

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from- to
Commission File Number 001-38293

SCPHARMACEUTICALS INC.

(Exact name of registrant as specified in its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)
2400 District Avenue, Suite 310
Burlington, Massachusetts
(Address of principal executive offices)

46-5184075
(I.R.S. Employer
Identification No.)

01803
(Zip Code)

Registrant's telephone number, including area code: (617) 517-0730

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value \$0.0001	SCPH	The Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act:

None
(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES NO

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (\$232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES NO

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

The aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates of the registrant computed by reference to the price at which the common equity was last sold as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2021) was \$94,066,126. The number of shares of registrant's Common Stock outstanding as of March 21, 2022 was 27,371,488.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents (or parts thereof) are incorporated by reference into the following parts of this Form 10-K: Certain information required in Part III of this Annual Report on Form 10-K is incorporated from the registrant's Definitive Proxy Statement for the 2022 Annual Meeting of Shareholders.

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PART I

Summary of the Material and Other Risks Associated with Our Business

Our business is subject to numerous material and other risks and uncertainties that you should be aware of in evaluating our business. These risks include, but are not limited to, the following:

- We are heavily dependent on the success of our product candidates and, in particular, our lead product candidate, FUROSCIX®. We cannot give any assurance that we will receive regulatory approval for this product candidate or any other product candidates, which is necessary before they can be commercialized.
- If we are not able to obtain required regulatory approvals, we will not be able to commercialize FUROSCIX, and our ability to generate revenue will be materially impaired.
- If we fail to produce FUROSCIX in the volumes that we require on a timely basis, we may face delays in our commercialization efforts, if approved.
- We are utilizing the 505(b)(2) pathway for the regulatory approval of FUROSCIX, and a New Drug Application (“NDA”) submitted under Section 505(b)(2) may subject us to a patent infringement lawsuit that would delay or prevent the review or approval of FUROSCIX.
- The commercial success of FUROSCIX and any other product candidates, if approved, depends upon attaining market acceptance by hospital networks, physicians, patients, third-party payers and the medical community.
- If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell FUROSCIX, if approved, we may be unable to generate any revenue.
- We have a limited operating history and no history of commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future success.
- We have a history of significant operating losses and expect to incur significant and increasing losses for the foreseeable future; we may never achieve or maintain profitability.
- We may need additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.
- Our success depends on our ability to protect our intellectual property and proprietary technology, as well as the ability of our collaborators to protect their intellectual property and proprietary technology.
- If we fail to comply with our obligations under our existing and any future intellectual property license with third parties, we could lose license rights that are important to our business.
- We may be subject to product liability lawsuits related to our product candidates, if approved, which could divert our resources, result in substantial liabilities and reduce the commercial potential of our product candidates.
- The ongoing and evolving COVID-19 pandemic may materially and adversely affect our business and our financial results, including the activities required for the resubmission of the FUROSCIX NDA and our intended commercial launch of FUROSCIX, if approved.
- Our failure to successfully identify, develop and market additional product candidates could impair our ability to grow.
- We depend heavily on our executive officers, directors and principal consultants and the loss of their services would materially harm our business.

The material and other risks summarized above should be read together with the text of the full risk factors below and in the other information set forth in this Annual Report, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC. If any such material and other risks and uncertainties actually occur, our business, prospects, financial condition and results of operations could be materially and adversely affected. The risks summarized above or described in full below are not the only risks that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial may also materially adversely affect our business, prospects, financial condition and results of operations.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, statements about:

- the completion of activities required for the resubmission of the FUROSCIX® NDA with West's proprietary on-body infusor on our current projected timelines and subsequent review and potential approval by the U.S. Food and Drug Administration, or FDA, including any delays in submission or approval related to the ability of our third-party vendors to perform adequately and COVID-19;
- the likelihood of approval by the FDA of our regulatory filings for FUROSCIX using our next generation delivery device;
- the timing or likelihood of other regulatory filings and approvals;
- the outcome of any bridging studies, clinical trials or human factors studies that may be required by the FDA for approval of any of our product candidates;
- the commercialization of FUROSCIX, if approved, including launch preparation, ability to interact with physicians, patient access to FUROSCIX, manufacturing and supply chain matters, including any delays related to COVID-19 in our future planned Phase 4 studies of FUROSCIX incorporating West's proprietary on-body infusor to support the pricing and access to our product candidates;
- the pricing, reimbursement or pharmacoeconomic benefit of FUROSCIX or any other of our product candidates, if approved;
- the rate and degree of market acceptance and clinical utility of FUROSCIX or any other of our product candidates for which we receive marketing approval;
- the initiation, timing, progress and results of our research and development programs, including future preclinical and clinical studies;
- our ability to advance any other product candidates into, and successfully complete, clinical studies and obtain regulatory approval for them;
- our ability to identify additional product candidates;
- the implementation of our strategic plans for our business, product candidates and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering FUROSCIX or any other of our product candidates and technology;
- estimates of our expenses, future revenues, capital requirements and our needs for additional financing;
- our ability to manufacture, or the ability of third parties to deliver, sufficient quantities of supplies, components and drug product for commercialization of FUROSCIX or any other of our product candidates including any delays related to COVID-19;
- our ability to maintain and establish collaborations;
- our future financial performance;
- developments relating to our competitors and our industry, including the impact of government regulation; and
- other risks and uncertainties, including those listed under the caption "Risk Factors."

In some cases, forward-looking statements can be identified by terminology such as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may

cause actual results to differ materially from current expectations include, among other things, those listed under the section entitled “Risk Factors” and elsewhere in this Annual Report on Form 10-K. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. While we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Annual Report on Form 10-K.

Item 1. Business.

OVERVIEW

We are a pharmaceutical company focused on developing and commercializing products that have the potential to optimize the delivery of infused therapies, advance patient care and reduce healthcare costs. Our strategy is designed to enable the subcutaneous administration of therapies that have previously been limited to intravenous, or IV, delivery. By moving delivery away from the high-cost healthcare settings typically required for IV administration, we believe our technology has the potential to reduce overall healthcare costs and advance the quality and convenience of care. Our lead product candidate, FUROSCIX, consists of our novel formulation of furosemide delivered via an on-body infusor and is under development for treatment of congestion in patients with worsening heart failure who display reduced responsiveness to oral diuretics and do not require hospitalization.

We resubmitted our new drug application, or NDA, for FUROSCIX, with the U.S. Food and Drug Administration, or FDA, on June 30, 2020. The resubmission was a response to a Complete Response Letter, or CRL, from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA prior to our June 30, 2020 resubmission, we decided to transition to our next generation device. The resubmission incorporated our next generation device which is being developed through a partnership with West Pharmaceutical Services, Inc., or West, using its proprietary on-body infusor.

On July 23, 2020, the FDA accepted the resubmission of our NDA and we were given a Prescription Drug User Fee Act, or PDUFA, target action date of December 30, 2020; however, on December 3, 2020, we received a second CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. No clinical deficiencies were noted. On January 28, 2021, we had a Type A meeting with the FDA to discuss the issues described in the CRL and steps required for the resubmission of the FUROSCIX NDA. On June 2, 2021, we had a Type C meeting with the FDA regarding the requirements for resubmission of the FUROSCIX NDA. Based on the guidance we received during these meetings and subsequently contained within the meeting minutes, we conducted the required bench testing for the West proprietary on-body infusor. We anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities. We recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022.

Heart failure affects 6.5 million adults in the United States and this population is expected to grow to greater than 8.0 million by 2030. Our proprietary formulation of furosemide administered subcutaneously via the West proprietary on-body infusor, which we refer to together as FUROSCIX, is intended to help alleviate the signs and symptoms associated with congestion due to fluid retention in heart failure patients, such as fatigue and shortness of breath. FUROSCIX is designed to offer alternative outpatient intervention for heart failure patients who display reduced responsiveness to oral diuretics in non-emergency situations and do not require hospitalization.

We believe FUROSCIX, if approved by the FDA, would allow heart failure patients to receive IV-strength diuresis outside the high-cost hospital setting. Prevention of hospital admission and reduced readmission rates would result in reducing the estimated 15 million days patients with heart failure spend in the hospital each year. By decreasing the number of admissions and readmissions to hospitals, we believe we can drive significant cost savings to payers and hospitals.

We are leveraging our subcutaneous formulation expertise to develop additional product candidates that we believe can significantly decrease the cost of treatment by moving treatment away from the hospital setting and can improve patient quality of life by eliminating the need for IV catheters. In this area, we have conducted

additional development work to deliver ceftriaxone, a parenteral cephalosporin that is typically administered intravenously or intramuscularly. Based on IMS Health data, each year in the United States, there are 15 million outpatient days of ceftriaxone therapy to treat various types of infections, including pneumonia, urinary tract infections, and Lyme Disease. The current outpatient treatment option for these patients, Outpatient Parenteral Antimicrobial Therapy requires the placement of a long-term venous access device, known as a peripherally inserted central catheter, or PICC, and coordination of home infusion or office-based infusion services for patients to receive antibiotics outside of the hospital, which places significant burdens on the patients. Subcutaneous administration of ceftriaxone represents an opportunity to reduce costs to the overall health care system and improve the quality of care by reducing the complications and serious health risks associated with IV catheters and increasing patient mobility and convenience. We have conducted a pharmacokinetic study with subcutaneous ceftriaxone and intend to conduct additional clinical trials to advance its development.

Beyond furosemide and ceftriaxone, we aim to leverage our subcutaneous formulation expertise to develop and seek approval of additional drug candidates. We intend to conduct feasibility work on additional product candidates.

OUR PLATFORM AND OTHER PIPELINE PROGRAMS

FUROSCIX to Treat Congestion in Patients with Heart Failure

Heart failure is a chronic disease resulting from impairment of the heart's ability to pump blood and is one of the most common causes of hospital admissions in patients over 65 with at least 1-2 million hospitalizations in the United States annually. Patients with heart failure are prone to retain sodium and water in their blood stream and, as this accumulates, it can distribute to tissues. This extra fluid settling in the lungs, ankles and abdomen can cause symptoms ranging from weight gain, mild swelling and shortness of breath while walking to more severe symptoms, such as weakness, severe fatigue and difficulty breathing when sitting or lying down. Congestion is the most common cause of hospitalization for patients with heart failure.

Oral loop diuretics, such as furosemide, are the mainstay for the management and prevention of congestion in patients with heart failure. However, during periods of worsening congestion in heart failure, the bioavailability of oral furosemide is reduced and becomes highly variable. To overcome the limitation of oral furosemide in this setting, two strategies are typically employed. First, the furosemide dose is typically doubled, and/or additional oral diuretics (thiazide diuretics) are incorporated to attempt to overcome the blunted pharmacological response to these agents. Second, if this fails, clinicians often rely on giving IV diuretics, either in the hospital, an outpatient heart failure clinic or an infusion center, if available. Approximately 800,000 patients with symptoms of heart failure are admitted to the hospital by an emergency physician annually and we believe 50% of these admissions may be potentially avoided if patients could receive timely, effective treatment for symptomatic congestion outside of the hospital setting.

