchase. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to options or other rights held by such person that are currently exercisable or that will become exercisable or otherwise vest within 60 days of November 30, 2022 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o Mineralys Therapeutics, Inc., 150 N. Radnor Chester Road, Suite F200, Radnor, Pennsylvania 19087. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with

respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
5% or Greater Stockholders			
Catalys Pacific Fund, LP ⁽¹⁾	96,583,605	32.9 %	
Samsara BioCapital, L.P. ⁽²⁾	38,676,953	13.2 %	
HBM Healthcare Investments (Cayman) Ltd. ⁽³⁾	31,374,741	10.7 %	
Entities affiliated with Adams Street Partners, LLC ⁽⁴⁾	24,438,729	8.3 %	
BioDiscovery 6 FPCI ⁽⁵⁾	20,823,692	7.1 %	
Entities affiliated with RA Capital Management, L.P. ⁽⁶⁾	20,823,692	7.1 %	
Named Executive Officers and Directors			
Jon Congleton ⁽⁷⁾	11,330,953	3.8 %	
David Rodman, M.D. ⁽⁸⁾	1,300,226	*	
Brian Taylor Slingsby, M.D., Ph.D., M.P.H	96,583,605	32.9 %	
Srinivas Akkaraju, M.D., Ph.D.	38,676,953	13.2 %	
Alexander Asam, Ph.D.	*	*	
Derek DiRocco, Ph.D.	*	*	
Olivier Litzka, Ph.D.	*	*	
Takeshi Takahashi, M.B.A.	*	*	
All executive officers and directors as a group (9 persons) ⁽⁹⁾	151,612,324	51.6 %	

* Less than 1%.

- (1) The general partner of Catalys Pacific Fund, LP is Catalys Pacific Fund GP, LP. Brian Taylor Slingsby is the managing member of Catalys Pacific, LLC, the general partner of the General Partner. Catalys Pacific Fund GP, LP and Brian Taylor Slingsby may be deemed to have voting and investment power over the shares held of record by Catalys Pacific Fund, LP. Catalys Pacific Fund GP, LP and Brian Taylor Slingsby disclaim beneficial ownership of such shares, except to the extent of any pecuniary interest therein. The address of the entity listed above is PO Box 309, Uglad House, Grand Cayman, KY1-1104, Cayman Islands.
- (2) Samsara BioCapital GP, LLC (Samsara LLC) is the general partner of Samsara BioCapital, L.P. (Samsara LP) and may be deemed to beneficially own the shares held by Samsara LP. Dr. Akkaraju has voting and investment power over the shares held by Samsara LP and, accordingly, may be deemed to beneficially own the shares held by Samsara LP. Each of Samsara LLC and Dr. Akkaraju disclaims beneficial ownership in these shares except to the extent of his or its respective pecuniary interest therein.
- (3) Voting and investment power over the shares held by HBM Healthcare Investments (Cayman) Ltd. (HBM Healthcare) is exercised by the board of directors of HBM Healthcare. The board of directors of HBM Healthcare Investments (Cayman) Ltd. consists of Jean Marc Lesieur, Sophia Harris, Richard Coles, Dr. Andreas Wicki and Paul Woodhouse, none of whom has individual voting or investment power with respect to the shares.
- (4) Includes 1,971,065 shares of common stock held by Adams Street 2016 Direct Venture/Growth Fund LP, 2,549,835 shares of common stock held by Adams Street 2017 Direct Venture/Growth Fund LP, 3,807,896 shares of common stock held by Adams Street 2018 Direct Venture/Growth Fund LP, 2,139,118 shares of common stock held by Adams Street 2019 Direct Venture/Growth Fund LP, 2,281,039 shares of common stock held by Adams Street 2020 Direct Venture/Growth Fund LP, 2,212,895 shares of common stock held by Adams Street 2021 Direct Venture/Growth Fund LP, and 9,476,881 shares of common stock held by Adams Street Growth Equity Fund VII LP. Thomas S. Bremner, Jeffrey T. Diehl, Elisha P. Gould III, Robin P. Murray and Fred Wang, each of whom is a partner of Adams Street Partners, LLC (or a subsidiary thereof), may be deemed to have shared voting and investment power over the shares. Adams Street Partners, LLC and Thomas Bremner, Jeffrey Diehl, Elisha P. Gould III, Robin Murray and Fred Wang disclaim beneficial ownership of the shares except to the extent of their pecuniary interest therein. The address of Adams Street Partners, LLC is One North Wacker Drive, Suite 2700, Chicago, Illinois 60606.
- (5) BioDiscovery 6 FPCI is exercised by its Management Company Andera Partners. The Managing Partners of Andera Partners consist of Raphaël Wisniewski and Laurent Tourtois, none of whom has individual voting or investment power with respect to the shares.
- (6) Includes 2,082,369 shares of common stock held by RA Capital Healthcare Fund, L.P. (RA Healthcare) and 18,741,323 shares of common stock held by RA Capital Nexus Fund III, L.P. (Nexus II). RA Capital Management, L.P. is the investment manager for RA Healthcare and Nexus II. The general partner of RA Capital Management, L.P. is RA Capital Management GP, LLC, of which Peter Kolchinsky, Ph.D. and Rajeev Shah are the managing members. RA Capital Management, L.P., RA Capital Management GP, LLC, Peter Kolchinsky, Ph.D. and Rajeev Shah may be deemed to have voting and investment power over the shares held of record by RA Healthcare

and Nexus II. RA Capital Management, L.P., RA Capital Management GP, LLC, Peter Kolchinsky, Ph.D. and Rajeev Shah disclaim beneficial ownership of such shares, except to the extent of any pecuniary interest therein. The address of the entities listed above is 200 Berkeley Street, 18th Floor, Boston, Massachusetts 02116.

- (7) Includes 8,503,433 shares subject to repurchase by us within 60 days after November 30, 2022 and 119,187 shares of common stock issuable upon the exercise of options within 60 days of November 30, 2022.
- (8) Includes 1,300,226 shares of common stock issuable upon the exercise of options within 60 days after November 30, 2022.
- (9) Includes the shares described in footnotes 7 and 8 above. Also includes 3,720,587 shares of common stock held by Adam Levy, our Chief Financial and Chief Business Officer, all of which are subject to repurchase within 60 days after November 30, 2022.

DESCRIPTION OF CAPITAL STOCK

General

The following description summarizes some of the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering, our investors' rights agreement and of the Delaware General Corporation Law. 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, amended and restated bylaws and our investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part.

Following the closing of this offering, our authorized capital stock will consist of _____ shares of common stock, \$0.0001 par value per share, and _____ shares of preferred stock, \$0.0001 par value per share.

Common Stock

As of September 30, 2022, there were 69,315,006 shares of our common stock outstanding and held of record by 12 stockholders, including _____ shares of restricted common stock which are subject to forfeiture or our right of repurchase, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 222,843,084 shares of common stock, which will automatically occur immediately prior to the closing of this offering. Based on the number of shares of common stock outstanding as of September 30, 2022, and further assuming the issuance by us of _____ shares of common stock in this offering, there will be _____ shares of common stock outstanding upon the closing of this offering. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to the supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matter. Our amended and restated certificate of incorporation and amended and restated bylaws also provide that our directors may be removed only for cause and only by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon. In addition, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon is required to amend or repeal, or to adopt any provision inconsistent with, several of the provisions of our amended and restated certificate of incorporation. See below in "—Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws—Amendment of Charter Provisions."

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of common stock have no preemptive or conversion rights or other subscription rights and there are no redemption or sinking funds provisions applicable to the common stock. All outstanding shares of common stock are, and the common stock to be outstanding upon the closing of this offering will be, duly authorized, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Upon the closing of this offering, all of our previously outstanding shares of convertible preferred stock will have been converted into common stock, there will be no authorized shares of our previously outstanding convertible preferred stock, and we will have no shares of preferred stock outstanding. Under the terms of our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, our board of directors has the authority, without further action by our stockholders, to issue up

to shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

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, deterring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options

As of September 30, 2022, options to purchase 14,263,474 shares of our common stock were outstanding, of which 2,925,384 were vested and exercisable as of that date. For additional information regarding the terms of our 2023 Plan, see “Executive and Director Compensation—Equity Incentive Plans—2020 Equity Incentive Plan.”

Registration Rights

As of September 30, 2022, upon the closing of this offering holders of shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion convertible preferred stock immediately prior to the closing of this offering, will be entitled to the following rights with respect to the registration of such shares for public resale under the Securities Act, pursuant to an investors’ rights agreement by and among us and certain investors. The registration of shares of common stock as a result of the following rights being exercised would enable holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

Demand Registration Rights

Form S-1. If at any time beginning six months following the effective date of the registration statement of which this prospectus forms a part, the holders of at least sixty percent (60%) of the registrable securities request in writing that we effect a registration with respect to at least forty percent (40%) of the registrable securities then outstanding, we may be required to provide notice of such request to all holders of registrable securities and offer them the opportunity to participate in such registration, and to use commercially reasonable efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, among other things, within the preceding 12 months, we have already effected two registrations for the holders of registrable securities in response to these demand registration rights.

Form S-3. If at any time we become entitled under the Securities Act to register our shares on Form S-3, and the holders at least twenty percent (20%) of the registrable securities request in writing that we effect a registration with respect to all or a part of the registrable securities then outstanding where the anticipated aggregate offering price, net of expenses, is at least \$4.0 million, we may be required to provide notice of such request to all holders of registrable securities and offer them the opportunity to participate in such registration, and to use commercially reasonable efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, among other things, within the preceding 12 months, we have already effected two registrations on Form S-3 for the holders of registrable securities.

If the holders requesting registration intend to distribute their shares by means of an underwritten offering, the underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares in accordance with the cut-back provisions of the investors’ rights agreements.

Piggyback Registration Rights

If at any time following the closing of this offering we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice

of the registration and to include their shares of registrable securities in the registration. If our proposed registration involves an underwritten offering, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares in accordance with the cut-back provisions of the investors' rights agreement.

Indemnification

Our investors' rights agreement contains customary cross indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in a registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expenses

Other than underwriting discounts and commissions, we will be required to pay all expenses incurred by us related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling securityholders, blue sky fees and expenses and the expenses of any special audits incident to the registration.

Termination of Registration Rights

The registration rights terminate five years after the closing of this offering.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock

The ability of our board of directors, without action by the stockholders, to issue up to _____ shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board of directors, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board of Directors

Our amended and restated bylaws provide that our board of directors will be divided into three classes. The directors in each class will serve for a three-year term, with one class being elected each year by our stockholders. For more information on the classified board of directors, see “Management — Board Composition and Election of Directors.” This system of electing directors may tend to discourage a third party from attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office except for cause and, in addition to any other vote required by law, upon the approval of not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware (the Court of Chancery) will be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders, creditors or other constituents; (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or amended and restated bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (v) any action asserting a claim governed by the internal affairs doctrine, in all cases

to the fullest extent permitted by law. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendant to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. In any case, stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. Our amended and restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least two thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board of directors and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be . The transfer agent and registrar's address is .

The Nasdaq Global Market Listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "MLYS."

Limitations of Liability and Indemnification Matters

For a discussion of liability and indemnification, see "Executive and Director Compensation—Limitations of Liability and Indemnification Matters."

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although we have applied to have our common stock listed on Nasdaq, we cannot assure you that there will be an active public market for our common stock.

Based on the number of shares of our common stock outstanding as of September 30, 2022, and assuming (i) the issuance of _____ shares in this offering, (ii) the automatic conversion of all of our outstanding shares of convertible preferred stock into 222,843,084 shares of common stock and the related reclassification of the carrying value of the convertible preferred stock to permanent equity upon the closing of this offering, (iii) no exercise of the underwriters' option to purchase additional shares of common stock and (iv) no exercise of outstanding options, we will have outstanding an aggregate of _____ shares of common stock following the closing of this offering.

Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining _____ shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or Rule 701 under the Securities Act, each of which is summarized below. We expect that substantially all of these shares will be subject to the 180-day lock-up period under the lock-up agreements described below.

Lock-Up Agreements

We, our officers, directors and holders of substantially all of our securities, have agreed with the underwriters that for a period of 180 days, after the date of this prospectus, among other things and subject to specified exceptions, we or they will not 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 sell, or otherwise dispose of or transfer any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, request or demand that we file a registration statement related to our common stock or enter into any swap or other agreement that transfers to another, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock, or publicly declare an intention to do any of the foregoing. Upon expiration of the lock-up period, certain of our stockholders will have the right to require us to register their shares under the Securities Act. See "—Registration Rights" below and "Description of Capital Stock—Registration Rights."