In addition to potentially unnecessary hospitalizations, it has been estimated that up to 50% of patients hospitalized for an episode of acute decompensated heart failure are discharged on oral diuretics with persistent signs and symptoms of congestion. The presence of congestion at discharge has been associated with an increased risk of 30-day all-cause mortality and rehospitalization for heart failure. The American College of Cardiology Foundation and the American Heart Association Task Force on Practice guidelines recommend that patients hospitalized for heart failure have a post discharge follow up visit within 14 days of hospital discharge. Since symptoms of congestion generally worsen over several days or weeks, patients with heart failure could receive FUROSCIX at the first signs and symptoms of congestion, when the response to oral diuretics is not adequate.

Therefore, FUROSCIX may potentially offer an alternative outpatient route of administration of furosemide for heart failure patients to alleviate the signs and symptoms associated with congestion when responsiveness to oral diuretics is reduced and hospitalization is not indicated in order to potentially avoid unnecessary hospitalizations.

FUROSCIX is our novel formulation of furosemide contained in a pre-filled, Crystal Zenith® cartridge and self-administered subcutaneously via a single-use, disposable and wearable on-body delivery system. The user inserts the pre-filled cartridge into the wearable device, secures it to the abdomen via a medical-grade adhesive, and a subcutaneous infusion of FUROSCIX is administered through a pre-programmed, biphasic delivery profile with 30 mg administered over the first hour, followed by 12.5 mg per hour for the subsequent 4 hours (a total dose of 80 mg (10 mL) over 5 hours).

We believe that, if approved, FUROSCIX has the potential to provide a safe and effective solution that will enable IV-strength diuresis outside of the high-cost hospital setting. We believe FUROSCIX can potentially reduce the

estimated 15 million days per year that heart failure patients spend in the hospital and thus reduce overall health care costs by decreasing both admissions and readmissions.

Subcutaneous FUROSCIX has the potential to:

- *Reduce hospital admission rates:* Since symptoms of congestion generally worsen over several days or weeks, there is a window of opportunity to intervene. We believe FUROSCIX, if approved, could in certain instances avoid a hospitalization by providing IV-strength diuresis in an outpatient setting such as the physician's office, a heart failure clinic or at home. It is estimated that 90% of patients presenting to the emergency department with worsening heart failure are admitted to the hospital and approximately 50% of those patients could potentially be safely discharged after demonstrating effective diuresis with parenteral therapy during a brief period of observation.
- *Reduce patient readmission:* We believe FUROSCIX, if approved, could reduce the incidence of readmission for heart failure patients by providing IV-strength diuresis in the home post-hospital discharge. It is estimated that 30-50% of patients that are hospitalized for acute decompensated heart failure that are transitioned to oral furosemide prior to being discharged from the hospital have persistent symptoms of congestion at discharge. Persistent congestion may reduce the absorption of oral furosemide reducing the diuretic effect. As a result, patients are often readmitted to the hospital to receive IV furosemide. We believe FUROSCIX can break this cycle by providing IV-strength diuresis to patients shortly after discharge to reduce the rate of readmissions for decompensated heart failure.

If approved, FUROSCIX may potentially offer an outpatient therapeutic option to deliver IV-strength furosemide to potentially avoid the need for unnecessary, expensive hospitalizations which could improve patients' quality of life with minimal interruption of daily living.

Clinical Development of FUROSCIX

We are developing FUROSCIX, a drug-device combination product, pursuant to Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act in which we are relying on the FDA's finding of safety and efficacy for the Listed Drug Furosemide (Injection, USP, 10 mg/mL; NDA 18667; Hospira, Inc.), which is indicated for intravenous (IV) and intramuscular (IM) injection for the treatment of edema in adult patients with congestive heart failure, cirrhosis of the liver and renal disease, including nephrotic syndrome. Currently, there are no FDA-approved furosemide products for subcutaneous administration which could provide an alternative route of administration that could be used in the outpatient setting when the response to oral diuretics is not adequate.

FUROSCIX (Furosemide Injection, 80 mg/10 mL) is a novel, pH neutral formulation of furosemide being developed for administration via a subcutaneous infusion using a proprietary, wearable, pre-programmed on-body drug delivery system. The currently available furosemide injection products are alkaline, with a pH of 8.0 – 9.3. Subcutaneous administration of IV/IM furosemide, USP formulation has been associated with local skin reactions, some severe, requiring discontinuation of treatment and local treatment of the complication which has been attributed to the alkaline pH of the furosemide formulation, volume of fluid administered and the rapid injection. There are currently no furosemide products approved by the FDA for subcutaneous administration.

We resubmitted our new drug application, or NDA, for FUROSCIX, with the FDA, on June 30, 2020. On July 23, 2020, the FDA accepted the resubmission of our NDA and we were given a PDUFA target action date of December 30, 2020; however, on December 3, 2020, we received a second CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. No clinical deficiencies were noted. On January 28, 2021, we had a Type A meeting with the FDA to discuss the issues described in the CRL and steps required for the resubmission of the FUROSCIX NDA. On June 2, 2021, we had a Type C meeting with the FDA regarding the requirements for resubmission of the FUROSCIX NDA. Based on the guidance we received during these meetings and subsequently contained within the meeting minutes, we conducted the required bench testing for the West proprietary on-body infusor. We anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities. We recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022.

Pharmacokinetic/Pharmacodynamic (PK/PD) Study

We conducted a pivotal, randomized, open-label crossover study from April to September 2015 to assess the relative bioavailability of FUROSCIX in 17 patients with heart failure. In this study, FUROSCIX was delivered subcutaneously via the B. Braun Perfusor Space Infusion Pump. This study also evaluated diuresis and the urinary sodium excretion over eight hours and 24 hours post-dosing as the pharmacodynamic endpoints.

Treatment arms

In this study, the reference treatment was IV furosemide with two bolus injections of 40 mg dosed over two minutes, two hours apart. Our test treatment was FUROSCIX with 80 mg infused subcutaneously, with 30 mg over the first hour followed by 12.5 mg per hour over the subsequent four hours.

Comparative pharmacokinetic results

This study demonstrated bioequivalence in the concentration of drug delivered over time based upon the area under the curve, or AUC, between our subcutaneous formulation of furosemide and IV furosemide. Although the maximum concentration, or C_{max} , of furosemide achieved was four-fold higher with IV injection compared to subcutaneous infusion, the bioavailability of subcutaneous infusion relative to intravenous injection was 99.6%, with a 90% confidence interval of 94.8% to 104.8%, thus meeting the FDA's defined bioequivalence criteria limit of 80% to 125%. We believe that the difference in C_{max} between IV injection and subcutaneous furosemide is attributable to the two bolus IV injections administered at the initiation of IV therapy. Nevertheless, the 5-hour infusion of FUROSCIX resulted in nearly complete bioavailability compared to two bolus IV injections of furosemide.

Comparative pharmacodynamic results

Total mean urine outputs for subcutaneous versus IV administration were 102% (2654 mL vs 2641 mL; $p = 0.83$) and 103% (3630 mL vs 3538 mL; $p = 0.71$) at 8 and 24 hours, respectively. Total mean urine sodium excretion for subcutaneous versus IV administration were 97.3% (284 mmol vs 292 mmol; $p = 0.78$) and 97.4% (341 mmol vs 350 mmol; $p = 0.80$), at 8 and 24 hours, respectively. The total urine sodium excretion and urine output were comparable between our subcutaneous formulation of furosemide and IV furosemide.

Adhesive Validation Study

An open label, non-randomized, single-site study was conducted in healthy volunteers to evaluate the effectiveness and local skin tolerability of the 3M 9907W medical tape, the component of the FUROSCIX On-Body Infusor that adheres to the skin of the abdomen to deliver a subcutaneous infusion. After preparation, the device was attached to the skin of the abdomen and a simulated infusion began. At the end of the 5 and 6-hour assessment time points, the devices were $\geq 50\%$ adhered in 100% of the subjects and at both time points, the orange safety latch was not visible on any of the devices. The 3M 9907W medical tape was effective in maintaining the adhesion of the on-body infusor to the skin of the abdomen during a 6-hour wear time and no subjects had a complete device dislodgement of the on-body infusor for FUROSCIX.

Following a 6-hour wear time, 63.2% of the subjects exhibited minimal erythema or no evidence of skin irritation. For those subjects with greater than minimal erythema, these effects were transient: 89.5% exhibited minimal erythema or no evidence of skin irritation when assessed at the 1-hour post device removal. Pain and discomfort were assessed immediately after device removal. Most subjects (60.5%) reported scores of 0 (no pain) or 1 on an 11-point pain scale. The majority of subjects (84.2%) reported no discomfort or mild discomfort upon removal of the device.

The 3M 9907W medical tape was able to maintain adhesion of the FUROSCIX On-Body Infusor device for the duration of the 6-hour wear time and was generally well tolerated.

Human Factors Summary

We conducted a human factors validation study for the next generation device from October 21, 2019 to November 14, 2019. The study included 60 subjects made up of 30 heart failure patients, 15 caregivers and 15 healthcare practitioners. Half of the patients were trained, while the remaining patients, all caregivers and all HCPs were untrained.

Participants performed extremely well across all user groups and training conditions. All participants but one successfully setup and started the infusion without experiencing any use errors related to critical tasks which would delay dosing or harm the patient.

All participants successfully noticed, identified, and articulated how to respond to an alarm experienced during an infusion without any use errors.

All participants successfully allowed the infusion to carry out, noticed when it completed and performed all steps required to remove and dispose of the on-body infusor without any use errors.

Overall, the study, which was designed to measure eight observational use metrics, across 900 tasks including setup, starting of the infusion, responding to the on-body infusor alarm and finishing the procedure after the infusion demonstrated a user success rate of 99%.

Participants also performed well during the knowledge and reading comprehension tasks. Thirty-seven knowledge and comprehension tasks related to critical information were evaluated. Overall, across all 2,220 knowledge and comprehension tasks, participants experienced a user success rate of over 99.5%.

Based on the results from the human factors program, we believe the following:

- The FUROSCIX On-Body Infusor and Instructions for Use (IFU) have been successfully validated with the intended user populations (congestive heart failure (CHF) patients, family caregivers, and HCPs) and use cases.
- The validation results demonstrate that the FUROSCIX On-Body Infusor and IFU can be safely and effectively used and that performance of critical tasks will not result in patterns of preventable use errors.
- After two suggested minor edits to the IFU, all use-related risks for the commercial product will either (a) have been eliminated or (b) consist of acceptable residual risks that cannot be mitigated.

FREEDOM-HF - Furoscix Real-World Evaluation for Decreasing Hospital Admissions in Heart Failure

FREEDOM-HF was a health economic study designed to support the commercial reimbursement of FUROSCIX, if approved. Further, this multicenter, prospective adaptive clinical trial was designed to evaluate differences in heart failure and overall costs between subjects receiving FUROSCIX outside the hospital and patients receiving intravenous furosemide in the hospital setting for 30-days after being discharged from the emergency department. Differences in costs were determined from a propensity-matched control arm derived from Truven Health Analytics MarketScan databases. The study was designed to enroll up to 75 subjects in the FUROSCIX cohort to detect a statistically significant difference in 30-day overall and heart-failure related costs. The study began enrollment in the fourth quarter of 2020 and completed enrollment in May 2021.

Based on the results from a planned, prespecified interim analysis conducted to confirm the final sample size, and following input from statisticians, principal investigators, payer advisors and Health Economics and Outcomes Research experts, enrollment was closed on May 17, 2021, prior to the enrollment target of 34 patients. This decision was made due to the statistically significant reduction observed in 30-day heart failure-related costs in patients who received FUROSCIX in the interim analysis. The final analysis included 24 subjects treated with FUROSCIX and 66 matched comparators based on seven variables associated with hospitalization. On July 13, 2021, we announced preliminary top-line results from FREEDOM-HF, demonstrating that average 30-day heart failure-related costs were reduced by \$17,753 per study subject in the FUROSCIX arm compared to historically matched comparators ($p < 0.0001$). In September 2021, we announced additional results from FREEDOM-HF, demonstrating that average 30-day total healthcare costs were reduced by \$30,568 per study subject in the FUROSCIX arm compared to historically matched comparators ($p < 0.0001$). Since the price for FUROSCIX has not been established, the difference in costs does not include the cost of FUROSCIX. These results support our hypothesis that treating heart failure patients presenting to the emergency department with worsening congestion with FUROSCIX outside of the hospital setting has the potential to dramatically reduce the significant costs associated with hospital admissions and readmissions.

We conducted an analysis of additional secondary endpoints in FREEDOM-HF which provided additional insights into the clinical effectiveness of FUROSCIX. In this analysis, it was determined that patients who received FUROSCIX had a median reduction of heart failure peptide biomarkers from study entry to first visit, and to last

visit, of 42.3% and 28%, respectively ($p \leq 0.01$). In addition, patients who received FUROSCIX had a 12.8-point improvement in the Kansas City Cardiomyopathy Questionnaire (KCCQ-12) Summary Score 30 days after study entry.

These results have been presented at the Heart Failure Society of America Annual meeting in September 2021 in Denver, Colorado and at the Technology and Heart Failure Therapeutics Conference in February 2022 in New York, NY.

AT HOME-HF PILOT - Avoiding Treatment in the Hospital with Furoscix for the Management of Congestion in HearFailure – A Pilot Study

AT-HOME-HF PILOT is a multicenter, randomized pilot clinical trial designed to evaluate the clinical outcomes and safety of FUROSCIX compared to a “treatment as usual” approach in patients presenting to a heart failure clinic with chronic heart failure and fluid overload requiring augmented diuretic therapy. The primary endpoint is the improvement in a composite/combined morbidity/mortality endpoint consisting of (1) cardiovascular death, (2) heart failure hospitalization, (3) urgent emergency department/clinic visit for worsening heart failure (defined as IV diuretics, augmentation of, or new administration of, metolazone) and (4) NT-proBNP at 30 days using the Finkelstein Schoenfeld method. We anticipate a sample size of 51 subjects (randomized 2:1) could provide additional data on the effectiveness and safety of FUROSCIX and inform a potential clinical trial. The study began enrollment in the second quarter of 2021 and we are expecting to complete enrollment and have data available in the first half of 2022.

Investigator Sponsored Studies

We intend to support investigator sponsored studies post-approval and to initiate Phase 4 studies with FUROSCIX, incorporating West's proprietary on-body infusor, to evaluate the efficacy, safety, patient acceptance and health economic outcomes.

Commercialization

If we successfully obtain regulatory approval, we plan to commercialize FUROSCIX in the United States by building and utilizing our own commercial infrastructure. We currently intend to focus our commercial efforts on the United States market, which we believe represents the largest market opportunity for FUROSCIX. In addition, we plan to seek collaborations with third-party partners outside of the United States to distribute our products in foreign markets, if approved by the relevant foreign regulatory authorities.

If approved, we believe that we can effectively commercialize FUROSCIX in the United States with an initial specialty sales force of approximately 35-40 field-based sales representatives. We intend to initially pursue a highly-concentrated target market, which consists of approximately 400 hospitals, associated clinics and office-based practices that, collectively account for approximately 40% of all IV furosemide administered to heart failure patients based on current IMS Drug Distribution Data. We also plan to target the top ten Medicare Part D plans, which cover 80% of Medicare Part D patients. We conducted payer research on 14 payers, representing 22 to 29 million total Medicare lives. We found that reducing readmissions and increasing patient comfort were ranked as important potential attributes of FUROSCIX by the health plans and pharmacy benefit managers that were surveyed.

We intend to build a highly concentrated commercial infrastructure focused on distribution, promotion and customer support to healthcare providers in our key hospital targets and in office-based practices. Our target call points within these hospitals and practices will include heart failure specialists, cardiologists, emergency room doctors and heart failure nurse practitioners. To date, our market research with 309 healthcare professionals has indicated that 93% of our target prescribers would adopt FUROSCIX, if approved, with 80% intending to adopt FUROSCIX in the first six months of product availability. Furthermore, within the prescriber group of heart failure specialists, cardiologists and nurse practitioners that we intend to target at launch, the intent to adopt is 93%, 96% and 94%, respectively, and 89%, 88% and 86%, respectively, of those prescribers intend to adopt in the first six months of product availability. Based on our market research, healthcare professionals perceive the top potential advantages of FUROSCIX, if approved, as the ability to treat in the home setting, prevention of hospitalization, and avoidance of IV placement, while the lowest perceived barriers to adoption identified in the survey were the preference to monitor in a hospital setting, sufficiency of current medications and hospital guidelines or protocols.

In addition, based on a last two patient exercise conducted in our quantitative market research with healthcare professionals, when given the option to change their prior treatment choice to FUROSCIX, if approved, 65% of healthcare practitioners in a clinic setting and 40% in a hospital setting responded that they would prescribe our product candidate. We expect to supplement our sales force with representatives in the medical science, nursing and reimbursement fields to support the proper training and utilization of FUROSCIX.

As part of our commercialization strategy, we plan to educate hospitals, healthcare practitioners, patients and caregivers of the benefits of FUROSCIX and its proper use. We plan to work with national associations, such as the Heart Failure Society of America and the American Association of Heart Failure Nurses, hospital networks and individual hospitals to update treatment and issue guidelines to include subcutaneous furosemide outpatient treatment plans. These guidelines are intended to provide information to hospitals and healthcare practitioners regarding treatment of outpatient heart failure patients with subcutaneous furosemide. Patients with heart failure could receive FUROSCIX at the initial worsening signs and symptoms when the response to oral diuretics is not adequate. In addition, patients could receive FUROSCIX after discharge, if they still are exhibiting some signs and symptoms of congestion despite their oral diuretic regimen. We expect to package FUROSCIX, if approved, as individual, single use only on-body infusor kits. In April 2016, we held a meeting with the Centers for Medicare and Medicaid Services, or CMS, at which CMS stated that coverage and reimbursement of FUROSCIX may be available under Medicare Part D as a transition of care drug.

By educating patients on the proper use of FUROSCIX shortly after discharge followed by a face-to-face visit, health care professionals can ensure proper training, initiate treatment at the point of care, and ensure that patients can receive additional days of treatment in the home setting.

Our Pipeline Programs

Beyond our initial focus on heart failure, our strategy is to identify and develop additional product candidates where, if approved, could provide effective and convenient subcutaneous therapy that may benefit patients, caregivers and payers.

- *FUROSCIX*: FUROSCIX is a proprietary furosemide formulation that is buffered to a neutral pH to enable subcutaneous administration via a proprietary wearable, pre-programmed on-body delivery system, based on the West proprietary on-body infusor. It is under development for the treatment of congestion due to volume overload in patients with worsening heart failure who display reduced responsiveness to oral diuretics and do not require hospitalization. We recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022.
- *scCeftriaxone*: We have filed an investigational new drug application, or IND, for scCeftriaxone, an antibiotic currently used intravenously for the treatment of infections caused by gram-positive and gram-negative organisms. To date, we have completed a PK study for scCeftriaxone. We are currently evaluating a suitable on-body delivery system to administer scCeftriaxone.
- *scCarbapenem*: We have completed several IND-enabling studies for our scCarbapenem program, an antibiotic currently used intravenously for the treatment of infections caused by gram-negative organisms.

Ceftriaxone

Many patients with an infection requiring IV antibiotics are admitted to the hospital, and a portion of these patients will require subsequent outpatient treatment with IV administration requiring insertion of a PICC line catheter. Ceftriaxone is a parenteral antibiotic commonly used to treat various types of infections, including pneumonia, bone and joint infections, blood stream infections, urinary tract infections and Lyme Disease. According to 2015 data from Arlington Medical Resources, ceftriaxone is the second most utilized antibiotic in the hospital setting and second most utilized IV antibiotic at hospital discharge. Based on Option Care data from August 2016, ceftriaxone represents the largest segment of antibiotics prescribed in the outpatient setting, accounting for 19% of all outpatient prescriptions. Each year, there are approximately 15 million outpatient days of ceftriaxone therapy in the United States based on IMS Health data, with 50% of outpatient ceftriaxone administered to Medicare patients who do not have coverage for home infusion services and frequently must drive to a hospital clinic, emergency room or physician's office or be admitted to a skilled nursing facility or hospital to receive IV antibiotics. Subcutaneous antibiotics, including ceftriaxone, have the potential to reduce the length of hospital stay

by facilitating transition of care and eliminating the risks of complications from long term IV catheters. Such antibiotics could also enhance convenience and independence of patients and caregivers and potentially reduce the economic burden to payers, particularly in Medicare, by reducing payments for outpatient infusion services.

After the submission of the IND we conducted a randomized, partially blinded crossover study of 18 patients to evaluate the PK and bioavailability of a commercial formulation of ceftriaxone administered subcutaneously as compared to IV administration. In this study, we observed that the bioavailability of subcutaneous ceftriaxone was 108% of that of IV ceftriaxone. In a PD model based on subcutaneous pharmacokinetics observed in this study, the T>MIC for the first 24 hours for the ceftriaxone 1-gram subcutaneous infusion was observed to be not inferior to the 1-gram IV infusion (98.5% vs 100%). The most common adverse event observed with subcutaneous ceftriaxone administration was pain, with a median pain score of two on a scale of zero to ten (with zero being no pain and ten being the worst possible pain). There were no serious adverse events reported in this study.

We intend to identify a suitable on-body delivery system for the administration of ceftriaxone subcutaneously, conduct additional studies to evaluate optimal delivery for ceftriaxone and to evaluate the skin safety of subcutaneous administration of ceftriaxone.