BofA Securities, Inc., Evercore Group L.L.C., and Stifel, Nicolaus & Company, Incorporated may, in their sole discretion and at any time or from time to time before the termination of the lock-up period, in certain cases without public notice, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our stockholders who will execute a lock-up agreement providing consent to the sale of shares prior to the expiration of the lock-up period.

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 10b5-1 Trading Plans

Following the closing of this offering, certain of our officers, directors and significant stockholders may adopt written plans, known as Rule 10b5-1 trading plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis to diversify their assets and investments. Under these 10b5-1 trading plans, a broker may execute trades pursuant to parameters established by the officer, director or stockholder when entering into the plan, without further direction from such officer, director or stockholder. Such sales would not

commence until the expiration of the applicable lock-up agreements entered into by such officer, director or stockholder in connection with this offering.

Rule 144

Affiliate Resales of Restricted Securities

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale, and who has beneficially owned shares of our common stock for at least six months would be entitled to sell in “broker’s transactions” or certain “riskless principal transactions” or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately _____ shares immediately after this offering, assuming no exercise of the underwriters’ option to purchase additional shares; or
- the average weekly trading volume in our common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

An “affiliate” is a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with an issuer. Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of \$50,000, the seller must file a notice on Form 144 with the SEC and Nasdaq concurrently with either the placing of a sale order with the broker or the execution of a sale directly with a market maker.

Non-Affiliate Resales of Restricted Securities

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the three months preceding a sale, and who has beneficially owned shares of our common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701 as currently in effect, any of an issuer’s employees, directors, officers, consultants or advisors who purchase shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act are entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements. However, substantially all Rule 701 shares are subject to lock-up agreements as described above and will become eligible for sale in compliance with Rule 144 only upon the expiration of the restrictions set forth in those agreements.

The SEC has indicated that Rule 701 will apply to typical options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after an issuer becomes subject to the reporting requirements of the Exchange Act.

Equity Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our equity incentive plans and employee stock purchase plan. We expect to file the registration statement covering shares offered pursuant to these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration Rights

Upon the closing of this offering, holders of _____ shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our convertible preferred stock into 222,843,084 shares of our common stock immediately prior to the closing of this offering, will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the closing of this offering. Registration of these shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by our affiliates. See “Description of Capital Stock—Registration Rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreements described above.

MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the Code), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the IRS), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder’s particular circumstances, including the impact of the Medicare contribution tax on net investment income and the alternative minimum tax. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- brokers, dealers or traders in securities;
- “controlled foreign corporations,” “passive foreign investment companies” and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- “qualified foreign pension funds” as defined in Section 897(1)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR

COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a “Non-U.S. Holder” is any beneficial owner of our common stock that is neither a “U.S. person” nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and the control of one or more “United States persons” (within the meaning of Section 7701(a) (30) of the Code), or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section titled “Dividend Policy,” we do not anticipate declaring or paying cash dividends to holders of our common stock in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder’s adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below in “—Sale or Other Taxable Disposition.”

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). If a Non-U.S. Holder holds the stock through a financial institution or other intermediary, the Non-U.S. Holder will be required to provide appropriate documentation to the intermediary, which then will be required to provide certification to the applicable withholding agent, either directly or through other intermediaries. A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussions below of backup withholding and withholding under FATCA (defined below), a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment or fixed base in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest (USRPI) by reason of our status as a U.S. real property holding corporation (USRPHC) for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our common stock, which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our common stock by a Non-U.S. Holder will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will be subject to backup withholding or information reporting unless the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections are commonly referred to as the Foreign Account Tax Compliance Act (FATCA)) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or subject to the proposed Treasury Regulations discussed below, gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in clause (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would also have applied to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers (including applicable withholding agents) generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued. There can be no assurance that final Treasury Regulations would provide an exemption from FATCA withholding for gross proceeds.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

BofA Securities, Inc., Evercore Group L.L.C., and Stifel, Nicolaus & Company, Incorporated are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
BofA Securities, Inc.	
Evercore Group L.L.C.	
Stifel, Nicolaus & Company, Incorporated	
Guggenheim Securities, LLC	
Credit Suisse Securities (USA) LLC	
Wells Fargo Securities, LLC	
Total	

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of \$ _____ per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

	Per Share	Without Option	With Option
Public offering price	\$	\$	\$
Underwriting discount	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

The expenses of the offering, not including the underwriting discount, are estimated at \$ _____ and are payable by us. We have also agreed to reimburse the underwriters for their expenses relating to clearance of this offering with the Financial Industry Regulatory Authority, or FINRA, in an amount up to \$ _____.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to _____ additional shares at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We, our executive officers and directors and our other existing security holders have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, or exercisable for, common stock (collectively, the Lock-Up Securities) for 180 days after the date of this prospectus without first obtaining the written consent of BofA Securities, Inc., Evercore Group L.L.C., and Stifel, Nicolaus & Company, Incorporated. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant for the sale of any common stock;
- lend or otherwise dispose of or transfer any common stock;
- request or demand that we file or make a confidential submission of a registration statement related to the common stock;
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise; or
- publicly disclose the intention to do any of the foregoing.

This lock-up provision applies to any Lock-Up Securities whether now owned or acquired later by the person executing the agreement or for which the person executing the agreement has or later acquires the power of disposition. BofA Securities, Inc., Evercore Group L.L.C., and Stifel, Nicolaus & Company, Incorporated, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice.

Nasdaq Global Market Listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "MLYS."

Before this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations between us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are:

- the valuation multiples of publicly traded companies that the representatives believe to be comparable to us;
- our financial information;
- the history of, and the prospects for, our company and the industry in which we compete;
- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues;

- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

The underwriters do not expect to sell more than 5% of the shares in the aggregate to accounts over which they exercise discretionary authority.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out 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 close out 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 shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our 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 shares of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

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. Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each member state of the European Economic Area (each a Relevant State), no shares have been offered or will be offered pursuant to this 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 offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- a. to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- b. to fewer than 150 natural or legal persons (other than qualified investors as defined under 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 shares shall require the Company or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person in a Relevant State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the underwriters that it is a qualified investor within the meaning of the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the underwriters and their respective affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an “offer to the public” in relation to any 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, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

The above selling restriction is in addition to any other selling restrictions set out below.

Notice to Prospective Investors in the United Kingdom

In relation to the United Kingdom (UK), no shares have been offered or will be offered pursuant to this offering to the public in the UK prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority in the UK in accordance with the UK Prospectus Regulation and the FSMA, except that offers of shares may be made to the public in the UK at any time under the following exemptions under the UK Prospectus Regulation and the FSMA:

- a. to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;
- b. to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- c. at any time in other circumstances falling within section 86 of the FSMA,

provided that no such offer of shares shall require the Company or any underwriter to publish a prospectus pursuant to Section 85 of the FSMA or Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

Each person in the UK who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the underwriters that it is a qualified investor within the meaning of the UK Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the UK Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in the UK to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the underwriters and their respective affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares in the UK 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, the expression “UK Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, and the expression “FSMA” means the Financial Services and Markets Act 2000.

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the Financial Promotion Order), (ii) are persons falling within Article 49(2)(a) to (d) (“high net worth companies, unincorporated associations, etc.”) of the Financial Promotion Order, (iii) are outside the UK, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended (FSMA)) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as “relevant persons”). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared

without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (DFSA). This prospectus 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 herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus, you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (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 (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 prospectus 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 prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the

document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, 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 of 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” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, “Japanese Person” shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, has not been circulated or distributed, nor will it be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (SFA)) pursuant to 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.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a. 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; or
- b. a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- a. to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- b. where no consideration is or will be given for the transfer;
- c. where the transfer is by operation of law; or
- d. as specified in Section 276(7) of the SFA.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) 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.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Latham & Watkins LLP, San Diego, California. The underwriters are being represented by Shearman & Sterling LLP, New York, New York.

EXPERTS

The financial statements of Mineralys Therapeutics, Inc. at December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the common stock offered hereby, we refer you to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement.

We are not currently subject to the information and periodic and current reporting requirements of the Exchange Act. Upon the closing of this offering, we will become subject to the information and periodic and current reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. The SEC maintains a website at www.sec.gov that contains reports, proxy statements and other information regarding companies that file electronically with it. The address of that site is www.sec.gov. Our periodic and current reports, proxy statements and other information will be available at www.sec.gov.

We also maintain a website at www.mineralystx.com. Upon the closing of this offering, you may access our proxy statements, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock. We have included our website address in this prospectus solely as an inactive textual reference.



**Mineralys Therapeutics, Inc.
Financial Statements
Index**

Report of Independent Registered Public Accounting Firm	F-2
Balance Sheets as of December 31, 2020 and 2021	F-3
Statements of Operations for the Years Ended December 31, 2020 and 2021	F-4
Statements of Convertible Preferred Stock and Stockholders' Deficit for the Years Ended December 31, 2020 and 2021	F-5
Statements of Cash Flows for the Years Ended December 31, 2020 and 2021	F-6
Notes to Financial Statements	F-7

**Mineralys Therapeutics, Inc.
Condensed Financial Statements (Unaudited)
Nine Months Ended September 30, 2021 and 2022
Index**

Condensed Balance Sheets as of December 31, 2021 and September 30, 2022	F-21
Condensed Statements of Operations for the Nine Months Ended September 2021 and 2022	F-22
Condensed Statements of Convertible Preferred Stock and Stockholders' Deficit for the Nine Months Ended September 30, 2021 and 2022	F-23
Condensed Statements of Cash Flows for the Nine Months Ended September 30, 2021 and 2022	F-24
Notes to Condensed Financial Statements	F-25

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board
of Directors of
Mineralys Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the balance sheets of Mineralys Therapeutics, Inc. (the "Company") as of December 31, 2021 and 2020, the related statements of operations, redeemable 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, 2021 and 2020, 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 and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our 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

October 12, 2022
We have served as the Company's auditor since 2022.
Denver, Colorado

Mineralys Therapeutics, Inc.
Balance Sheets
(in thousands, except share and per share amounts)

	December 31,	
	2020	2021
Assets		
Current assets:		
Cash	\$ 1,409	\$ 10,612
Prepaid and other current assets	57	510
Total current assets	1,466	11,122
Other assets	20	3
Total assets	<u>\$ 1,486</u>	<u>\$ 11,125</u>
Liabilities, convertible preferred stock, and stockholders' deficit		
Current liabilities:		
Accounts payable	\$ 529	\$ 763
Accrued liabilities	54	4,291
Convertible notes - related party	4,500	—
Total current liabilities	5,083	5,054
Commitments and contingencies (Note 4)		
Series A convertible preferred stock, \$0.0001 par value, 0 and 86,340,911 shares authorized and 0 and 61,180,259 shares issued and outstanding at December 31, 2020 and 2021, respectively, \$0 and \$29,184 aggregate liquidation preference at December 31, 2020 and 2021, respectively	—	28,996
Stockholders' deficit:		
Common stock, \$0.0001 par value, 70,000,000 and 166,000,000 shares authorized and 58,437,500 and 58,762,555 shares issued and outstanding at December 31, 2020 and 2021, respectively	6	6
Additional paid-in capital	—	80
Accumulated deficit	(3,603)	(23,011)
Total stockholders' deficit	(3,597)	(22,925)
Total liabilities, convertible preferred stock, and stockholders' deficit	<u>\$ 1,486</u>	<u>\$ 11,125</u>

The accompanying notes are an integral part of these financial statements.

Mineralys Therapeutics, Inc.
Statements of Operations
(in thousands, except share and per share data)

	Year Ended December 31,	
	2020	2021
Operating expenses:		
Research and development	\$ 2,411	\$ 16,308
General and administrative	532	2,417
Total operating expenses	2,943	18,725
Loss from operations	(2,943)	(18,725)
Other income (expense):		
Interest expense	(115)	(27)
Change in fair value of convertible notes	(367)	(657)
Other income (expense)	(1)	1
Total other expense, net	(483)	(683)
Net loss	\$ (3,426)	\$ (19,408)
Net loss per share attributable to common stockholders, basic and diluted	\$ (0.07)	\$ (0.36)
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted	50,000,000	53,820,364

The accompanying notes are an integral part of these financial statements.

Mineralys Therapeutics, Inc.
Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share data)

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-In- Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at January 1, 2020	—	\$ —	50,000,000	\$ 5	\$ —	\$ (177)	\$ (172)
Issuance of restricted stock awards	—	—	8,437,500	1	(1)	—	—
Stock-based compensation	—	—	—	—	1	—	1
Net loss	—	—	—	—	—	(3,426)	(3,426)
Balance at December 31, 2020	—	—	58,437,500	6	—	(3,603)	(3,597)
Issuance of convertible preferred stock, net of issuance costs of \$188	50,311,827	23,812	—	—	—	—	—
Issuance of convertible preferred stock upon conversion of convertible notes	10,868,432	5,184	—	—	—	—	—
Issuance of restricted stock awards	—	—	325,055	—	—	—	—
Stock-based compensation	—	—	—	—	80	—	80
Net loss	—	—	—	—	—	(19,408)	(19,408)
Balance at December 31, 2021	61,180,259	\$ 28,996	58,762,555	\$ 6	\$ 80	\$ (23,011)	\$ (22,925)

The accompanying notes are an integral part of these financial statements.