Additional Product Programs

We are leveraging our know-how for use in other clinical settings where subcutaneous delivery can improve IV treatments to develop a suite of product candidates that, like FUROSCIX, we believe can decrease the cost of treatment by moving treatment out of the hospital setting and eliminating the need for IV catheters. We expect to pursue the development of a subcutaneous carbapenem to treat infections caused by gram-negative infections and have completed initial feasibility work on a potential candidate. We also intend to identify other opportunities where subcutaneous delivery can improve patient treatment and reduce healthcare costs. We intend to evaluate market criteria to systematically choose potential product programs for our pipeline. We plan to look for product candidates that we believe allow us to clearly demonstrate value to patients and the healthcare system and that have large market potential and a concentrated specialty physician prescribing base. We expect to leverage our FUROSCIX sales force to promote additional products that we develop and commercialize.

Our FUROSCIX On-Body Infusor

The FUROSCIX On-Body Infusor is a drug-device combination product consisting of FUROSCIX (furosemide injection, 80 mg per 10 mL), a novel, pH neutral furosemide formulation optimized for subcutaneous administration and contained in a prefilled, Crystal Zenith® cartridge, and a proprietary wearable, pre-programmed on-body delivery system, the FUROSCIX On-Body Infusor, based on West's proprietary on-body infusor. The FUROSCIX On-Body Infusor is applied to the abdomen via a medical grade adhesive and delivers a subcutaneous infusion of FUROSCIX through a pre-programmed, biphasic delivery profile over 5 hours.

MANUFACTURE OF OUR PRODUCT CANDIDATES

We use a network of qualified suppliers or contract manufacturing organizations, or CMOs, to produce, manufacture, sterilize and assemble the component parts of our product candidates, including FUROSCIX. Our suppliers produce these component parts to our designs and specifications. Certain processes utilized in the manufacture and test of our product candidates have been verified and validated as required by the FDA and other regulatory bodies. The manufacturing facilities of our suppliers are subject to periodic inspection by the FDA and certain corresponding state agencies, and we regularly audit our suppliers' processes to ensure conformity with the specifications, policies and procedures for our product candidates.

We have produced FUROSCIX for use in our clinical trials and stability studies only. We believe that our current third-party manufacturers have capacity for potential commercialization of FUROSCIX, if approved, in quantities sufficient to meet our expected commercial needs, and to accommodate the manufacturing of materials for future clinical trials of other potential product programs that we may identify for our product pipeline.

In order to meet projected global demand for FUROSCIX, if approved, we plan to support an increase in production capacity at West's and our pharmaceutical manufacturing partners' facilities.

INTELLECTUAL PROPERTY

Proprietary protection

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our drug candidates, manufacturing and process discoveries and other know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing on our proprietary rights. We and our partners have been building and continue to build our intellectual property portfolio relating to our product candidates and technology. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and certain foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also intend to rely on trade secrets, know-how, continuing technological innovation, and potential in-licensing opportunities to develop and maintain our proprietary position. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us or our partners in the future will be commercially useful in protecting our technology.

Patent rights

Patent life determination depends on the date of filing of the application and other factors as promulgated under the patent laws. In most countries, including the United States, the patent term is generally 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country.

Furosemide 8 mg/mL formulation

As of February 7, 2022, we own a patent family directed to the composition of matter of our subcutaneous formulation of furosemide and methods of treating edema, hypertension or heart failure using the formulation of furosemide. This patent family includes U.S. Patent No. 9,884,039, directed to methods of treatment, U.S. Patent No. 10,272,064, directed to liquid pharmaceutical formulations, one pending U.S. patent application directed to methods of treatment, one granted patent in each of Canada, China and Europe, two granted patents in Japan, one pending patent application in Europe, and seven granted patents and five pending patent applications in other countries outside of the United States. Patents that issue from this patent family are generally expected to expire in 2034, excluding any additional term in the United States for patent term adjustment. U.S. Patent Nos. 9,884,039 and 10,272,064 are scheduled to expire in April 2034.

Other furosemide formulations

As of February 7, 2022, we also own a patent family directed to compositions of matter of liquid pharmaceutical formulations containing an increased concentration of furosemide and methods of treating congestion, edema, fluid overload, or hypertension using these formulations of furosemide. This patent family includes one pending U.S. patent application, one pending patent application in each of Canada, China, Europe and Japan, and 11 pending patent applications in other countries outside of the United States. Patents that issue from this patent family are generally expected to expire in 2040, excluding any additional term in the United States for patent term adjustment.

Trade secret and other protection

In addition to patented intellectual property, we also rely on trade secrets and proprietary know-how to protect our technology and maintain our competitive position, especially when we do not believe that patent protection is appropriate or can be obtained. Our policy is to require each of our employees, consultants and advisors to execute a confidentiality and inventions assignment agreement before beginning their employment, consulting or advisory relationship with us. The agreements generally provide that the individual must keep confidential and not disclose to other parties any confidential information developed or learned by the individual during the course of the individual's relationship with us except in limited circumstances. These agreements generally also provide that we shall own all inventions conceived by the individual in the course of rendering services to us.

Other intellectual property rights

We file trademark applications and pursue registrations in the United States and abroad when appropriate. We own trademark registrations in the U.S. and E.U. for the marks SCPHARMACEUTICALS and FUROSCIX.

From time to time, we may find it necessary or prudent to obtain licenses from third-party intellectual property holders.

COMPETITION

Our industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We face competition and potential competition from a number of sources, including pharmaceutical and biotechnology companies, generic drug companies, drug delivery companies and academic and research institutions. Some of these companies are developing therapies that are directly competitive to our approach, and others are more generally developing therapies to treat heart failure. These companies include but are not limited to: Abbott Laboratories, Amgen, AstraZeneca, Bayer, Bioheart, Boston Scientific, Boehringer Ingelheim, GlaxoSmithKline, Johnson & Johnson, Eli Lilly and Company, Merck & Co., Medtronic, Novartis, Pfizer, Roche, Sanofi, Sarfex Pharmaceuticals, Servier Pharmaceuticals, SQ Innovation and Takeda Pharmaceutical Company. We believe the key competitive factors that will affect the development and commercial success of our product candidates include ease of administration and convenience of dosing, therapeutic efficacy, safety and tolerability profiles and cost. Many of our potential competitors have substantially greater financial, technical and human resources than we do, as well as more experience in the development of product candidates, obtaining FDA and other regulatory approvals of products, and the commercialization of those products. Consequently, our competitors may develop similar products for the treatment of heart failure or for other indications we may pursue in the future, and such competitors' products may be more effective, better tolerated and less costly than our product candidates. Our competitors may also be more successful in manufacturing and marketing their products than we are. We will also face competition in recruiting and retaining qualified personnel and establishing clinical trial sites and patient enrollment in clinical trials.

GOVERNMENT REGULATION

United States Drug Development

In the United States, the FDA regulates drugs, medical devices and combinations of drugs and devices, or combination products, under the federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. Drugs are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, untitled or warning letters, requests for voluntary product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Our product candidates are subject to regulation as combination products, which means that they are composed of both a drug product and device product. If marketed individually, each component would be subject to different regulatory pathways and reviewed by different Centers within the FDA. A combination product, however, is assigned to a Center that will have primary jurisdiction over its regulation based on a determination of the combination product's primary mode of action, which is the single mode of action that provides the most important therapeutic action. In the case of our product candidates, the primary mode of action is attributable to the drug component of the product, which means that the FDA's Center for Drug Evaluation and Research has primary jurisdiction over the premarket development, review and approval of our product candidates. Accordingly, we plan to investigate our products through the IND framework and seek approval through the NDA pathway. Based on our discussions with the FDA to date, we do not anticipate that the FDA will require a separate medical device authorization for the on-body infusor component of FUROSCIX, but this could change during the course of its review of any marketing application that we may submit. The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of extensive pre-clinical laboratory tests, animal studies and formulation studies in accordance with applicable regulations, including the FDA's Good Laboratory Practice regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials in accordance with an applicable IND and other clinical study related regulations, sometimes referred to as good clinical practices, or GCPs, to establish the safety and efficacy of the proposed drug for its proposed indication;
- submission to the FDA of an NDA which, for a combination product like FUROSCIX, is expected to include information and data regarding the drug delivery device technology;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the product, or components thereof, are produced to assess compliance with the FDA's current good manufacturing practice requirements, or cGMP;
- potential FDA audit of the clinical trial sites that generated the data in support of the NDA; and
- FDA review and approval of the NDA prior to any commercial marketing or sale.

Once a pharmaceutical product candidate is identified for development, it enters the pre-clinical testing stage. Pre-clinical tests include laboratory evaluations of product chemistry, toxicity, formulation and stability, as well as animal studies. An IND sponsor must submit the results of the pre-clinical tests, together with manufacturing information, analytical data and any available clinical data or literature, to the FDA as part of the IND. The sponsor must also include a protocol detailing, among other things, the objectives of the initial clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the initial clinical trial lends itself to an efficacy evaluation. Some pre-clinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions related to a proposed clinical trial and places the trial on a clinical hold within that 30-day period. 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 or non-compliance, and may be imposed on all drug products within a certain class of drugs. The FDA also can impose partial clinical holds, for example, prohibiting the initiation of clinical trials of a certain duration or for a certain dose.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with GCP regulations. These regulations include the requirement that all research subjects provide informed consent in writing before their participation in any clinical trial. Further, an institutional review board, or IRB, must review and approve the plan for any clinical trial before it commences at any institution, and the IRB must conduct continuing review and reapprove the study at least annually. An IRB considers, among other things, whether the risks to individuals participating in the clinical trial are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the information regarding the clinical trial and the consent form that must be provided to each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed.

Each new clinical protocol and any amendments to the protocol must be submitted for FDA review, and to the IRBs for approval. Protocols detail, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety.

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

- Phase 1. The product is initially introduced into a small number of healthy human subjects or patients and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain early evidence on effectiveness. In the case of some products for severe or life-threatening diseases, especially when the product is suspected or known to be unavoidably toxic, the initial human testing may be conducted in patients.
- Phase 2. Involves clinical trials in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage and schedule.
- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit relationship of the product and provide an adequate basis for product labeling.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 trials. Companies that conduct certain clinical trials also are required to register them and post the results of completed clinical trials on a government-sponsored database, such as ClinicalTrials.gov in the United States, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events, findings from other studies that suggest a significant risk to humans exposed to the product, findings from animal or in vitro testing that suggest a significant risk to human subjects, and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the clinical trial sponsor may suspend or terminate 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 product has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check points based on access to certain data from the study. The clinical trial sponsor may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

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

NDA and FDA Review Process

The results of product development, pre-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the drug, proposed labeling and other relevant information, are submitted to the FDA as part of an NDA for a new drug, requesting approval to market the product. The submission of an NDA is subject to the payment of a substantial user fee, and the sponsor of an approved NDA is also subject to an annual program user fee; although a waiver of such fee may be obtained under certain limited circumstances. For example, the agency will waive the application fee for the first human drug application that a small business or its affiliate submits for review.

The FDA reviews all NDAs submitted before it accepts them for filing and may request additional information rather than accepting an NDA for filing. The FDA typically makes a decision on accepting an NDA for filing within 60 days of receipt. The decision to accept the NDA for filing means that the FDA has made a threshold determination that the application is sufficiently complete to permit a substantive review. Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA, the FDA's goal to complete its substantive review of a standard NDA and respond to the applicant is ten months from the receipt of the NDA. The FDA does not always meet its PDUFA goal dates, and the review process is often extended by FDA requests for additional information or clarification.

After the NDA submission is accepted for filing, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMPs to assure and preserve the product's identity, strength, quality and purity. During its review, the FDA will likely re-analyze the clinical trial data, which could result in extensive discussions between the FDA and us during the review process. The review and evaluation of an NDA by the FDA is extensive and time consuming and may take longer than originally planned to complete, and we may not receive a timely approval, if at all. The FDA may refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMPs. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. In addition, before approving an NDA, the FDA may also audit data from clinical trials to ensure compliance with GCP requirements. After the FDA evaluates the application, manufacturing process and manufacturing facilities, it may issue an approval letter or a CRL. An approval letter authorizes commercial marketing of the drug with specific 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 all the specific deficiencies in the NDA identified by the FDA. The CRL may require additional clinical data and/or an additional pivotal Phase 3 clinical trial(s), and/or other significant and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. If a CRL is issued, the applicant may either resubmit the NDA, addressing all the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive, and the FDA may interpret data differently than we interpret the same data.

505(b)(2) Approval Process

Section 505(b)(2) of the FDCA provides an alternate regulatory pathway for the FDA to approve a new product and permits reliance for such approval on published literature or an FDA finding of safety and effectiveness for a previously approved drug product. Specifically, section 505(b)(2) permits the filing of an NDA where one or more of the investigations relied upon by the applicant for approval were not conducted by or for the applicant and for which the applicant has not obtained a right of reference. Typically, 505(b)(2) applicants must perform additional trials to support the change from the previously approved drug and to further demonstrate the new product's safety and effectiveness. The FDA may then approve the new product candidate for all or some of the labeled indications for which the referenced product has been approved, as well as for any new indication sought by the section 505(b)(2) applicant.

Our subcutaneous formulation of furosemide is based upon an already approved version of furosemide in oral and IV formulations, rather than a new chemical entity product candidate. Accordingly, we submitted a 505(b)(2) application that relied on FDA's prior findings of safety and effectiveness for previously-approved oral and/or IV furosemide in our clinical development plans and our NDA submission. We plan to use the 505(b)(2) pathway as well for other product candidates that we may develop.

Regulation of Combination Products in the United States

Certain products may be comprised of components, such as drug components and device components that would normally be regulated under different types of regulatory authorities, and frequently by different centers at the

FDA. These products are known as combination products. Specifically, under regulations issued by the FDA, a combination product may be:

- a product comprised of two or more regulated components that are physically, chemically, or otherwise combined or mixed and produced as a single entity;
- two or more separate products packaged together in a single package or as a unit and comprised of drug and device products, device and biological products, or biological and drug products;
- a drug, or device, or biological product packaged separately that according to its investigational plan or proposed labeling is intended for use only with an approved individually specified drug, or device, or biological product where both are required to achieve the intended use, indication, or effect and where upon approval of the proposed product the labeling of the approved product would need to be changed, e.g., to reflect a change in intended use, dosage form, strength, route of administration, or significant change in dose; or
- any investigational drug, or device, or biological product packaged separately that according to its proposed labeling is for use only with another individually specified investigational drug, device, or biological product where both are required to achieve the intended use, indication, or effect.

Under the FDCA and its implementing regulations, the FDA is charged with assigning a center with primary jurisdiction, or a lead center, for review of a combination product. The designation of a lead center generally eliminates the need to receive approvals from more than one FDA component for combination products, although it does not preclude consultations by the lead center with other components of the FDA. The determination of which center will be the lead center is based on the "primary mode of action" of the combination product. Thus, if the primary mode of action of a drug-device combination product is attributable to the drug product, the FDA center responsible for premarket review of the drug product would have primary jurisdiction for the combination product. The FDA has also established an Office of Combination Products to address issues surrounding combination products and provide more certainty to the regulatory review process. That office serves as a focal point for combination product issues for agency reviewers and industry. It is also responsible for developing guidance and regulations to clarify the regulation of combination products, and for assignment of the FDA center that has primary jurisdiction for review of combination products where the jurisdiction is unclear or in dispute.

A combination product with a drug primary mode of action generally would be reviewed and approved pursuant to the drug approval processes under the FDCA. In reviewing the NDA or 505(b)(2) application for such a product, however, FDA reviewers in the drug center could consult with their counterparts in the device center to ensure that the device component of the combination product met applicable requirements regarding safety, effectiveness, durability and performance. In addition, under FDA regulations, combination products are subject to cGMP requirements applicable to both drugs and devices, including the Quality System Regulations, or QSRs, applicable to medical devices.

Drug-device combination products present unique challenges for competitors seeking approval of Abbreviated New Drug Applications, or ANDA, for generic versions of combination products. Generally, the FDA reviews both the drug and device constituents of a proposed generic product to determine whether it is the same as the innovator product, including whether the basic design and operating principles of the device component are the same and whether minor differences require significant differences in labeling for safe and effective use. If the FDA determines that the device component of the proposed generic product is not the same in terms of performance and critical design, or that the labeling is not the same, it generally will not approve the ANDA. Likewise, if the FDA determines that certain clinical studies, such as clinical usability or human factors studies, are necessary to demonstrate the safety and/or effectiveness of the device component, the FDA generally will not accept or approve an ANDA for a combination product and will instead require the submission of a full NDA or 505(b)(2) application.

Post-Marketing Requirements

Any products for which we receive FDA approval are subject to continuing regulation by the FDA, including, among other things, monitoring and recordkeeping activities, reporting to the applicable regulatory authorities of adverse events with the product, providing the regulatory authorities with updated safety and efficacy information, and product sampling and distribution requirements in accordance with the Prescription Drug Marketing Act, a part of the FDCA. Moreover, each component of a combination product retains its regulatory status (as a drug or device, for example) and is subject to the requirements established by the FDA for that type of component. The FDA strictly regulates labeling, advertising, promotion and other types of information on products that are placed on the market.

Prescription drug advertising is subject to federal, state and foreign regulations. In the United States, the FDA regulates prescription drug promotion and advertising, including direct-to-consumer advertising. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use. In addition, a pharmaceutical company must comply with restrictions on promoting drugs for uses or in patient populations that are not described in the drug's approved labeling (known as "off-label use"), limitations on industry-sponsored scientific and educational activities, and requirements for promotional activities involving the internet. Although physicians may prescribe legally available drugs for off-label uses, manufacturers and their agents may not market or promote such off-label uses or provide off-label information in the promotion of drug products that is not consistent with the approved labeling for those products. The FDA and other regulatory and enforcement authorities actively enforce laws and regulations prohibiting promotion of off-label uses and the promotion of products for which marketing approval has not been obtained. A company that is found to have improperly promoted off-label uses may be subject to corrective advertising in addition to significant liability, which may include civil and administrative remedies as well as criminal sanctions.

In the United States, once a product is approved, its manufacture is subject to comprehensive and continuing regulation by the FDA. The FDA regulations require that combination products be manufactured in specific approved facilities and in accordance with cGMPs applicable to drugs and devices, including certain QSR requirements. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. 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. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. These regulations also impose certain organizational, procedural and documentation requirements with respect to manufacturing and quality assurance activities. NDA holders using contract manufacturers, laboratories or packagers are responsible for the selection and monitoring of qualified firms, and, in certain circumstances, qualified suppliers to these firms. These firms and, where applicable, their suppliers are subject to inspections by the FDA at any time, and the discovery of violative conditions, including failure to conform to cGMPs, could result in enforcement actions that interrupt the operation of any such facilities or the ability to distribute products manufactured, processed or tested by them. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA, including, among other things, recall or withdrawal of the product from the market. Additionally, manufacturers and other parties involved in the drug supply chain for prescription drug products must also comply with product tracking and tracing requirements and for notifying the FDA of counterfeit, diverted, stolen and intentionally adulterated products or products that are otherwise unfit for distribution in the United States.

The FDA also may require post-marketing testing, known as Phase 4 testing, a risk evaluation and mitigation strategy, or REMS, to assure the safe use of the drug, and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, untitled or warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development and impact approved products already on the market.

Other Regulatory Matters

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The failure to comply with regulatory requirements subjects firms to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, voluntary recall, seizure of products, total or partial suspension of production, denial or withdrawal of product approvals, exclusion from federal healthcare programs, or refusal to allow a firm to enter into supply contracts, including government contracts. In addition, even if a firm complies with FDA and

other requirements, new information regarding the safety or effectiveness of a product could lead the FDA to modify or withdraw product approval. Prohibitions or restrictions on sales or withdrawal of future products marketed by us could materially affect our business in an adverse way.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the voluntary recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Orphan Designation and Exclusivity

The FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition that affects fewer than 200,000 individuals in the United States. Alternatively, orphan drug designation may be available if the disease or the condition affects 200,000 or more individuals in the United States and there is no reasonable expectation that the cost of developing and making the drug for this type of disease or condition will be recovered from sales in the United States.

Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user-fee waivers. In addition, if a product is the first to receive FDA approval of the indication for which it has orphan designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same orphan indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity, which may permit off-label use for the orphan indication. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same drug or biological product as defined by the FDA for the same orphan indication or if our product candidate is determined to be contained within the competitor's product for the same indication or disease. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan product exclusivity.

U.S. Marketing Exclusivity

Market exclusivity provisions under the FDCA can also delay the submission or the approval of certain marketing applications, including 505(b)(2) applications. The FDA provides three years of marketing exclusivity for an NDA (including a 505(b)(2) application), 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. Three-year exclusivity is typically awarded to innovative changes to a previously-approved drug product, such as new indications, dosage forms or strengths. 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 applications for drugs that do not have the innovative change, such as generic copies of the original, unmodified drug product. Three-year exclusivity blocks approval of 505(b)(2) applications and ANDAs but 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 nonclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness. Orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances. Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods, including exclusivity attaching to certain patent certifications. This six-month exclusivity, which runs from the end of other exclusivity protection and patent terms, may be granted based on the voluntary completion within certain timeframes of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

European Orphan Designation and Exclusivity

In the European Union, the European Medicines Agency's, or EMA's, Committee for Orphan Medicinal Products, or COMP, grants orphan designation to promote the development of products that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions that affect not more than five in 10,000 persons in the European Union, or products intended for the diagnosis, prevention or treatment of a life-threatening, seriously debilitating or serious and chronic conditions when, without incentives, it is unlikely that sales of such products would generate sufficient return in the European Union to justify the necessary investment in developing the products. In each case, orphan designation is only available where no satisfactory method of

diagnosis, prevention, or treatment of the condition has been authorized for marketing in the EU (or, if a method exists, the product would be a significant benefit to those affected by the condition).