Mineralys Therapeutics, Inc.
Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2020	2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (3,426)	\$ (19,408)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of convertible notes	367	657
Stock-based compensation	1	80
Non-cash interest expense	115	27
Changes in operating assets and liabilities:		
Prepaid and other current assets	(57)	(386)
Accounts payable and accrued liabilities	537	4,471
Net cash used in operating activities	(2,463)	(14,559)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of convertible notes - related party	3,850	—
Proceeds from the issuance of Series A convertible preferred stock, net of offering costs	(20)	23,812
Net cash provided by financing activities	3,830	23,812
Net increase in cash and restricted cash	1,367	9,253
Cash and restricted cash - beginning	42	1,409
Cash and restricted cash - ending	\$ 1,409	\$ 10,662
Supplement Disclosure of Non-Cash Financing Activities:		
Conversion of convertible notes and accrued interest to Series A convertible preferred stock	\$ —	\$ 5,184

The accompanying notes are an integral part of these financial statements.

Note 1. Nature of Business

Mineralys Therapeutics, Inc. (the “Company”) is a clinical-stage biopharmaceutical company focused on developing medicines to target diseases driven by abnormally elevated aldosterone. The Company’s clinical-stage product candidate, MLS-101, is a proprietary, orally administered, highly selective aldosterone synthase inhibitor that the Company is initially developing for the treatment of patients with uncontrolled or resistant hypertension. The Company has completed a Phase 2 proof-of-concept study of MLS-101 for the treatment of uncontrolled or resistant hypertension and has plans for the continued research and development of MLS-101 in hypertension and other potential indications. The Company was incorporated as a Delaware corporation in May 2019, and it is headquartered in Radnor, Pennsylvania.

The Company’s operations to date have been limited to business planning, raising capital, in-licensing MLS-101, conducting preclinical and clinical trials, and other research and development.

On July 7, 2020, the Company effected a stock split of its common stock, par value \$0.0001 per share, at a ratio of 500-for-1 (the “Stock Split”). Unless otherwise noted herein, references to share and per-share amounts give retroactive effect to the Stock Split.

Liquidity and Capital Resources

Since inception, the Company has not generated any revenue from product sales or other sources and has incurred significant operating losses and negative cash flows from operations. The Company’s primary uses of cash to date have been to fund research and development activities, business planning, establishing and maintaining the Company’s intellectual property portfolio, hiring personnel, raising capital, and providing general and administrative support for these operations. As of December 31, 2021, the Company had an accumulated deficit of \$23.0 million and cash and restricted cash of \$10.7 million. For the year ended December 31, 2021, the Company had a net loss of \$19.4 million and net cash used in operating activities of \$14.6 million.

From inception to December 31, 2021 the Company has funded its operations by raising aggregate gross proceeds of approximately \$28.0 million from the sale of the Company’s convertible preferred stock and convertible notes. The Company has a limited operating history, and the sales and income potential of its business is unproven. The Company expects to continue to incur substantial losses in the foreseeable future as a result of the Company’s research and development activities.

Additional funding will be required in the future to continue with the Company’s planned research and development and other activities. The Company expects to finance its operations through equity offerings, including this initial public offering, debt financings, and other capital sources, including potential strategic collaborations, licensing, and other similar arrangements. 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 and results of operations or financial condition. The Company believes that its existing cash as of December 31, 2021, combined with the cash proceeds received from sales of the Company’s preferred stock subsequent to December 31, 2021 disclosed in Note 10. “*Subsequent Events*,” will be sufficient to allow the Company to fund operations for at least one year from the issuance date of these financial statements.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”), which include all adjustments necessary for the fair presentation of the Company’s financial position, results of operations, and cash flows for the periods presented. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification (“ASC”) and Accounting Standards Updates of the Financial Accounting Standards Board (“FASB”).

Mineralys Therapeutics, Inc.
Notes to Financial Statements

The Company's management performed an evaluation of its activities through the date of filing of these financial statements and concluded that there are no subsequent events requiring disclosure, other than as disclosed.

Emerging Growth Company Status

The Company is an "emerging growth company," as defined in the Jumpstart Our Business Startups Act, ("JOBS Act") and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. The Company may take advantage of these exemptions until the Company is no longer an "emerging growth company." Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards and as a result of this election, its financial statements may not be comparable to companies that comply with public company effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of an offering or such earlier time that it is no longer an "emerging growth company."

Segment Information

The Company operates in one operating segment for the purposes of assessing performance and making operating decisions and, accordingly, no segment disclosures have been presented herein. All assets are held in the United States.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Estimates are used in the following areas, among others: research and development accruals, fair value of convertible notes, fair value of the Company's common stock, and income taxes.

Cash and Restricted Cash

As of December 31, 2020 and 2021, the Company had zero and \$50 thousand, respectively, classified as restricted cash for the required collateral for a credit card facility with Silicon Valley Bank. The following table provides a reconciliation of cash and restricted cash as reported in the statement of cash flows to the balance sheets (in thousands):

	December 31,	
	2020	2021
Cash	\$ 1,409	\$ 10,612
Restricted cash, as a component of prepaid and other current assets	—	50
Total	\$ 1,409	\$ 10,662

Concentration of Credit Risk

The Company has no significant off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts, or other hedging arrangements. Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash balances in several accounts with one financial institution which, from time to time, are in excess of federally insured limits.

Fair Value Measurements

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. ASC Topic 820, *Fair Value*

Mineralys Therapeutics, Inc.
Notes to Financial Statements

Measurement, establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

- Level 1 – quoted prices in active markets for identical assets and liabilities
- Level 2 – other significant observable inputs (including quoted prices for similar assets and liabilities, interest rates, credit risk, etc.)
- Level 3 – significant unobservable inputs (including the Company's own assumptions in determining the fair value of assets and liabilities)

For certain financial instruments, including cash and restricted cash, prepaid expenses, accounts payable, and certain accrued liabilities, the recorded amount approximates estimated fair value due to their relatively short maturity period.

Deferred Offering Costs

The Company capitalizes certain legal, professional, accounting, and other third-party fees that are directly associated with in-process equity issuances as deferred offering costs until such equity issuances are consummated. After consummation of the equity issuance, these costs are recorded as a reduction in the capitalized amount associated with the equity issuance. Should the equity issuance be abandoned, the deferred offering costs are expensed immediately as a charge to operating expenses in the statement of operations. Deferred offering costs as of December 31, 2020 and 2021 were \$20 thousand and \$3 thousand, respectively. Such costs are classified in other assets on the balance sheets.

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. Therefore, the convertible preferred stock is classified outside of stockholders' deficit on the balance sheets as events triggering the redemption for cash 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.

Research and Development Expenses

Research and development costs, both internal and external, are expensed as incurred. Costs are considered incurred based on an evaluation of the progress to completion of specific tasks under each contract using information and data provided to the Company by its clinical sites and vendors. These costs consist of direct and indirect costs associated with specific projects, as well as fees paid to various entities that perform certain research on behalf of the Company. The Company's research and development expenses consist primarily of clinical trial expenses, consulting costs and employee-related costs, and costs associated with required regulatory filings, licenses, and fees.

Non-refundable advance payments for goods and services that will be used in future research and development activities are capitalized and recorded as expense in the period that the Company receives the goods or when services are performed. Assets acquired (or in-licensed) that are utilized in research and development that have no alternative future use are expensed as incurred.

Commitments and Contingencies

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of business. The Company accrues a liability for such matters when it is probable that future expenditures will be made and can be reasonably estimated. The Company expects that contingencies related to regulatory approval milestones will only become probable once such regulatory outcome is achieved.

Stock-Based Compensation

The Company accounts for its stock-based compensation awards in accordance with ASC Topic 718, *Compensation – Stock Compensation* (ASC 718). ASC 718 requires all stock-based payments to employees, including grants of employee stock options, to be recognized in the statements of operations based on their fair values. The Company's stock-based awards are subject only to service-based vesting conditions. The Company measures restricted common stock awards using the difference, if any, between the purchase price per share of the award and the fair value of the Company's common stock at the date of the grant. The Company estimates the fair value of its stock option awards using the Black-Scholes option pricing model, which requires the input of assumptions, including (a) the expected stock price volatility, (b) the calculation of expected term of the award, (c) the risk-free interest rate, and (d) expected dividends. The Company accounts for forfeitures as they occur.

Given that the Company's common stock is privately held, there is no active trading market for the Company's common stock. Therefore, the Company based its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The Company believes that the companies in the group have characteristics similar to its own characteristics, including stage of product development and a focus on the life sciences industry. The Company believes the group selected has sufficient similar economic and industry characteristics and includes companies that are most representative of the Company.

The Company uses the simplified method, to calculate the expected term, as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term for options granted and utilizes the contractual term for options granted. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the stock options.

As there is no public market for the Company's common stock, the Company determined the fair value of the shares of its common stock underlying its share-based awards by considering a number of objective and subjective factors, including third-party valuations of the Company's common stock, the valuation of comparable companies, the Company's operating and financial performance, and general and industry-specific economic outlook, amongst other factors. The assumptions underlying these valuations represented management's best estimate, with the assistance of a third-party valuation specialist, which involved inherent uncertainties and the application of management's judgment. As a result, if the Company had used different assumptions or estimates, the fair value of the Company's common stock and its stock-based compensation expense could have been materially different.

Compensation expense related to awards is recognized on a straight-line basis by recognizing the grant date fair value over the associated service period of the award, which is generally the vesting term.

Net Loss Per Share

The Company's basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period. The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential common stock equivalents outstanding for the period determined using the treasury stock method. For purposes of this calculation, convertible preferred stock and stock options to purchase common stock are considered to be common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is anti-dilutive. The following table sets forth the potential

Mineralys Therapeutics, Inc.
Notes to Financial Statements

common shares excluded from the calculation of net loss per common share because their inclusion would be anti-dilutive:

	Year Ended December 31,	
	2020	2021
Unvested restricted stock awards	8,437,500	3,645,834
Convertible preferred stock (as converted into common stock)	—	61,180,259
Options to purchase common stock	—	5,694,756
Total	8,437,500	70,520,849

Income Taxes

Income taxes are recorded in accordance with ASC Topic 740, *Income Taxes* (ASC 740), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities and for loss and credit carryforwards using enacted tax rates anticipated to be in effect for the year in which the differences are expected to reverse. Valuation allowances are provided if, based upon the weight of available evidence, it is more likely than not that some or all the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that some or all the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position, as well as consideration of the available facts and circumstances. As of December 31, 2020 and 2021, the Company does not have any significant uncertain tax positions. If the Company were to incur interest and penalties on uncertain tax positions, it would classify them as income tax expense.

Recently Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Note 3. Fair Value of Financial Instruments

There were no financial instruments measured at fair value on a recurring basis based on the fair value hierarchy at December 31, 2021, and the following table presents this information as of December 31, 2020 (in thousands):

	December 31, 2020	
	Level 3	
Liabilities		
Convertible notes - related party	\$	4,500

There were no transfers within the fair value hierarchy during the periods presented.

Between May 2019 and July 2020, the Company issued unsecured convertible promissory notes in the aggregate principal amount of \$4.0 million to its founding investor and related party Catalys Pacific Fund LP (“Catalys”), pursuant to a convertible notes agreement subsequently amended on December 20, 2020 (the “Convertible Notes”). The Company elected the fair value option to account for the Convertible Notes because the Company determined the fair value option provided users of the financial statements greater ability to estimate the

Mineralys Therapeutics, Inc.
Notes to Financial Statements

outcome of future events as facts and circumstances change, particularly with respect to changes in the fair value of the stock underlying the conversion option and redemption feature. The Company used a guideline transaction method valuation model to estimate the fair value of the Convertible Notes, which relied on unobservable Level 3 inputs. Changes in the fair value of the Convertible Notes were recognized as expense as reported in change in fair value of convertible notes on the statement of operations for the year ended December 31, 2020. Refer to Note 6. “Convertible Notes – Related Party” for details of the terms and conditions of the Convertible Notes.