In the European Union, orphan designation entitles a party to financial incentives such as reduction of fees or fee waivers and 10 years of market exclusivity is granted following medicinal product approval. This period may be reduced to six years if the orphan designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Market exclusivity may also be revoked in very select cases, such as if (i) it is established that a similar medicinal product is safer, more effective or otherwise clinically superior to the authorized product; (ii) the marketing authorization holder of the authorized orphan product consents to such revocation; or (iii) the marketing authorization holder of the authorized orphan product cannot supply enough orphan medicinal product.

Other Healthcare Laws and Compliance Requirements

In the United States, our current and future operations are subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, CMS, other divisions of the U.S. Department of Health and Human Services, or HHS (such as the Office of Inspector General, Office for Civil Rights and the Health Resources and Service Administration), the U.S. Department of Justice, or DOJ, and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, our clinical research, sales, marketing and scientific/educational grant programs may have to comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the privacy and security provisions of the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and similar state laws, each as amended, as applicable:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs; a person or entity does not need to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act, or FCA, or federal civil money penalties statute. On December 2, 2020, the Office of Inspector General, or OIG, published further modifications to the federal Anti-Kickback Statute. Under the final rules, OIG added safe harbor protections under the Anti-Kickback Statute for certain coordinated care and value-based arrangements among clinicians, providers, and others. This rule (with exceptions) became effective January 19, 2021. Implementation of this change is currently under review by the Biden administration and may be amended or repealed. Additionally, on November 30, 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. We continue to evaluate what effect, if any, these developments will have on our business;
- the federal civil and criminal false claims laws and civil monetary penalty laws, including the FCA, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment to, or approval by Medicare, Medicaid, or other federal healthcare programs, knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim or an obligation to pay or transmit money to the federal government, or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay money to the federal government. Manufacturers can be held liable under the FCA even when they do not submit claims directly to government payers if they are deemed to “cause” the submission of false or fraudulent claims. The FCA also permits a private individual acting as a “whistleblower” to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery;

- the anti-inducement law, which prohibits, among other things, the offering or giving of remuneration, which includes, without limitation, any transfer of items or services for free or for less than fair market value (with limited exceptions), to a Medicare or Medicaid beneficiary that the person knows or should know is likely to influence the beneficiary's selection of a particular supplier of items or services reimbursable by a federal or state governmental program;
- HIPAA, which created new federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payer (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information;
- the federal transparency requirements under the Affordable Care Act, or ACA, including the provision commonly referred to as the Physician Payments Sunshine Act, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the U.S. Department of Health and Human Services information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists, chiropractors, and effective January 1, 2022, physician assistants and nurse practitioners) and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members;
- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs; and
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Additionally, we are subject to state and non-U.S. equivalents of each of the healthcare laws described above, among others, some of which may be broader in scope and may apply regardless of the payer. Many U.S. states have adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare services reimbursed by any source, not just governmental payers, including private insurers. In addition, some states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. Several states also impose other marketing restrictions or require pharmaceutical companies to make marketing or price disclosures to the state. There are ambiguities as to what is required to comply with these state requirements and if we fail to comply with an applicable state law requirement we could be subject to penalties. Finally, there are state and non-U.S. laws governing the privacy and security of health information, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws.

We may develop products that, if approved, may be administered by a physician. Under currently applicable U.S. law, certain products not usually self-administered (including injectable drugs) may be eligible for coverage under Medicare through Medicare Part B. Medicare Part B is part of original Medicare, the federal health care program that provides health care benefits to the aged and disabled, and covers outpatient services and supplies, including certain pharmaceutical products, that are medically necessary to treat a beneficiary's health condition. As a condition of receiving Medicare Part B reimbursement for a manufacturer's eligible drugs, the manufacturer is required to participate in other government healthcare programs, including the Medicaid Drug Rebate Program and the 340B Drug Pricing Program. The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of HHS as a condition for states to

receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. Under the 340B Drug Pricing Program, the manufacturer must extend discounts to entities that participate in the program.

In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price, or ASP, and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payers.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

Law enforcement authorities are increasingly focused on enforcing fraud and abuse laws, and it is possible that some of our practices may be challenged under these laws. Efforts to ensure that our current and future business arrangements with third parties, and our business generally, will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices, including our arrangements with physicians and other healthcare providers, some of whom received stock options as compensation for services provided, may not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including, without limitation, the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, individual imprisonment, exclusion from participation in Medicare, Medicaid and other federal healthcare programs, injunctions, private "qui tam" actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our drug candidates outside the United States will also likely subject us to non-U.S. equivalents of the healthcare laws mentioned above, among other non-U.S. laws.

If any of the physicians or other healthcare providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which may also adversely affect our business.

Healthcare Reform

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and other third-party payers have attempted to control costs by limiting coverage and the amount of reimbursement for particular medical products. For example, in March 2010, the ACA was enacted, which, among other things, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; introduced a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected; extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care plans; imposed mandatory discounts for certain Medicare Part D beneficiaries as a condition for manufacturers' outpatient drugs coverage under Medicare Part D; subjected drug manufacturers to new annual fees based on pharmaceutical companies' share of sales to federal healthcare programs; imposed a new federal excise tax on the sale of certain medical devices; created a new Patient Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research;

and established the Center for Medicare Innovation at the CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending.

Some of the provisions of the ACA have yet to be implemented, and there have been legal and political challenges to certain aspects of the ACA. Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of certain taxes under the ACA have been signed into law. On January 22, 2018, former President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA mandated fees, including the so-called “Cadillac” tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. The Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole”. In December 2018, the CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of the federal district court litigation regarding the method CMS uses to determine this risk adjustment. Since then, the ACA risk adjustment program payment parameters have been updated annually.

Further, the Tax Cuts and Jobs Act of 2017, or Tax Act, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate.” On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, or the Texas District Court Judge, ruled that the individual mandate is a critical and inseparable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the Fifth Circuit U.S. Court of Appeals held that the individual mandate is unconstitutional, and remanded the case to the lower court to reconsider its earlier invalidation of the full ACA. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case, and held oral arguments on November 10, 2020. Pending a decision, the ACA remains in effect, but it is unclear at this time what effect these developments will have on the status of the ACA.

Other legislative changes have been proposed and adopted since the ACA was enacted. For example, in August 2011, President Obama signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least \$1.2 trillion for fiscal years 2012 through 2021, triggering the legislation’s automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013 and, due to amendments to the statute, including Coronavirus Aid, Relief and Economic Security Act, or CARES Act, will stay in effect through 2030 unless additional Congressional action is taken. Pursuant to the CARES Act, which was signed into law on March 27, 2020 to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, and subsequent legislation, these reductions have been suspended from May 1, 2020 through March 31, 2022. Then, a 1% payment reduction will occur beginning April 1, 2022 through June 30, 2022, and the 2% payment reduction will resume on July 1, 2022. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, President Biden signed an Executive Order on July 9, 2021 affirming the administration’s policy to (i) support legislative reforms that would lower the prices of prescription drug and biologics, including by allowing Medicare to negotiate drug prices, by imposing inflation caps, and, by supporting the development and market entry of lower-cost generic drugs and biosimilars; and (ii) support the enactment of a public health insurance option. Among other things, the Executive Order also directs HHS to provide a report on actions to combat excessive pricing of prescription drugs, enhance the domestic drug supply chain, reduce the price that the

Federal government pays for drugs, and address price gouging in the industry; and directs the FDA to work with states and Indian Tribes that propose to develop section 804 Importation Programs in accordance with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, and the FDA's implementing regulations. FDA released such implementing regulations on September 24, 2020, which went into effect on November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. On September 25, 2020, CMS stated drugs imported by states under this rule will not be eligible for federal rebates under Section 1927 of the Social Security Act and manufacturers would not report these drugs for "best price" or Average Manufacturer Price purposes. Since these drugs are not considered covered outpatient drugs, CMS further stated it will not publish a National Average Drug Acquisition Cost for these drugs. If implemented, importation of drugs from Canada may materially and adversely affect the price we receive for any of our product candidates. Further, on November 20, 2020 CMS issued an Interim Final Rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates would have been calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. However, on August 6, 2021 CMS announced a proposed rule to rescind the MFN rule. Additionally, on November 30, 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, both the Biden administration and Congress have indicated that they will continue to seek new legislative measures to control drug costs.

In addition, there have been several changes to the 340B drug pricing program, which imposes ceilings on prices that drug manufacturers can charge for medications sold to certain health care facilities. On December 27, 2018, the District Court for the District of Columbia invalidated a reimbursement formula change under the 340B drug pricing program, and CMS subsequently altered the fiscal years 2019 and 2018 reimbursement formula on specified covered outpatient drugs. The court ruled this change was not an "adjustment" which was within the Secretary's discretion to make but was instead a fundamental change in the reimbursement calculation. However, most recently, on July 31, 2020, the U.S. Court of Appeals for the District of Columbia Circuit overturned the district court's decision and found that the changes were within the Secretary's authority. On September 14, 2020, the plaintiffs-appellees filed a Petition for Rehearing En Banc (i.e., before the full court), but was denied on October 16, 2020. Plaintiffs-appellees filed a petition for a writ of certiorari at the Supreme Court on February 10, 2021. On Friday July 2, 2021, the Supreme Court granted the petition. It is unclear how these developments could affect covered hospitals who might purchase our future products and affect the rates we may charge such facilities for our approved products in the future, if any.

Additionally, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to an order entered by the U.S. District Court for the District of Columbia, the portion of the rule eliminating safe harbor protection for certain rebates related to the sale or purchase of a pharmaceutical product from a manufacturer to a plan sponsor under Medicare Part D has been delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. Further, implementation of this change and new safe harbors for point-of-sale reductions in price for prescription pharmaceutical products and pharmacy benefit manager service fees are currently under review by the Biden administration and may be amended or repealed. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, Congress has indicated that it will continue to seek new legislative measures to control drug costs.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidate for which we obtain regulatory approval. In the United States and markets in other countries, sales of any product candidates for which we receive regulatory approval for commercial sale will depend, in part, on the availability of coverage and reimbursement from third-party payers. Third-party payers include government authorities, managed care providers, private health insurers and other organizations. Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third-party payers. Third-party payers decide which therapeutics they will pay for and establish reimbursement levels. Coverage and reimbursement by a third-party payer may depend upon a number of factors, including the third-party payer's determination that use of a therapeutic is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

The process for determining whether a payer will provide coverage for a product may be separate from the process for setting the reimbursement rate that the payer will pay for the product. Third-party payers may limit coverage to specific products on an approved list, or formulary, which might not include all of the FDA-approved products for a particular indication. A decision by a third-party payer not to cover our product candidates could reduce physician utilization of our products if approved and have a material adverse effect on our sales, results of operations and financial condition. Moreover, a payer's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

In addition, coverage and reimbursement for products can differ significantly from payer to payer. One third-party payer's decision to cover a particular medical product or service does not ensure that other payers will also provide coverage for the medical product or service, or will provide coverage at an adequate reimbursement rate. As a result, the coverage determination process will require us to provide scientific and clinical support for the use of our products to each payer separately and will be a time-consuming process.

Third-party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. Obtaining reimbursement for our products may be particularly difficult because of the higher prices often associated with branded drugs and drugs administered under the supervision of a physician. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. Obtaining coverage and reimbursement approval of a product from a government or other third-party payer is a time-consuming and costly process that could require us to provide to each payer supporting scientific, clinical and cost-effectiveness data for the use of our product on a payer-by-payer basis, with no assurance that coverage and adequate reimbursement will be obtained. A third-party payer's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, in the United States, no uniform policy of coverage and reimbursement for products exists among third-party payers. Private third-party payers tend to follow Medicare coverage and reimbursement limitations to a substantial degree, but also have their own methods and approval process apart from Medicare determinations. Therefore, one payer's determination to provide coverage for a product does not assure that other payers will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient 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 any product candidate that we successfully develop.

Outside of the United States, the pricing of pharmaceutical products and medical devices is subject to governmental control in many countries. For example, in the European Union, pricing and reimbursement schemes vary widely from country to country. Some countries provide that products may be marketed only after a

reimbursement price has been agreed. Some countries may require the completion of additional studies that compare the cost-effectiveness of a particular therapy to currently available therapies or so-called health technology assessments, in order to obtain reimbursement or pricing approval. Other countries may allow companies to fix their own prices for products, but monitor and control product volumes and issue guidance to physicians to limit prescriptions. Efforts to control prices and utilization of pharmaceutical products and medical devices will likely continue as countries attempt to manage healthcare expenditures.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if third-party payers fail to provide coverage and adequate reimbursement. In addition, emphasis on managed care, the increasing influence of health maintenance organizations, and additional legislative changes in the United States has increased, and we expect will continue to increase, the pressure on healthcare pricing. The downward pressure on the rise in healthcare costs in general, particularly prescription medicines, medical devices and surgical procedures and other treatments, has become very intense. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Human Capital Management

As of March 22, 2022, we had 26 full-time employees, including five in research and development, 12 in clinical and medical affairs, regulatory affairs, and quality assurance, two in commercial and seven in finance, general administrative and executive administration. None of our employees are represented by a labor union or are parties to a collective bargaining agreement and we believe that our employee relations are good.

Our future success depends on our ability to attract, develop and retain key personnel, maintain our culture, and ensure diversity and inclusion in our board, management and broader workforce. Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees as we expand the workforce. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards. A testament to our strong culture is our second year in a row earning a spot on Boston Business Journal's Best Places to Work list for companies of our size.

Facilities

Our principal executive offices are located in a 13,066 square foot facility in Burlington, Massachusetts. The term of the lease for our Burlington, Massachusetts facility extends through November 2022. We lease 2,037 square feet in Salem, New Hampshire. The term of the lease for our Salem, New Hampshire facility extends through August 2022. Our facilities house our research and development, sales, marketing, finance and administrative activities. We believe that our current facilities are adequate to meet our needs for the foreseeable future and that suitable additional space will be available as and when needed.

Corporate Information

We were formed as a limited liability company under the laws of the State of Delaware in February 2013 under the name scPharmaceuticals LLC and we converted to a corporation under the laws of the State of Delaware in March 2014 under the name scPharmaceuticals Inc. Our website address is www.scpharmaceuticals.com.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all other information in this Annual Report on Form 10-K, including our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before investing in our common stock. Any of the risk factors we describe below could adversely affect our business, financial condition or results of operations. The market price of our common stock could decline if one or more of these risks or uncertainties actually occur, causing you to lose all or part of the money you paid to buy our common stock. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business. Certain statements below are forward-looking statements. See "Forward-Looking Statements" in this Annual Report on Form 10-K.

Risks Related to our Product Candidates

Risks Related to Approval and Commercialization of our Product Candidates

We are heavily dependent on the success of our product candidates and, in particular, our lead product candidate, FUROSCIX. We cannot give any assurance that we will receive regulatory approval for this product candidate or any other product candidates, which is necessary before they can be commercialized.

To date, we have expended significant time, resources and effort on the development of our product candidates, and a substantial majority of our resources are now focused on seeking marketing approval for and planning for potential commercialization of our most advanced product candidate, FUROSCIX, in the United States. Our business and future success are substantially dependent on our ability to successfully and timely obtain regulatory approval for and commercialize FUROSCIX for the treatment of decompensated heart failure. All of our other product candidates are in earlier stages of development and subject to the risks of failure inherent in developing drug products. Accordingly, our ability to generate significant product revenues in the near term will depend almost entirely on our ability to successfully obtain marketing approval for and commercialize FUROSCIX.

We are not permitted to market any of our product candidates in the United States until we receive approval of a new drug application, or NDA, from the U.S. Food and Drug Administration, or FDA, or in any foreign jurisdiction until we receive the requisite approvals from such jurisdiction. We resubmitted our NDA for FUROSCIX with the FDA on June 30, 2020. The resubmission was a response to a Complete Response Letter, or CRL, from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA, which required device modifications necessary to advance FUROSCIX using the existing technology, we decided to transition to our next generation device, which is being developed through a partnership with West Pharmaceutical Services, Inc., or West, using its proprietary on-body infusor. On July 23, 2020, the FDA accepted the resubmission of our NDA and assigned a Prescription Drug User Fee Act, or PDUFA, target action date of December 30, 2020 for completion of its review of the NDA. However, on December 3, 2020, we received a CRL from the FDA and subsequently held a Type A meeting with the FDA. In each, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. On January 28, 2021, we had a Type A meeting with the FDA to discuss the issues described in the CRL and steps required for the resubmission of the FUROSCIX NDA. On June 2, 2021, we had a Type C meeting with the FDA regarding the requirements for resubmission of the FUROSCIX NDA. Based on the guidance we received during these meetings and subsequently contained within the meeting minutes, we conducted the required bench testing for the West proprietary on-body infusor. We anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities.

There can be no assurance that the FDA will approve FUROSCIX and, unless it obtains regulatory approval, it may never be commercialized. Satisfaction of regulatory requirements can be protracted, is dependent upon the type, complexity and novelty of the product candidate and requires the expenditure of substantial resources. For example, FUROSCIX is considered to be a drug-device combination product by the FDA, and its NDA thus will require review and coordination by the FDA's drug and device centers prior to approval. We cannot predict whether we will obtain regulatory approval to commercialize FUROSCIX or any of our other product candidates, and we cannot, therefore, predict the timing of any future revenues from these product candidates, if any. Any

further delay or setback in the regulatory approval or commercialization of any of these product candidates will adversely affect our business.

Our ability to successfully commercialize any of our products candidates will depend, among other things, on our ability to:

- receive marketing approvals from the FDA and similar foreign regulatory authorities;
- produce, through a validated process, sufficiently large quantities of our product candidates to permit successful commercialization;
- establish and maintain commercial manufacturing arrangements with third-party manufacturers;
- build and maintain sales, distribution and marketing capabilities sufficient to launch commercial sales of our product candidates;
- successfully complete our clinical trials for our product candidates under clinical development;
- establish collaborations with third parties for the commercialization of our product candidates in countries outside the United States and such collaborators' ability to obtain regulatory and reimbursement approvals in such countries;
- secure acceptance of our product candidates from physicians, healthcare payers, patients and the medical community; and
- manage our spending as costs and expenses increase due to clinical trials, regulatory approvals and commercialization.

There are no guarantees that we will be successful in completing these tasks. If we are unable to successfully complete these tasks, we may not be able to commercialize FUROSCIX or any of our other product candidates in a timely manner, or at all, in which case we may be unable to generate sufficient revenues to sustain and grow our business.

If we are not able to obtain required regulatory approvals, we will not be able to commercialize FUROSCIX, and our ability to generate revenue will be materially impaired. There is no assurance that, if approved, our commercialization efforts with respect to FUROSCIX will be successful or that we will be able to generate revenues at the levels or within the timing we expect or at the levels or within the timing necessary to support our goals.

FUROSCIX and the activities associated with its development and commercialization, including its design, research, testing, manufacture, safety, efficacy, recordkeeping, labeling, packaging, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and similar regulatory authorities outside the United States. Failure to obtain marketing approval for FUROSCIX will prevent us from commercializing it.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not received approval from regulatory authorities to market any product candidate in any jurisdiction, and it is possible that neither FUROSCIX nor any product candidates we may seek to develop in the future will ever obtain the appropriate regulatory approvals necessary for us to commence product sales.

The FDA has substantial discretion in the drug approval process, including the ability to delay, limit or deny approval of a product candidate for many reasons. For example, the FDA has already delayed our timeline to commercialization of FUROSCIX by issuing CRLs in June 2018 and December 2020 with respect to our NDA for FUROSCIX. As of May 26, 2021, the FDA noted it is continuing to ensure timely reviews of applications for medical products during the COVID-19 pandemic in line with its user fee performance goals; however, the FDA may not be able to continue its current pace and review timelines could be extended, including where a pre-approval inspection or an inspection of clinical sites is required. In addition, the FDA:

- could determine that we cannot rely on the Section 505(b)(2) regulatory pathway for FUROSCIX;
- could determine that the information provided by us was inadequate, contained clinical deficiencies or otherwise failed to demonstrate the safety and effectiveness of FUROSCIX or any of our product candidates for any indication;
- could determine that additional clinical, human factors or other studies are required to evaluate FUROSCIX incorporating West's proprietary on-body infusor;
- may not find the data from bioequivalence studies and/or clinical trials sufficient to obtain marketing approval in the United States, including any findings that the clinical and other benefits of our product candidates outweigh their safety risks;
- may disagree with our trial design or our interpretation of data from preclinical studies, bioequivalence studies and/or clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design for our trials;
- may determine that there are unacceptable risks associated with the device component of FUROSCIX or that there are deficiencies with the information submitted to demonstrate the safety, effectiveness and reliability of the device component;
- may determine that we have identified the wrong listed drug or drugs or that approval of our Section 505(b)(2) application for FUROSCIX or any of our other product candidates is blocked by patent or non-patent exclusivity of the listed drug or drugs or of other previously-approved drugs with the same conditions of approval as FUROSCIX (e.g., subcutaneous injection);
- may delay the timing of routine or pre-approval inspections due to the ongoing COVID-19 pandemic, which could impact the approval process, or identify deficiencies in the manufacturing processes or facilities of third-party manufacturers with which we enter into agreements for the manufacturing of our product candidates;
- may approve our product candidates for fewer or more limited indications than we request, or may grant approval contingent on the performance of costly post-approval clinical trials;
- may change its approval policies or adopt new regulations; or
- may not approve the labeling claims that we believe are necessary or desirable for the successful commercialization of our product candidates.