The carrying value of outstanding Convertible Notes at December 31, 2020 approximated the estimated aggregate fair value as the embedded contingent put option is recognized at fair value and classified with the debt host. The put option allows certain notes payable to be converted into stock, contingent upon completion of an equity financing transaction with gross proceeds above certain thresholds. The fair value estimate of the embedded put option is based on the probability-weighted discounted value of the put feature and represents a Level 3 measurement. Significant assumptions used to determine the fair value of the put feature include the estimated probability of exercise of the put option and the discount rate used to calculate fair value. The estimated probability of exercise is based on management’s expectation for future equity financing transactions. The discount rate is based on the weighted-average effective yield of notes previously issued by the Company, adjusted for changes in market yields of biotechnology sector CCC-rated debt.

The preceding methods described may have produced a fair value calculation that may not have been indicative of net realizable value or reflective of future fair values. Although the Company believes its valuation methods were appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value could result in a different fair value measurement at the reporting date.

All outstanding Convertible Notes were settled upon their conversion into convertible preferred stock upon the consummation of a qualifying equity financing in February 2021. Refer to Note 6. “Convertible Notes – Related Party” for details of the conversion.

The following table sets forth a summary of changes in the fair value of the Convertible Notes, representing a recurring measurement that is classified within Level 3 of the fair value hierarchy (in thousands):

Convertible Notes at January 1, 2020	\$	168
Issuance of Convertible Notes		3,850
Change in fair value		367
Accrued interest		115
Convertible Notes at December 31, 2020		4,500
Change in fair value		657
Accrued interest		27
Reclassification of Convertible Notes into convertible preferred stock		(5,184)
Convertible Notes at December 31, 2021	\$	—

Note 4. Commitments and Contingencies

License Agreement with Mitsubishi Tanabe

In July 2020, the Company entered into a license agreement (the “Mitsubishi License”) with Mitsubishi Tanabe Pharma Corporation (“Mitsubishi Tanabe”), pursuant to which Mitsubishi Tanabe granted the Company an exclusive, worldwide, royalty-bearing, sublicensable license under Mitsubishi Tanabe’s patent and other intellectual property rights to exploit products incorporating MLS-101 (“MLS-101 Products”) for the prevention, treatment, diagnosis, detection, monitoring, or predisposition testing with respect to indications, diseases, and conditions in humans. Pursuant to the Mitsubishi License, the Company paid Mitsubishi Tanabe a \$1.0 million upfront fee, and the Company is obligated to pay Mitsubishi Tanabe development milestone payments of up to \$9.0 million in the aggregate and commercial milestone payments of up to \$155.0 million in the aggregate upon first commercial sale and upon meeting certain annual sales targets, as well as additional commercial milestone payments of up to \$10.0 million for a second indication. Additionally, the Company is obligated to pay Mitsubishi Tanabe tiered

royalties at percentages ranging from the mid-single-digits to ten percent (10%) of aggregate net sales of each MLS-101 Product on an MLS-101 Product-by-MLS-101 Product and country-by-country basis, until the later of (i) the expiration of the last-to-expire valid Mitsubishi Tanabe patent claim covering an MLS-101 Product, (ii) ten years from the first commercial sale of an MLS-101 Product, or (iii) the expiration of regulatory exclusivity in such country. Such royalties are subject to reduction under specified conditions, including lack of patent coverage and generic competition.

The Company is obligated to use commercially reasonable efforts to conduct and complete the development activities and to file for regulatory approval for at least one MLS-101 Product in a major market country and consider in good faith to develop at least one MLS-101 Product in a non-major market country. If the Company elects to sublicense its rights under the Mitsubishi License to a third party with respect to exploitation of MLS-101 or any MLS-101 Product in certain countries in Asia, Mitsubishi Tanabe has a right of first negotiation, for a specified period of time. The Company agreed not to commercialize any competing product prior to three years following the first commercial sale of the first MLS-101 Product in any country without Mitsubishi Tanabe's prior consent.

Unless terminated earlier, the Mitsubishi License will continue until the expiration of all of the Company's royalty obligations to Mitsubishi Tanabe. The Company may terminate the Mitsubishi License for any or no reason upon 90 or 180 days' prior written notice to Mitsubishi Tanabe depending on whether the Mitsubishi Tanabe Product has received regulatory approval. Mitsubishi Tanabe may terminate the Mitsubishi License if the Company has not initiated regulatory consultation for the first global clinical trials of MLS-101 in at least one major market country within a specified amount of time or if the Company or its affiliates or sublicensees initiate a challenge to the patent rights licensed to the Company by Mitsubishi Tanabe. In addition, either party may terminate the Mitsubishi License in the event of an uncured material breach by or bankruptcy of the other party, subject to certain notice and cure periods, or upon the other party's bankruptcy or insolvency.

For the year ended December 31, 2020 and 2021, the Company recorded research and development expense of approximately \$1.0 million and zero, respectively, related to the Mitsubishi License.

Litigation

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. From time to time, the Company may become involved in legal proceedings arising in the ordinary course of business. The Company was not subject to any material legal proceedings during the year ended December 31, 2020 and 2021 and no material legal proceedings are currently pending or threatened.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters including, but not limited to, losses arising from breach of such agreements or intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with officers of the Company and members of its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any claims under indemnification arrangements, and it has not accrued any liabilities related to such obligations in its financial statements as of December 31, 2020 and 2021.

Note 5. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31,	
	2020	2021
Research and development expenses	\$ —	\$ 3,636
Compensation and benefits	—	313
Other	54	342
Total	<u>\$ 54</u>	<u>\$ 4,291</u>

Note 6. Convertible Notes – Related Party

From May 2019 to July 2020, the Company issued Convertible Notes with maturities on the one-year anniversary date of each issuance, bearing interest at a rate of 6% per annum. The Convertible Notes and accrued interest were subject to automatic conversion upon the closing of a qualifying equity financing into the equity securities sold in the qualifying financing at a conversion price equal to the price of the equity securities sold in the qualified financing multiplied by 0.80.

On February 16, 2021 (the “Conversion Date”), the Convertible Notes and accrued interest totaling \$5.2 million were converted into 10,868,432 shares of Series A convertible preferred stock upon the closing of the Series A financing. As a result, on the Conversion Date, the Convertible Notes were reclassified to Series A convertible preferred stock, which is described in more detail in Note 7. “*Capital Stock*.”

Note 7. Capital Stock

As of December 31, 2021, the Company has reserved authorized shares of common stock, on an as-converted basis, for future issuance as follows:

	December 31, 2021
Series A convertible preferred stock	61,180,259
Common stock options outstanding	5,694,756
Awards available for grant under the 2020 Plan	4,381,962
Total	<u>71,256,977</u>

Preferred Stock

In February 2021, the Company entered into a Series A redeemable convertible preferred stock agreement (the “Series A Purchase Agreement”). Under the Series A Purchase Agreement the Company was authorized to issuance up to 86,340,911 shares of Series A redeemable convertible preferred stock, par value \$0.0001 per share (“Series A Preferred Stock”). From February 2021 to April 2021, the Company issued 50,311,827 shares of Series A Preferred Stock at \$0.477 per share for net proceeds of \$23.8 million, after issuance costs incurred of \$0.2 million. Additionally, in February 2021, the Convertible Notes and related accrued interest converted into 10,868,432 shares of Series A Preferred Stock, which is described in more detail in Note 6. “*Convertible Notes – Related Party*.”

The Series A Purchase Agreement provided for an additional closing for the Series A purchasers for the issuance of up to 25,151,957 shares of Series A Preferred Stock, at a purchase price of \$0.477 per share for aggregate cash proceeds of \$12.0 million, upon the achievement of the Milestone (as defined in the Series A Purchase Agreement) or a waiver of the Milestone by the requisite holders. The Company determined that the right of the investors to purchase an additional number of shares of Series A Preferred Stock upon the achievement of the Milestone did not meet the definition of a freestanding financial instrument as the preferred shares issued at the initial closing and the future tranche right were not legally detachable and separately exercisable. In January 2022,

the Milestone was subsequently met and additional shares of Series A Preferred Stock were issued as described in Note 10. *Subsequent Events.*”

The rights, preferences, and privileges of the Company’s Series A Preferred Stock are as follows:

Voting

The holders of Series A Preferred Stock are entitled to a number of votes equal to the number of whole shares of common stock into which the shares of Series A Preferred Stock are convertible. Except as provided by law or otherwise, the holders of the Series A Preferred Stock vote together with the holders of common stock as a single class. Holders of Series A Preferred Stock, voting as a separate class, are entitled to elect three members of the board of directors.

Dividends

Dividends are payable, if permitted by law, in accordance with the Series A Preferred Stock terms if and when declared by the board of directors. Holders of the Series A Preferred Stock are entitled to receive dividends out of any assets at the time legally available, at the applicable dividend rate specified for such shares of the Series A Preferred Stock. Dividends are not mandatory and are not cumulative. No dividends have been declared or paid since inception of the Company.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of shares of the Series A Preferred Stock then outstanding are entitled to be paid out of the assets of the Company available for distribution to its stockholders or, in the case of a deemed liquidation event, such as a merger or consolidation or the sale, lease, transfer, exclusive license, or other disposition of substantially all of the Company’s assets (collectively, a “Deemed Liquidation Event”), out of the consideration payable to stockholders in such an event, before any payment shall be made to the holders of common stock by reason of their ownership thereof, an amount per share equal to the Series A Preferred Stock original issue price, plus any dividends declared but unpaid. If upon any such liquidation, dissolution, or winding up of the Company or a Deemed Liquidation Event, the assets of the Company available for distribution to its stockholders are insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they are entitled, the holders of shares of the Series A Preferred Stock share ratably in any distribution of the assets available for distribution in proportion to the respective amounts that would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

The remaining available proceeds will be distributed pro rata among the holders of the shares of the Series A Preferred Stock and common stock, based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to common stock pursuant to the applicable terms immediately prior to such liquidation, dissolution, or winding up of the Company.

Conversion

Each share of the Series A Preferred Stock is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as determined by dividing the Series A Preferred Stock original issue price by the Series A Preferred Stock conversion price in effect at the time of conversion, which as of December 31, 2021 was equal to the original issue price. The applicable conversion price is subject to future adjustments upon the occurrence of certain events. The Series A Preferred Stock automatically converts upon either (i) the closing of a qualified initial public offering of its common stock at a price per share of at least \$1.19 per share (subject to adjustment for any share split, combination or dividend or distribution payable) resulting in at least \$75,000,000 in gross proceeds to the Company, or (ii) the election to convert the preferred shares by requisite holders of the Series A Preferred Stock.

Mineralys Therapeutics, Inc.
Notes to Financial Statements

The Company evaluated the Series A Preferred Stock and determined that it was considered an equity host under ASC 815. In making this determination, the Company's analysis followed the whole instrument approach, which compares an individual feature against the entire Series A Preferred Stock instrument that includes that feature. The Company's analysis was based on a consideration of the economic characteristics and risks of the Series A Preferred Stock. More specifically, the Company evaluated all of the stated and implied substantive terms and features, including (i) whether the Series A Preferred Stock included redemption features, (ii) how and when any redemption features could be exercised, (iii) whether the holders of the Series A Preferred Stock were entitled to dividends, (iv) the voting rights of the Series A Preferred Stock, and (v) the existence and nature of any conversion rights. The Company concluded that, as the Series A Preferred stock represented an equity host, the conversion feature included in the Series A Preferred Stock was clearly and closely related to the associated host instrument. Accordingly, the conversion feature was not considered an embedded derivative that requires bifurcation.

Redemption

The Series A Preferred Stock is redeemable upon a request by two-thirds of the requisite holders of the Company's Series A Preferred Stock in the event of a Deemed Liquidation Event, if the Company does not effect a dissolution of the Company within 90 days after such Deemed Liquidation Event, payable at a price equal to the cash or the value of the property, rights, or securities to be paid or distributed to holders pursuant to such Deemed Liquidation Event. Any redemption is deemed to be remote at December 31, 2021, and the fair value of Series A Preferred Stock is deemed to be the price paid by the Series A preferred stockholders. Due to this redemption option, Series A Preferred Stock is recorded in mezzanine equity and is subject to subsequent measurement under the guidance provided under ASC 480. Pursuant to ASC 480, the Company has elected to recognize changes in redemption value immediately. However, based on the nature of Series A Preferred Stock, no subsequent measurement will be recognized until a Deemed Liquidation Event becomes probable. As of December 31, 2021, a Deemed Liquidation Event was not probable; as a result, the Series A Preferred Stock is valued at original issue price, less cost of issuance.

Note 8. Stock-Based Compensation

Equity Incentive Plan

On July 7, 2020, the board of directors adopted, and the Company's stockholders approved, the 2020 Equity Incentive Plan. The 2020 Equity Incentive Plan, as amended and restated (the "2020 Plan"), provides for the grant of incentive stock options to employees of the Company, and for the grant of non-statutory stock options, restricted stock awards ("RSAs"), restricted stock unit awards, and other forms of stock awards to employees, directors, and consultants of the Company (collectively, "stock-based awards").

The board of directors or a designated committee of the board of directors is responsible for the administration of the 2020 Plan and determines the term, exercise price, and vesting terms of each award. Under the terms of existing awards, all stock option grants expire ten years from grant date. Options may not have an exercise price less than 100% of the fair market value of the Company's common stock on the grant date, and generally vest over a period of four years.

Total stock-based compensation expense reported in the statements of operations was allocated as follows (in thousands):

	Year Ended	
	December 31,	
	2020	2021
Research and development	\$ 1	\$ 75
General and administrative	—	5
Total	\$ 1	\$ 80

Mineralys Therapeutics, Inc.
Notes to Financial Statements

Stock Options

As of December 31, 2020 and 2021, the Company had 12,500,000 and 18,839,273, respectively, shares of its common stock reserved under the 2020 Plan. As of December 31, 2020 and 2021, a total of 4,062,500 and 4,381,962, respectively, options were available for issuance under the 2020 Plan. The following is a summary of the Company's stock option activity under its 2020 Plan:

	Shares	Weighted-Average Exercise Price	Total Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Life (Years)
Options outstanding at December 31, 2020	—	\$ —	\$ —	—
Options granted	5,694,756	0.06		
Options outstanding at December 31, 2021	5,694,756	\$ 0.06	\$ 105	9.4
Options vested and exercisable as of December 31, 2021	316,314	\$ 0.08	\$ —	9.7

As of December 31, 2021, the Company had \$0.2 million of unrecognized share-based compensation expense related to stock option awards that is expected to be recognized over a weighted-average period of approximately 3.1 years. For the year ended December 31, 2021, the total fair value of options vested was \$18 thousand.

There were no options granted during the year ended December 31, 2020. The weighted-average grant date fair value per share for the outstanding options at December 31, 2021 was \$0.05. The following table presents the weighted-average assumptions used in the Black-Scholes option pricing model to determine the fair value of stock options granted during the year ended December 31, 2021:

Exercise price	\$ 0.06
Stock price on date of grant	\$ 0.06
Expected term (years)	6.08
Expected stock price volatility	87.00 %
Risk-free rate of interest	1.12 %
Expected dividend yield	— %

Restricted Stock Awards

RSAs granted by the Company have varying vesting terms depending on the terms of the grant. Holders of unvested RSAs have the same rights as those of common stockholders including voting rights and non-forfeitable dividend rights. However, ownership of unvested RSAs cannot be transferred until vested. Upon a participant's termination of continuous service for any reason, any shares subject to RSAs held by the participant that have not vested as of such termination date may be forfeited to or repurchased by the Company.

The following is a summary of the Company's RSA activity under its 2020 Plan:

	Shares	Weighted-Average Grant Date Fair Value
Unvested at January 1, 2020	—	\$ —
Granted	8,437,500	\$ 0.0007
Unvested at December 31, 2020	8,437,500	\$ 0.0007
Granted	325,055	\$ 0.0050
Vested	(5,116,721)	\$ 0.0036
Unvested at December 31, 2021	3,645,834	\$ 0.0010

Mineralys Therapeutics, Inc.
Notes to Financial Statements

As of December 31, 2021, the Company had \$4 thousand of unrecognized share-based compensation expense related to RSAs that is expected to be recognized over a weighted-average period of approximately 2.8 years. For the year ended December 31, 2021, the total fair value of RSAs vested was \$19 thousand.

Note 9. Income Taxes

There was no current or deferred income tax expense or benefit for the years ended December 31, 2020 and 2021, due to the Company's net loss and increases in its deferred tax asset valuation allowance. The components of the Company's deferred tax assets are as follows (in thousands):

	December 31,	
	2020	2021
Net operating loss carryforwards	\$ 362	\$ 4,460
Research and development credit carryforwards	84	520
Intangible assets	289	286
Other	—	83
Total deferred tax assets	735	5,349
Valuation allowance	(735)	(5,349)
Deferred tax assets, net of valuation allowance	\$ —	\$ —

When realization of the deferred tax asset is more likely than not to occur, the benefit related to the deductible temporary differences attributable to operations is recognized as a reduction of income tax expense. Valuation allowances are provided against deferred tax assets when, based on all available evidence, it is considered more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. The deferred tax assets have been fully offset by a valuation allowance, as realization is dependent on future earnings, if any, the timing and amount of which are uncertain. The Company's valuation allowance increased by approximately \$0.7 million and \$4.6 million for the years ended December 31, 2020 and 2021, respectively.

As of December 31 2020 and 2021, the Company had federal net operating loss ("NOL") carryforwards of \$0.4 million and \$4.2 million available to reduce future taxable income, respectively. The federal NOL carryforward has no expiration as a result of the Tax Cuts and Jobs Act of 2017. As of December 31 2020 and 2021, the Company had \$0 and \$0.2 million, respectively, of state NOL carryforwards that begin expiring in 2041.

As of December 31 2020 and 2021, the Company had federal and state research and development credit carryforwards of \$0.1 million and \$0.6 million, respectively, to reduce future taxable income. The federal research and development credit carryforwards begin to expire in 2040. Research and development credit carryforwards associated with California do not expire. Research and development credit carryforwards associated with other states begin expiring in 2036.

The Internal Revenue Code (IRC) Sections 382 and 383 limit annual use of NOL and research and development credit carryforwards in the event a cumulative change in ownership of more than 50% occurs within a three-year period. The Company has not yet completed an ownership change analysis. If a requisite ownership change occurs, the amount of remaining tax attribute carryforwards available to offset taxable income and income tax expense in future years may be restricted or eliminated. If eliminated, the related asset would be removed from deferred tax assets with a corresponding reduction in the valuation allowance. Due to the existence of the valuation allowance, limitations created by future ownership changes, if any, will not impact the Company's effective tax rate.

Mineralys Therapeutics, Inc.
Notes to Financial Statements

The Company's effective tax rate for the years ended December 31, 2020 and 2021 was 0%. A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows for the years ended:

	December 31,	
	2020	2021
Statutory federal income tax rate	21.00 %	21.00 %
State income taxes, net of federal tax benefits	—	1.26
Research and development credits	2.46	2.24
Permanent items and other	(2.93)	(0.73)
Change in valuation allowance	(20.53)	(23.77)
Total provision for income taxes	— %	— %

The Company files income tax returns in the U.S. Federal jurisdiction and various state and local jurisdictions. As of December 31, 2021, all years remained subject to examination by tax authorities.

Uncertain tax positions are evaluated based on the facts and circumstances that exist at each reporting period. Subsequent changes in judgment based upon new information may lead to changes in recognition, derecognition, and measurement. Adjustment may result, for example, upon resolution of an issue with the taxing authorities or expiration of a statute of limitations barring an assessment for an issue. The Company recognizes a tax benefit from an uncertain tax position when it is more-likely-than-not that it will be sustained upon examination by tax authorities.

At December 31, 2020 and 2021, the Company had \$13 thousand and \$0.1 million, respectively, in unrecognized tax benefits, which would not affect the effective tax rate if recognized. During the year ended December 31, 2021, the Company's unrecognized tax benefits increased by \$0.1 million related to current year tax positions. The Company does not anticipate any significant changes in its unrecognized tax benefits over the next 12 months. The Company's policy is to recognize interest expense and penalties related to income tax matters in income tax expense. As of December 31, 2020 and 2021, the Company had no accrued interest or penalties related to uncertain tax positions.

The following table summarizes the changes to the Company's unrecognized tax benefits for the years ended December 31, 2020 and 2021 (in thousands):

	Year Ended December 31,	
	2020	2021
Beginning balance	\$ —	\$ 13
Additions related to current year positions	13	105
Ending Balance	\$ 13	\$ 118

Note 10. Subsequent Events

Amendment to the Articles of Incorporation

Subsequent to December 31, 2021, the Company's Articles of Incorporation were amended and restated to increase the authorized shares of common stock, authorize the issuance of Series B redeemable convertible preferred

Mineralys Therapeutics, Inc.
Notes to Financial Statements

stock ("Series B Preferred Stock") and modify the participation rights of the Series A Preferred Stock. On May 31, 2022, the authorized shares of the Company's classes of capital stock were modified to the following share amounts:

Common stock	319,000,000
Series A Preferred Stock ⁽¹⁾	86,332,216
Series B Preferred Stock ⁽²⁾	136,510,868
Total	<u>541,843,084</u>

(1) On May 31, 2022, the rights and privileges of the Series A Preferred Stock were amended to allow Series A Preferred Stockholders the right to receive a liquidating distribution under certain defined liquidating events at a maximum participation multiple of 2.5.

(2) The Series B Preferred Stock does not carry participation rights.

Offerings of Preferred Stock

In January 2022, the Company achieved the Milestone under the Series A Purchase Agreement and sold an aggregate of 25,151,957 shares of Series A Preferred Stock under the Series A Purchase Agreement to certain existing investors, members of the Company's board of directors and affiliates of members of its board of directors, at a purchase price of \$0.477 per share for aggregate gross proceeds of approximately \$12.0 million.

In June 2022, the Company entered into a Series B convertible preferred stock agreement with certain investors, including members of the Company's board of directors and affiliates of members of its board of directors, pursuant to which the Company issued and sold to such investors an aggregate of 136,510,868 shares of Series B Preferred Stock at a purchase price of \$0.8644 per share for aggregate gross proceeds of approximately \$118.0 million.

2020 Plan

In June 2022, the board of directors adopted, and the Company's stockholders approved, an amendment to the 2020 Plan to increase the authorized shares issuable to 37,205,875. Additionally, in March, June, and July 2022, the Company issued 10,552,451 RSAs and 8,568,718 stock options to employees with a weighted-average exercise price of \$0.10.

Mineralys Therapeutics, Inc.
Condensed Balance Sheets
(in thousands, except share and per share amounts)

	<u>December 31</u> <u>2021</u>	<u>September 30</u> <u>2022</u> <i>(Unaudited)</i>
Assets		
Current assets:		
Cash and cash equivalents	\$ 10,612	\$ 48,955
Marketable securities	—	71,998
Prepaid and other current assets	510	933
Total current assets	<u>11,122</u>	<u>121,886</u>
Other assets	3	564
Total assets	<u>\$ 11,125</u>	<u>\$ 122,450</u>
Liabilities, convertible preferred stock, and stockholders' deficit		
Current liabilities:		
Accounts payable	\$ 763	\$ 2,563
Accrued liabilities	4,291	4,657
Total current liabilities	<u>5,054</u>	<u>7,220</u>
Commitments and contingencies (Note 4)		
Series A convertible preferred stock, \$0.0001 par value, 86,340,911 and 86,332,216 shares authorized and 61,180,259 and 86,332,216 shares issued and outstanding as of December 31, 2021 and September 30, 2022, respectively, \$29,184 and \$41,180 aggregate liquidation preference as of December 31, 2021 and September 30, 2022, respectively	28,996	40,987
Series B convertible preferred stock, \$0.0001 par value, 0 and 136,510,868 shares authorized and 0 and 136,510,868 shares issued and outstanding as of December 31, 2021 and September 30, 2022, respectively, \$0 and \$118,000 aggregate liquidation preference as of December 31, 2021 and September 30, 2022, respectively	—	117,657
Stockholders' deficit:		
Common stock, \$0.0001 par value, 166,000,000 and 319,000,000 shares authorized and 58,762,555 and 69,315,006 shares issued and outstanding as of December 31, 2021 and September 30, 2022, respectively	6	7
Additional paid-in capital	80	316
Accumulated deficit	<u>(23,011)</u>	<u>(43,737)</u>
Total stockholders' deficit	<u>(22,925)</u>	<u>(43,414)</u>
Total liabilities, convertible preferred stock, and stockholders' deficit	<u>\$ 11,125</u>	<u>\$ 122,450</u>

The accompanying notes are an integral part of these condensed financial statements.

Mineralys Therapeutics, Inc.
Condensed Statements of Operations (Unaudited)
(in thousands, except share and per share data)

	Nine Months Ended September 30,	
	2021	2022
Operating expenses:		
Research and development	\$ 9,692	\$ 18,432
General and administrative	1,950	3,039
Total operating expenses	11,642	21,471
Loss from operations	(11,642)	(21,471)
Other income (expense):		
Interest income (expense)	(27)	741
Change in fair value of convertible notes	(657)	—
Other income	1	4
Total other income (expense), net	(683)	745
Net loss	\$ (12,325)	\$ (20,726)
Net loss per share attributable to common stockholders, basic and diluted	\$ (0.23)	\$ (0.37)
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted	53,548,713	55,639,462

The accompanying notes are an integral part of these condensed financial statements.

Mineralys Therapeutics, Inc.
Condensed Statements of Convertible Preferred Stock and Stockholders' Deficit (Unaudited)
(in thousands, except share data)

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Additional Paid-In- Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance as of December 31, 2020	—	\$ —	—	\$ —	58,437,500	\$ 6	\$ —	\$ (3,603)	\$ (3,597)
Issuance of Series A convertible preferred stock, net of issuance costs of \$188	50,311,827	23,812	—	—	—	—	—	—	—
Issuance of Series A convertible preferred stock upon conversion of convertible notes	10,868,432	5,184	—	—	—	—	—	—	—
Issuance of restricted stock awards	—	—	—	—	325,055	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	64	—	64
Net loss	—	—	—	—	—	—	—	(12,325)	(12,325)
Balance as of September 30, 2021	61,180,259	\$ 28,996	—	\$ —	58,762,555	\$ 6	\$ 64	\$ (15,928)	\$ (15,858)
Balance as of December 31, 2021	61,180,259	\$ 28,996	—	\$ —	58,762,555	\$ 6	\$ 80	\$ (23,011)	\$ (22,925)
Issuance of Series A convertible preferred stock, net of issuance costs of \$7	25,151,957	11,991	—	—	—	—	—	—	—
Issuance of Series B convertible preferred stock, net of issuance costs of \$343	—	—	136,510,868	117,657	—	—	—	—	—
Issuance of restricted stock awards	—	—	—	—	10,552,451	1	(1)	—	—
Stock-based compensation	—	—	—	—	—	—	237	—	237
Net loss	—	—	—	—	—	—	—	(20,726)	(20,726)
Balance as of September 30, 2022	86,332,216	\$ 40,987	136,510,868	\$ 117,657	69,315,006	\$ 7	\$ 316	\$ (43,737)	\$ (43,414)

The accompanying notes are an integral part of these condensed financial statements.

Mineralys Therapeutics, Inc.
Condensed Statements of Cash Flows (Unaudited)
(in thousands)

	Nine Months Ended September 30,	
	2021	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (12,325)	\$ (20,726)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of convertible notes	657	—
Stock-based compensation	64	237
Non-cash interest expense	27	—
Accretion of discount on held-to-maturity securities	—	(239)
Changes in operating assets and liabilities:		
Prepaid and other current assets	(543)	(473)
Accounts payable and accrued liabilities	2,451	2,166
Net cash used in operating activities	(9,669)	(19,035)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of marketable securities	—	(71,759)
Net cash used in investing activities	—	(71,759)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from the issuance of Series A convertible preferred stock, net of offering costs	23,812	11,991
Proceeds from the issuance of Series B convertible preferred stock, net of offering costs	—	117,657
Deferred offering costs	—	(561)
Net cash provided by financing activities	23,812	129,087
Net increase in cash, cash equivalents, and restricted cash	14,143	38,293
Cash, cash equivalents, and restricted cash - beginning	1,409	10,662
Cash, cash equivalents, and restricted cash - ending ⁽¹⁾	\$ 15,552	\$ 48,955
Supplement Disclosure of Non-Cash Financing Activities:		
Conversion of convertible notes and accrued interest to Series A convertible preferred stock	\$ 5,184	\$ —
Deferred offering costs included in accounts payable and accrued liabilities	\$ —	\$ 421

(1) Cash, cash equivalents, and restricted cash exclude marketable securities of \$72.0 million. Cash, cash equivalents, and marketable securities as of September 30, 2022 amounted to \$121.0 million.

The accompanying notes are an integral part of these condensed financial statements.

Note 1. Nature of Business

Mineralys Therapeutics, Inc. (the “Company”) is a clinical-stage biopharmaceutical company committed to developing treatments for diseases that are driven by abnormally elevated aldosterone. The Company’s clinical-stage product candidate, MLS-101 is a highly selective aldosterone synthase inhibitor, licensed from Mitsubishi Tanabe Pharma Corporation (“Mitsubishi Tanabe”), that is being investigated for the treatment of hypertension. The Company has completed a Phase 2 proof-of-concept study in patients with uncontrolled hypertension and has plans for the continued research and development of MLS-101 in hypertension and other potential indications. The Company was incorporated as a Delaware corporation in May 2019, and it is headquartered in Radnor, Pennsylvania.

The Company’s operations to date have been limited to business planning, raising capital, in-licensing MLS-101, conducting preclinical and clinical trials, and other research and development.

Liquidity and Capital Resources

Since inception, the Company has not generated any revenue from product sales or other sources and has incurred significant operating losses and negative cash flows from operations. The Company’s primary uses of cash to date have been to fund research and development activities, business planning, establishing and maintaining the Company’s intellectual property portfolio, hiring personnel, raising capital, and providing general and administrative support for these operations. As of September 30, 2022, the Company had an accumulated deficit of \$43.7 million and cash, cash equivalents, and marketable securities of \$121.0 million. For the nine months ended September 30, 2022, the Company had a net loss of \$20.7 million and net cash used in operating activities of \$19.0 million.

From inception to September 30, 2022, the Company has funded its operations by raising aggregate gross proceeds of approximately \$158.0 million from the sale of the Company’s convertible preferred stock and convertible notes. The Company has a limited operating history, and the sales and income potential of its business is unproven. The Company expects to continue to incur substantial losses in the foreseeable future as a result of the Company’s research and development activities.

Additional funding will be required in the future to continue with the Company’s planned research and development and other activities. The Company expects to finance its operations through equity offerings, including this initial public offering, debt financings, and other capital sources, including potential strategic collaborations, licensing, and other similar arrangements. 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 and results of operations or financial condition. The Company believes that its existing cash, cash equivalents, and marketable securities as of September 30, 2022 will be sufficient to allow the Company to fund operations for at least one year from the issuance date of these financial statements.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The unaudited condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”) and applicable rules and regulations of the U.S. Securities and Exchange Commission for interim reporting. As permitted under those rules and regulations, certain footnotes or other financial information normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted. These condensed financial statements have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, which are necessary for a fair presentation of the Company’s financial information. These unaudited condensed financial statements should be read in conjunction with the audited financial statements and related notes for the year ended December 31, 2020 and 2021.

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification (“ASC”) and Accounting Standards Updates of the Financial Accounting Standards Board (“FASB”).

Emerging Growth Company Status

The Company is an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act (“JOBS Act”), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. The Company may take advantage of these exemptions until the last day of the fiscal year following the fifth anniversary of its initial public offering or such earlier time as the Company is no longer an “emerging growth company.” Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards and as a result of this election, its financial statements may not be comparable to companies that comply with public company effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of an offering or such earlier time that it is no longer an “emerging growth company.”

Segment Information

The Company operates in one operating segment for the purposes of assessing performance and making operating decisions and, accordingly, no segment disclosures have been presented herein. All assets are held in the United States.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Estimates are used in the following areas, among others: research and development accruals, fair value of convertible notes, fair value of the Company’s common stock, and income taxes.

Cash, Cash Equivalents, and Restricted Cash

As of December 31, 2021 and September 30, 2022, the Company had \$50 thousand and zero, respectively, classified as restricted cash for the required collateral for a credit card facility with Silicon Valley Bank. The following table provides a reconciliation of cash, cash equivalents, and restricted cash as reported in the condensed statements of cash flows to the condensed balance sheets (in thousands):

	December 31, 2021	September 30, 2022
Cash	\$ 10,612	\$ 8,442
Money market funds	—	30,548
U.S. Treasury bills	—	9,965
Total cash and cash equivalents	10,612	48,955
Restricted cash, as a component of prepaid and other current assets	50	—
Total	<u>\$ 10,662</u>	<u>\$ 48,955</u>

Concentration of Credit Risk

The Company has no significant off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts, or other hedging arrangements. Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash balances in several accounts with two financial institutions which, from time to time, are in excess of federally insured limits.

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Fair Value Measurements

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. ASC Topic 820, *Fair Value Measurement*, establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

- Level 1 – quoted prices in active markets for identical assets and liabilities
- Level 2 – other significant observable inputs (including quoted prices for similar assets and liabilities, interest rates, credit risk, etc.)
- Level 3 – significant unobservable inputs (including the Company's own assumptions in determining the fair value of assets and liabilities)

For certain financial instruments, including cash and restricted cash, prepaid expenses, accounts payable, and certain accrued liabilities, the recorded amount approximates estimated fair value due to their relatively short maturity period.

Investments

The Company generally invests its excess cash in money market funds and investment grade short-term fixed income securities, such as U.S. Treasury bills. Such investments are included in cash and cash equivalents and marketable securities in the condensed balance sheets.

The Company determines the appropriate classification of short-term and long-term securities at the time of purchase and re-evaluates such designation as of each balance sheet date. Securities are classified as held-to-maturity when the Company has the positive intent and ability to hold the securities to maturity. Held-to-maturity securities are carried at amortized cost, adjusted for the accretion of discounts using the interest method.

For held-to-maturity investments, the Company periodically reviews each individual security position that has an unrealized loss, or impairment, to determine if that impairment is other-than-temporary. If the Company believes an impairment of a security position is other than temporary, based on available quantitative and qualitative information as of the report date, the loss will be recognized as other income (expense), net, in the Company's condensed statements of operations and a new cost basis in the investment is established. The Company began investing in marketable securities during the nine months ended September 30, 2022, and no impairment charges were recorded.

Deferred Offering Costs

The Company capitalizes certain legal, professional, accounting, and other third-party fees that are directly associated with in-process equity issuances as deferred offering costs until such equity issuances are consummated. After consummation of the equity issuance, these costs are recorded as a reduction in the capitalized amount associated with the equity issuance. Should the equity issuance be abandoned, the deferred offering costs are expensed immediately as a charge to operating expenses in the statement of operations. Deferred offering costs as of December 31, 2021 and September 30, 2022 were \$3 thousand and \$0.6 million, respectively. Such costs are classified in other assets on the balance sheets.

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Net Loss Per Share

The Company's basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period. The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential common stock equivalents outstanding for the period determined using the treasury stock method. For purposes of this calculation, convertible preferred stock and stock options to purchase common stock are considered to be common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is anti-dilutive. The following table sets forth the potential common shares excluded from the calculation of net loss per common share because their inclusion would be anti-dilutive:

	Nine Months Ended September 30,	
	2021	2022
Convertible preferred stock (as converted into common stock)	61,180,259	222,843,084
Options to purchase common stock	5,437,752	14,263,474
Unvested restricted stock awards	5,000,000	13,260,785
Total	71,618,011	250,367,343

Recently Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Note 3. Fair Value of Financial Instruments

There were no financial instruments measured at fair value on a recurring basis based on the fair value hierarchy as of December 31, 2021, and the following table presents this information as of September 30, 2022 (in thousands):

	September 30, 2022	
	Level 1	Level 2
Assets		
Cash equivalents		
Money market funds	\$ 30,548	\$ —
U.S. Treasury bills	—	9,965
Marketable securities		
U.S. Treasury bills	—	71,998

The following methods and assumptions were used by the Company in estimating the fair values of each class of financial instrument disclosed herein:

Money Market Funds—The carrying amounts of money market funds reported as cash and cash equivalents in the condensed balance sheets approximate their fair values due to their short-term nature. The fair values of money market funds are determined by Level 1 inputs utilizing quoted prices (unadjusted) in active markets for identical assets.

U.S. Treasury Bills—As of September 30, 2022, the Company had \$82.0 million of short-term U.S. Treasury bills, consisting of \$10.0 million with original maturities of three months or less and \$72.0 million with original maturities between three and six months. Fair values of these investments are determined by Level 2 inputs

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

utilizing quoted prices (unadjusted) in active markets for similar assets. As of September 30, 2022, held-to-maturity securities had an amortized cost of \$82.0 million reported as cash and cash equivalents or marketable securities in the condensed balance sheets and fair value of \$81.9 million.

There were no transfers within the fair value hierarchy during the periods presented.

Note 4. Commitments and Contingencies

License Agreement with Mitsubishi Tanabe

In July 2020, the Company entered into a license agreement (the “Mitsubishi License”) with Mitsubishi Tanabe, pursuant to which Mitsubishi Tanabe granted the Company an exclusive, worldwide, royalty-bearing, sublicensable license under Mitsubishi Tanabe’s patent and other intellectual property rights to exploit products incorporating MLS-101 (“MLS-101 Products”) for the prevention, treatment, diagnosis, detection, monitoring, or predisposition testing with respect to indication, diseases, and conditions in humans. Pursuant to the Mitsubishi License, the Company paid Mitsubishi Tanabe a \$1.0 million upfront fee, and the Company is obligated to pay Mitsubishi Tanabe development milestone payments of up to \$9.0 million in the aggregate and commercial milestone payments of up to \$155.0 million in the aggregate upon first commercial sale and upon meeting certain annual sales targets, as well as additional commercial milestone payments of up to \$10.0 million for a second indication. Additionally, the Company is obligated to pay Mitsubishi Tanabe tiered royalties at percentages ranging from the mid-single-digits to ten percent (10%) of aggregate net sales of each MLS-101 Product on an MLS-101 Product-by-MLS-101 Product and country-by-country basis, until the later of (i) the expiration of the last-to-expire valid Mitsubishi Tanabe patent claim covering an MLS-101 Product, (ii) ten years from the first commercial sale of an MLS-101 Product, or (iii) the expiration of regulatory exclusivity in such country. Such royalties are subject to reduction under specified conditions, including lack of patent coverage and generic competition.

The Company is obligated to use commercially reasonable efforts to conduct and complete the development activities and to file for regulatory approval for at least one MLS-101 Product in a major market country and consider in good faith to develop at least one MLS-101 Product in a non-major market country. If the Company elects to sublicense its rights under the Mitsubishi License to a third party with respect to exploitation of MLS-101 or any MLS-101 Product in certain countries in Asia, the Company agreed to negotiate such a sublicense first, for a specified period of time, with Mitsubishi Tanabe, if Mitsubishi Tanabe notifies the Company that it would like to obtain such a sublicense. The Company agreed not to commercialize any competing product prior to three years following the first commercial sale of the first MLS-101 Product in any country without Mitsubishi Tanabe’s prior consent.

Unless terminated earlier, the Mitsubishi License will continue until the expiration of all of the Company’s royalty obligations to Mitsubishi Tanabe. The Company may terminate the Mitsubishi License for any or no reason upon 90 or 180 days’ prior written notice to Mitsubishi Tanabe depending on whether the Mitsubishi Tanabe Product has received regulatory approval. Mitsubishi Tanabe may terminate the Mitsubishi License if the Company has not initiated regulatory consultation for the first global clinical trials of MLS-101 in at least one major market country within a specified amount of time or if the Company or its affiliates or sublicensees initiate a challenge to the patent rights licensed to the Company by Mitsubishi Tanabe. In addition, either party may terminate the Mitsubishi License in the event of an uncured material breach by or bankruptcy of the other party, subject to certain notice and cure periods, or upon the other party’s bankruptcy or insolvency.

For both the nine months ended September 30, 2021 and 2022, the Company did not incur any research and development expenses related to the Mitsubishi License.

Litigation

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount can be reasonably estimated. From time to time, the Company may become involved in legal proceedings arising in the ordinary course of business. The Company was not subject to any material legal proceedings during the nine months ended September 30, 2021 and 2022, and no material legal proceedings are currently pending or threatened.

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters including, but not limited to, losses arising from breach of such agreements or intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with officers of the Company and members of its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any claims under indemnification arrangements, and it has not accrued any liabilities related to such obligations in its condensed financial statements as of September 30, 2021 and 2022.

Note 5. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31, 2021	September 30, 2022
Research and development expenses	\$ 3,636	\$ 3,409
Compensation and benefits	313	403
Professional fees and other	342	845
Total	<u>\$ 4,291</u>	<u>\$ 4,657</u>

Note 6. Convertible Notes – Related Party

Between May 2019 and July 2020, the Company issued unsecured convertible promissory notes in the aggregate principal amount of \$4.0 million to its founding investor and related party Catalys Pacific Fund LP, pursuant to a convertible notes agreement subsequently amended on December 20, 2020 (the “Convertible Notes”). The Convertible Notes were recorded at the date of each issuance at its fair value, which was based on a guideline transaction method valuation model to estimate the fair value of the Convertible Notes, which relied on unobservable Level 3 inputs. Changes in the fair value of the Convertible Notes were recognized as expense as reported in change in fair value of convertible notes on the statement of operations for the nine months ended September 30, 2021.

On February 16, 2021 (the “Conversion Date”), the Convertible Notes and accrued interest totaling \$5.2 million were converted into 10,868,432 shares of Series A convertible preferred stock upon the closing of the Series A financing. As a result, on the Conversion Date, the Convertible Notes were reclassified to Series A convertible preferred stock, which is described in more detail in Note 7. “Capital Stock.”

Note 7. Capital Stock

As of September 30, 2022, the Company has reserved authorized shares of common stock, on an as-converted basis, for future issuance as follows:

Series A Preferred Stock	86,332,216
Series B Preferred Stock	136,510,868
Common stock options outstanding	14,263,474
Awards available for grant under the 2020 Plan	3,627,395
Total	<u>240,733,953</u>

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Preferred Stock Offerings

In February 2021, the Company entered into a Series A redeemable convertible preferred stock agreement (the “Series A Purchase Agreement”). From February 2021 to April 2021, the Company issued 50,311,827 shares of Series A convertible preferred stock, par value \$0.001 per share (“Series A Preferred Stock”) at \$0.477 per share for net proceeds of \$23.8 million. Additionally, in February 2021, the Convertible Notes and related accrued interest converted into 10,868,432 shares of Series A Preferred Stock, which is described in more detail in Note 6. “Convertible Notes – Related Party.”

The Series A Purchase Agreement provided for an additional closing for the Series A purchasers for the issuance of up to 25,151,957 shares of Series A Preferred Stock, at a purchase price of \$0.477 per share for aggregate cash proceeds of \$12.0 million, upon the achievement of the Milestone (as defined in the Series A Purchase Agreement) or a waiver of the Milestone by the requisite holders. In January 2022, the Company achieved the Milestone under the Series A Purchase Agreement and sold an aggregate of 25,151,957 shares of Series A Preferred Stock under the Series A Purchase Agreement to certain existing investors, members of the Company’s board of directors and affiliates of members of its board of directors, at a purchase price of \$0.477 per share for aggregate net proceeds of approximately \$12.0 million.

In June 2022, the Company entered into a Series B convertible preferred stock agreement with certain investors, including members of the Company’s board of directors and affiliates of members of its board of directors, pursuant to which the Company issued and sold to such investors an aggregate of 136,510,868 shares of Series B redeemable convertible preferred stock, par value \$0.0001 per share (“Series B Preferred Stock”) at a purchase price of \$0.8644 per share for aggregate net proceeds of approximately \$117.7 million.

The rights, preferences, and privileges of the Company’s Series A Preferred Stock are as follows:

Voting

The holders of Series A Preferred Stock are entitled to a number of votes equal to the number of whole shares of common stock into which the shares of Series A Preferred Stock are convertible. Except as provided by law or otherwise, the holders of the Series A Preferred Stock vote together with the holders of common stock as a single class. Holders of Series A Preferred Stock, voting as a separate class, are entitled to elect three members of the board of directors.

Dividends

Dividends are payable, if permitted by law, in accordance with the Series A Preferred Stock terms if and when declared by the board of directors. Holders of the Series A Preferred Stock are entitled to receive dividends out of any assets at the time legally available, at the applicable dividend rate specified for such shares of the Series A Preferred Stock. Dividends are not mandatory and are not cumulative. No dividends have been declared or paid since inception of the Company.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of shares of the Series A Preferred Stock then outstanding are entitled to be paid out of the assets of the Company available for distribution to its stockholders or, in the case of a deemed liquidation event, such as a merger or consolidation or the sale, lease, transfer, exclusive license, or other disposition of substantially all of the Company’s assets (collectively, a “Deemed Liquidation Event”), out of the consideration payable to stockholders in such an event, after payment of any liquidation preference of the Series B Preferred Stock and before any payment shall be made to the holders of common stock by reason of their ownership thereof, an amount per share equal to the Series A Preferred Stock original issue price, plus any dividends declared but unpaid. If upon any such liquidation, dissolution, or winding up of the Company or a Deemed Liquidation Event, the assets of the Company available for distribution to its stockholders are insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they are entitled, the holders of shares of the Series A Preferred Stock share ratably in any

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

distribution of the assets available for distribution in proportion to the respective amounts that would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

The remaining available proceeds will be distributed pro rata among the holders of the shares of the Series A Preferred Stock, and common stock, based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to common stock pursuant to the applicable terms immediately prior to such liquidation, dissolution, or winding up of the Company. However, the aggregate amount to which the holders of the Series A Preferred Stock are entitled to shall not exceed \$1.1925 per share.

Conversion

Each share of the Series A Preferred Stock is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as determined by dividing the Series A Preferred Stock original issue price by the Series A Preferred Stock conversion price in effect at the time of conversion, which as of September 30, 2022 was equal to the original issue price. The applicable conversion price is subject to future adjustments upon the occurrence of certain events. The Series A Preferred Stock automatically converts upon either (i) the closing of a qualified initial public offering of the Company's common stock (subject to adjustment for any share split, combination or dividend or distribution payable) resulting in at least \$75,000,000 in proceeds, net of underwriting discounts and commissions to the Company, or (ii) the election to convert the preferred shares by requisite holders of the Series A Preferred Stock and Series B Preferred Stock.

The Company evaluated the Series A Preferred Stock and determined that it was considered an equity host under ASC 815. In making this determination, the Company's analysis followed the whole instrument approach, which compares an individual feature against the entire Series A Preferred Stock instrument that includes that feature. The Company's analysis was based on a consideration of the economic characteristics and risks of the Series A Preferred Stock. More specifically, the Company evaluated all of the stated and implied substantive terms and features, including (i) whether the Series A Preferred Stock included redemption features, (ii) how and when any redemption features could be exercised, (iii) whether the holders of the Series A Preferred Stock were entitled to dividends, (iv) the voting rights of the Series A Preferred Stock, and (v) the existence and nature of any conversion rights. The Company concluded that, as the Series A Preferred Stock represented an equity host, the conversion feature included in the Series A Preferred Stock was clearly and closely related to the associated host instrument. Accordingly, the conversion feature was not considered an embedded derivative that requires bifurcation.

Redemption

The Series A Preferred Stock is redeemable upon a request by two-thirds of the requisite holders of the Company's Series A Preferred Stock in the event of a Deemed Liquidation Event, if the Company does not effect a dissolution of the Company within 90 days after such Deemed Liquidation Event, payable at a price equal to the cash or the value of the property, rights, or securities to be paid or distributed to holders pursuant to such Deemed Liquidation Event. Any redemption is deemed to be remote as of September 30, 2022, and the fair value of Series A Preferred Stock is deemed to be the price paid by the Series A preferred stockholders. Due to this redemption option, Series A Preferred Stock is recorded in mezzanine equity and is subject to subsequent measurement under the guidance provided under ASC 480. Pursuant to ASC 480, the Company has elected to recognize changes in redemption value immediately. However, based on the nature of Series A Preferred Stock, no subsequent measurement will be recognized until a Deemed Liquidation Event becomes probable. As of September 30, 2022, a Deemed Liquidation Event was not probable; as a result, the Series A Preferred Stock is valued at original issue price, less cost of issuance.

The rights, preferences, and privileges of the Company's Series B Preferred Stock are as follows:

Voting

The holders of Series B Preferred Stock are entitled to a number of votes equal to the number of whole shares of common stock into which the shares of Series B Preferred Stock are convertible. Except as provided by

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

law or otherwise, the holders of the Series B Preferred Stock vote together with the holders of common stock as a single class. Holders of Series B Preferred Stock, voting as a separate class, are entitled to elect two members of the board of directors.

Dividends

Dividends are payable, if permitted by law, in accordance with the Series B Preferred Stock terms if and when declared by the board of directors. Holders of the Series B Preferred Stock are entitled to receive dividends out of any assets at the time legally available, at the applicable dividend rate specified for such shares of the Series B Preferred Stock. Dividends are not mandatory and are not cumulative. No dividends have been declared or paid since inception of the Company.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of shares of the Series B Preferred Stock then outstanding are entitled to be paid out of the assets of the Company available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, out of the consideration payable to stockholders in such an event, before any payment shall be made to the holders of Series A Preferred Stock or common stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series B Preferred Stock original issue price, plus any dividends declared but unpaid, or (ii) such amount per share as would have been payable had all shares of Series B Stock been converted into common stock immediately prior to liquidation, dissolution, winding up, or Deemed Liquidation Event. If upon any such liquidation, dissolution, or winding up of the Company or a Deemed Liquidation Event, the assets of the Company available for distribution to its stockholders are insufficient to pay the holders of shares of Series B Preferred Stock the full amount to which they are entitled, the holders of shares of the Series B Preferred Stock share ratably in any distribution of the assets available for distribution in proportion to the respective amounts that would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

Conversion

Each share of the Series B Preferred Stock is convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as determined by dividing the Series B Preferred Stock original issue price by the Series B Preferred Stock conversion price in effect at the time of conversion, which as of September 30, 2022 was equal to the original issue price. The applicable conversion price is subject to future adjustments upon the occurrence of certain events. The Series B Preferred Stock automatically converts upon either (i) the closing of a qualified initial public offering of the Company's common stock (subject to adjustment for any share split, combination or dividend or distribution payable) resulting in at least \$75,000,000 in proceeds, net of underwriting discounts and commissions to the Company, or (ii) the election to convert the preferred shares by requisite holders of the Series A Preferred Stock and Series B Preferred Stock.

The Company evaluated the Series B Preferred Stock and determined that it was considered an equity host under ASC 815. In making this determination, the Company's analysis followed the whole instrument approach, which compares an individual feature against the entire Series B Preferred Stock instrument that includes that feature. The Company's analysis was based on a consideration of the economic characteristics and risks of the Series B Preferred Stock. More specifically, the Company evaluated all of the stated and implied substantive terms and features, including (i) whether the Series B Preferred Stock included redemption features, (ii) how and when any redemption features could be exercised, (iii) whether the holders of the Series B Preferred Stock were entitled to dividends, (iv) the voting rights of the Series B Preferred Stock, and (v) the existence and nature of any conversion rights. The Company concluded that, as the Series B Preferred Stock represented an equity host, the conversion feature included in the Series B Preferred Stock was clearly and closely related to the associated host instrument. Accordingly, the conversion feature was not considered an embedded derivative that requires bifurcation.

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Redemption

The holders of the Series B Preferred Stock have no rights to cause the redemption of their shares outside of a deemed liquidation event. A deemed liquidation event would constitute a redemption event that may be outside of the Company's control.

The Series B Preferred Stock is redeemable upon a request by two-thirds of the requisite holders of the Company's Series B Preferred Stock in the event of a Deemed Liquidation Event, if the Company does not effect a dissolution of the Company within 90 days after such Deemed Liquidation Event, payable at a price equal to the cash or the value of the property, rights, or securities to be paid or distributed to holders pursuant to such Deemed Liquidation Event. Any redemption is deemed to be remote as of September 30, 2022, and the fair value of Series B Preferred Stock is deemed to be the price paid by the Series B preferred stockholders. Due to this redemption option, Series B Preferred Stock is recorded in mezzanine equity and is subject to subsequent measurement under the guidance provided under ASC 480. Pursuant to ASC 480, the Company has elected to recognize changes in redemption value immediately. However, based on the nature of Series B Preferred Stock, no subsequent measurement will be recognized until a Deemed Liquidation Event becomes probable. As of September 30, 2022, a Deemed Liquidation Event was not probable; as a result, the Series B Preferred Stock is valued at original issue price, less cost of issuance.

Note 8. Stock-Based Compensation

Equity Incentive Plan

On July 7, 2020, the board of directors adopted, and the Company's stockholders approved, the 2020 Equity Incentive Plan. The 2020 Equity Incentive Plan, as amended and restated (the "2020 Plan"), provides for the grant of incentive stock options to employees of the Company, and for the grant of non-statutory stock options, restricted stock awards ("RSAs"), restricted stock unit awards, and other forms of stock awards to employees, directors, and consultants of the Company (collectively, "stock-based awards").

The board of directors or a designated committee of the board of directors is responsible for the administration of the 2020 Plan and determines the term, exercise price, and vesting terms of each award. Under the terms of existing awards, all stock option grants expire ten years from grant date. Options may not have an exercise price less than 100% of the fair market value of the Company's common stock on the grant date and generally vest over a period of four years. In June 2022, the board of directors adopted, and the Company's stockholders approved, an amendment to the 2020 Plan to increase the authorized shares issuable to 37,205,875.

Total stock-based compensation expense reported in the statements of operations was allocated as follows (in thousands):

	Nine Months Ended	
	September 30,	
	2021	2022
Research and development	\$ 61	\$ 109
General and administrative	3	128
Total	<u>\$ 64</u>	<u>\$ 237</u>

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

Stock Options

As of December 31, 2021 and September 30, 2022, the Company had 18,839,273 and 37,205,875, respectively, shares of its common stock reserved under the 2020 Plan. As of December 31, 2021 and September 30, 2022, a total of 4,381,962 and 3,627,395, respectively, awards were available for issuance under the 2020 Plan.

The following is a summary of the Company's stock option activity under its 2020 Plan:

	Shares	Weighted-Average Exercise Price	Total Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Life (Years)
Options outstanding as of December 31, 2021	5,694,756	\$ 0.06	\$ 105	9.4
Options granted	8,568,718	\$ 0.10		
Options outstanding as of September 30, 2022	14,263,474	\$ 0.08	\$ 1,360	9.3
Options vested and exercisable as of September 30, 2022	2,925,384	\$ 0.06	\$ 352	8.6

As of September 30, 2022, the Company had \$1.4 million of unrecognized share-based compensation expense related to stock option awards that is expected to be recognized over a weighted-average period of approximately 3.4 years. For the nine months ended September 30, 2021 and 2022, the total fair value of options vested was \$15 thousand and \$90 thousand, respectively.

During the nine months ended September 30, 2021 and 2022, the Company granted stock options with a weighted-average grant date fair value of \$0.05 per share and \$0.15 per share, respectively. The following table presents the weighted-average assumptions used in the Black-Scholes option pricing model to determine the fair value of stock options granted during the following periods:

	September 30, 2021	September 30, 2022
Exercise price	\$ 0.06	\$ 0.10
Stock price on date of grant	\$ 0.05	\$ 0.15
Expected term (years)	5.90	6.08
Expected stock price volatility	92.13 %	91.90 %
Risk-free rate of interest	1.09 %	2.97 %
Expected dividend yield	— %	— %

Restricted Stock Awards

RSAs granted by the Company have varying vesting terms depending on the terms of the grant. Holders of unvested RSAs have the same rights as those of common stockholders including voting rights and non-forfeitable dividend rights. However, ownership of unvested RSAs cannot be transferred until vested. Upon a participant's termination of continuous service for any reason, any shares subject to RSAs held by the participant that have not vested as of such termination date may be forfeited to or repurchased by the Company.

The following is a summary of the Company's RSA activity under its 2020 Plan:

	Shares	Weighted-Average Grant Date Fair Value
Unvested as of December 31, 2021	3,645,834	\$ 0.0010
Granted	10,552,451	\$ 0.1624
Vested	(937,500)	\$ 0.0010
Unvested as of September 30, 2022	13,260,785	\$ 0.1294

Mineralys Therapeutics, Inc.
Notes to Condensed Financial Statements (Unaudited)

As of September 30, 2022, the Company had \$1.6 million of unrecognized share-based compensation expense related to RSAs that is expected to be recognized over a weighted-average period of approximately 3.3 years. For the nine months ended September 30, 2021 and 2022, the total fair value of RSAs vested was \$17 thousand and \$1 thousand, respectively.

Note 9. Income Taxes

The Company did not record a current or deferred income tax expense or benefit for the nine months ended September 30, 2021 and 2022, due to the Company's net loss and increases in its deferred tax asset valuation allowance.

Through and including _____, 2023, (the 25th day after the date of this prospectus), all dealers effecting transactions in the common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Shares



Common Stock

PROSPECTUS

BofA Securities

Evercore ISI

Stifel

Guggenheim Securities

Credit Suisse

Wells Fargo Securities

, 2022

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the SEC registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq Global Market listing fee.

	Amount paid or to be paid	
SEC registration fee	\$	*
FINRA filing fee		*
Nasdaq Global Market listing fee		*
Accountants' fees and expenses		*
Legal fees and expenses		*
Transfer Agent's fees and expenses		*
Printing and engraving expenses		*
Miscellaneous		*
Total expenses	\$	*

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, will provide that we will indemnify each person who was or is a party or threatened to be

made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation currently in effect provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding unregistered securities issued by us since May 31, 2019 to the date of this registration statement. Also included is the consideration received by us for such securities and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(a) Issuances of Securities

1. In May 2019, we issued an aggregate of 100,000 shares of common stock to our founder at purchase price of \$0.0001 per share for aggregate consideration of \$10. In July 2020, we effected a 500-for-one forward stock split which increased the number of these founding common shares to 50,000,000.
2. In May 2019, February 2020, June 2020, July 2020 and December 2020, we issued and sold to an investor convertible promissory notes in an aggregate principal amount of approximately \$4.0 million. The notes, including interest thereon, converted into 10,868,432 shares of our Series A convertible preferred stock in February 2021.

3. In February and April 2021 and January 2022 we issued an aggregate of 86,332,216 shares of Series A convertible preferred stock to investors at a purchase price of \$0.477 per share, for aggregate consideration of approximately \$40.0 million, including conversion of the convertible promissory notes referred to above.
4. In June 2022 we issued an aggregate of 136,510,868 shares of Series B convertible preferred stock to investors at a purchase price of \$0.8644 per share, for aggregate consideration of approximately \$118.0 million.

No underwriters were involved in the foregoing issuances of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder, for transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All holders of securities described above represented to us in connection with their purchase or issuance that they were accredited investors and were acquiring the securities for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The holders received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

(b) Grants of Restricted Stock and Stock Options

1. From July 2020 through July 2022, we granted an aggregate of 19,315,006 shares of our restricted common stock under our existing 2020 equity incentive plan to certain of our employees and consultants in connection with services provided to us by such persons.
2. From March 2021 through the date of this registration statement, we granted stock options to purchase an aggregate of 14,263,474 shares of our common stock at a weighted-average exercise price of \$0.08 per share, to certain of our employees, consultants and directors in connection with services provided to us by such persons. None of these options have been exercised and none have been cancelled through the date of this registration statement.

The stock options and common stock issuable upon exercise of such options as described in this section (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees and directors, in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 701 promulgated under the Securities Act or the exemption set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of capital stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

Item 16. Exhibits and Financial Statement Schedules.

- (c) **Exhibits.** See Exhibit Index attached to this registration statement, which is incorporated by reference herein.
- (d) **Financial Statement Schedules.** Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters, at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Exhibit Index

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement
3.1**	Amended and Restated Certificate of Incorporation, as amended (currently in effect)
3.2**	Bylaws (currently in effect)
3.3*	Form of Amended and Restated Certificate of Incorporation (to be effective immediately prior to the closing of this offering)
3.4*	Form of Amended and Restated Bylaws (to be effective immediately prior to the closing of this offering)
4.1*	Specimen stock certificate evidencing the shares of common stock
4.2**	Amended and Restated Investors' Rights Agreement, dated June 1, 2022, by and among the Registrant and certain of its stockholders
5.1*	Opinion of Latham & Watkins LLP
10.1#**	Mineralys Therapeutics, Inc. Amended and Restated 2020 Equity Incentive Plan and form of stock option agreement and form of restricted stock agreement thereunder
10.2#*	Mineralys Therapeutics, Inc. 2023 Incentive Award Plan and form of stock option agreement and form of restricted stock unit agreement thereunder
10.3#*	Mineralys Therapeutics, Inc. 2023 Employee Stock Purchase Plan
10.4#*	Non-Employee Director Compensation Policy
10.5#†**	Offer Letter Agreement, dated October 9, 2020, by and between Jon Congleton and the Registrant
10.6#†**	Offer Letter Agreement, dated January 8, 2021, by and between David Rodman, M.D. and the Registrant
10.7#†**	Offer Letter Agreement, dated March 8, 2022, by and between Adam Levy and the Registrant
10.8#*	Form of Indemnification Agreement for Directors and Officers
10.9†**	License Agreement, dated July 9, 2020, between the Registrant and Mitsubishi Tanabe Pharmaceutical Corporation
23.1*	Consent of Ernst & Young LLP, independent registered public accounting firm
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (included on signature page)
107*	Filing Fee Table

* To be filed by amendment.

** Previously submitted.

Indicates management contract or compensatory plan.

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to Item 601 of Regulation S-K because it is both not material and is the type that the registrant treats as private or confidential.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Radnor, State of Pennsylvania, on this _____ day of _____, 2022.

MINERALYS THERAPEUTICS, INC.

By: _____
Jon Congleton
Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Mineralys Therapeutics, Inc., hereby severally constitute and appoint Jon Congleton and Adam Levy, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
_____ Jon Congleton	Chief Executive Officer (principal executive officer)	, 2022
_____ Adam Levy	Chief Financial Officer (principal financial and accounting officer)	, 2022
_____ Brian Taylor Slingsby, M.D., Ph.D., M.P.H.	Chairman	, 2022
_____ Srinivas Akkaraju, M.D., Ph.D.	Director	, 2022
_____ Alexander Asam, Ph.D.	Director	, 2022
_____ Derek DiRocco, Ph.D.	Director	, 2022
_____ Olivier Litzka, Ph.D.	Director	, 2022
_____ Takeshi Takahashi, M.B.A.	Director	, 2022