To date, most patients who have been evaluated in studies of our product candidates have been treated with versions of our product candidates incorporating our first generation device. As of February 2019, we have discontinued use of our first generation device in our product candidates and have pivoted to incorporate West's proprietary on-body infusor. We resubmitted our NDA for FUROSCIX with the FDA on June 30, 2020. The resubmission was a response to a CRL from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA, which required device modifications necessary to advance FUROSCIX using its then current technology, we decided to transition to our next generation device, which is being developed through a partnership with West, using its proprietary on-body infusor. If we are required to conduct additional testing or additional clinical studies, it could adversely affect the commercial viability of our product candidates and may adversely affect our ability to generate revenue, as a result of which our business, prospects, financial condition and results of operations may suffer.

Even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, may impose distribution or use restrictions, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

In addition, 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 other regulatory authorities. The FDA or other regulatory authorities may conclude that a financial relationship between us and a principal investigator has

created a conflict of interest or otherwise affected interpretation of the study. The FDA or other regulatory authorities may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval or rejection of our marketing applications by the FDA or other regulatory authorities, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

We have supported and plan to continue to support investigator sponsored clinical trials evaluating novel approaches utilizing FUROSCIX to manage patients with worsening heart failure who display reduced responsiveness to oral diuretics and do not require hospitalization. We do not control the design or administration of investigator-sponsored trials, and the investigator-sponsored trials could, depending on the actions of such third parties, jeopardize the validity of the clinical data generated, identify significant concerns with respect to FUROSCIX that could impact our findings or clinical trials, and adversely affect our ability to obtain marketing approval from the FDA or other applicable regulatory authorities.

All completed and ongoing studies are registered at www.clinicaltrials.gov, as applicable. To the extent the results of these or other investigator-sponsored trials are inconsistent with, or different from, the results of our company-sponsored trials or raise concerns regarding FUROSCIX, the FDA or a foreign regulatory authority may question the results of the company-sponsored trials or subject such results to greater scrutiny than it otherwise would. In these circumstances, the FDA or such foreign regulatory authorities may require us to obtain and submit additional clinical data, which could delay clinical development or marketing approval of FUROSCIX.

We expect to rely on third-party consultants to assist us in filing and supporting the applications necessary to gain marketing approvals. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish FUROSCIX's safety and efficacy for that indication. Securing marketing approval also requires the submission of information about the manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. If we cannot successfully obtain approval of or commercialize FUROSCIX, our business will be materially harmed and the price of our common stock will be adversely affected.

We intend to utilize the 505(b)(2) pathway for the regulatory approval of FUROSCIX. Final marketing approval of FUROSCIX or any of our other product candidates by the FDA or other regulatory authorities may be delayed, limited, or denied, any of which would adversely affect our ability to generate operating revenues.

We are pursuing a regulatory pathway pursuant to Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act, or FDCA, for the approval of FUROSCIX, which allows us to rely on existing clinical data for the drug. Section 505(b)(2) was enacted as part of the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments, and permits the submission of an NDA where at least some of the information required for approval comes from preclinical studies or clinical trials not conducted by or for the applicant and for which the applicant has not obtained a right of reference. The FDA interprets Section 505(b)(2) of the FDCA to permit the applicant to rely upon the FDA's previous findings of safety and efficacy for an approved product. The FDA requires submission of information needed to support any changes to a previously approved drug, such as published data or new studies conducted by the applicant or clinical trials demonstrating safety and efficacy. The FDA could refuse to file our NDA submissions, request additional information before accepting our submissions for filing or require additional information to sufficiently demonstrate safety and efficacy to support approval.

If the FDA does not allow us to pursue the Section 505(b)(2) regulatory pathway as anticipated, we may need to conduct additional clinical trials, provide additional data and information, and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval for these product candidates, and the complications and risks associated with these product candidates, would likely substantially increase. Moreover, an inability to pursue the Section 505(b)(2) regulatory pathway would likely result in new competitive products reaching the market more quickly than our product candidates, which would likely materially adversely impact our competitive position and prospects. Even if we are allowed to pursue the Section 505(b)(2) regulatory pathway, we cannot assure you that our product candidates will receive the requisite approvals for commercialization.

Notwithstanding the approval of many products by the FDA pursuant to Section 505(b)(2), over the last few years some pharmaceutical companies and others have objected to the FDA's interpretation of Section 505(b)(2) to

allow reliance on the FDA's prior findings of safety and effectiveness. If the FDA changes its interpretation of Section 505(b)(2), or if the FDA's interpretation is successfully challenged in court, this could delay or even prevent the FDA from approving any Section 505(b)(2) application that we submit. Moreover, the FDA adopted an interpretation of the three-year exclusivity provisions whereby a 505(b)(2) application can be blocked by exclusivity even if does not rely on the previously-approved drug that has exclusivity (or any safety or effectiveness information regarding that drug). Under the FDA's interpretation, the approval of FUROSCIX may be blocked by exclusivity awarded to a previously-approved drug product that shares certain innovative features with FUROSCIX, even if our 505(b)(2) application does not identify the previously-approved drug product as a listed drug or rely upon any of its safety or efficacy data. Any failure to obtain regulatory approval of our product candidates would significantly limit our ability to generate revenues, and any failure to obtain such approval for all of the indications and labeling claims we deem desirable could reduce our potential revenues.

Additional time may be required to obtain regulatory approval for our product candidates because they are combination products.

Because our product candidates are designed to be self-administered subcutaneously by patients, they are drug-device combination products that require coordination within the FDA and similar foreign regulatory agencies for review of their device and drug components. Although the FDA and similar foreign regulatory agencies have systems in place for the review and approval of combination products such as ours, we may experience delays in the development and commercialization of our product candidates due to regulatory timing constraints and uncertainties in the product development and approval process. For example, we resubmitted our NDA for FUROSCIX with the FDA on June 30, 2020. The resubmission was a response to a CRL from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA, which required device modifications necessary to advance FUROSCIX using its then current technology, we decided to transition to our next generation device, which is being developed through a partnership with West, using its proprietary on-body infusor. On December 3, 2020, we received a CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. No clinical deficiencies were noted. On January 28, 2021, we had a Type A meeting with the FDA to discuss the issues described in the CRL and steps required for the resubmission of the FUROSCIX NDA. On June 2, 2021, we had a Type C meeting with the FDA regarding the requirements for resubmission of the FUROSCIX NDA. Based on the guidance we received during these meetings and subsequently contained within the meeting minutes, we conducted the required bench testing for the West proprietary on-body infusor. We anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities, which may cause delays in regulatory approval. We recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022.

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

In order to market products in any particular jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a country-by-country basis regarding safety and efficacy. Approval by the FDA in the United States does not ensure approval by regulatory authorities in other countries or jurisdictions. In addition, the clinical standards of care may differ significantly such that clinical trials conducted in one country may not be accepted by healthcare providers, third-party payers or regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country. Approval processes vary among countries and can involve additional drug testing and validation and additional administrative review periods. Seeking foreign regulatory approval could result in difficulties and costs for us and require additional preclinical studies or clinical trials which could be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. We do not have any product candidates approved for sale in any jurisdiction, including in international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, or if regulatory approvals in international markets are delayed, our target market will be reduced and our ability to realize the full market potential of any drug we develop will be unrealized.

Risks Related to Clinical Development

The commencement and completion of clinical trials can be delayed or prevented for a number of reasons.

Beyond FUROSCIX, we intend to identify, develop and market additional product candidates. However, we may not be able to commence or complete the clinical trials that would support the submission of an NDA to the FDA or marketing authorization to any other regulatory agency. Drug development is a long, expensive and uncertain process, and delay or failure can occur at any stage of any of our clinical trials. Clinical trials can be delayed or prevented for a number of reasons, including:

- difficulties obtaining regulatory approval to commence a clinical trial or complying with conditions imposed by a regulatory authority regarding the scope or term of a clinical trial;
- delays in reaching or failing to reach agreement on acceptable terms with prospective contract research organizations, or CROs, contract manufacturing organizations, or CMOs, and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- failure of our third-party contractors, such as CROs and CMOs, or our investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner;
- insufficient or inadequate supply or quality of a product candidate or other materials necessary to conduct our clinical trials;
- difficulties obtaining institutional review board, or IRB, approval to conduct a clinical trial at a prospective site;
- the FDA requiring alterations to any of our study designs, our nonclinical strategy or our manufacturing plans;
- challenges recruiting and enrolling subjects to participate in clinical trials for a variety of reasons, including size and nature of subject population, proximity of subjects to clinical sites, eligibility criteria for the trial, nature of trial protocol, the availability of approved effective treatments for the relevant disease and competition from other clinical trial programs for similar indications;
- difficulties maintaining contact with subjects after treatment, which results in incomplete data;
- receipt by a competitor of marketing approval for a product targeting an indication that our product targets, such that we are not "first to market" with our product candidate;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines; and
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

Clinical trials may also be delayed or terminated as a result of ambiguous or negative interim results. In addition, a clinical trial may be suspended or terminated by us, the FDA, the IRBs at the sites where the IRBs are overseeing a trial, or a data safety monitoring board overseeing the clinical trial at issue, or other regulatory authorities due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- inspection of the clinical trial operations or trial sites by the FDA or other regulatory authorities;
- unforeseen safety issues, including serious adverse events associated with a product candidate, or lack of effectiveness; and
- lack of adequate funding to continue the clinical trial.

Clinical failure may occur at any stage of clinical development, and the results of our clinical trials may not support our proposed indications for our product candidates.

We cannot be certain that existing clinical trial results will be sufficient to support regulatory approval of our product candidates. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the results of later clinical trials will replicate the results of prior clinical trials and preclinical testing. Moreover, success in clinical trials in a particular indication, does not ensure

that a product candidate will be successful in other indications. A number of companies in the pharmaceutical industry have suffered significant setbacks in clinical trials, even after promising results in earlier preclinical studies or clinical trials or successful later-stage trials in other related indications. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway and safety or efficacy observations made in clinical trials, including previously unreported adverse events. The results of preclinical and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical and initial clinical trials. A failure of a clinical trial to meet its predetermined endpoints would likely cause us to abandon a product candidate and may delay development of any other product candidates. Any delay in, or termination of, our clinical trials will delay the submission of the NDA to the FDA, the marketing authorization application to the EMA or other similar applications with other relevant foreign regulatory authorities and, ultimately, our ability to commercialize our product candidates and generate revenue.

Additionally, several of our past and planned and ongoing clinical trials utilize an “open-label” trial design. An “open-label” clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved drug or placebo. Most typically, open-label clinical trials test only the investigational product candidate and sometimes may do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a “patient bias” where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. In addition, open-label clinical trials may be subject to an “investigator bias” where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. The results from an open-label trial may not be predictive of future clinical trial results with any of our product candidates for which we include an open-label clinical trial when studied in a controlled environment with a placebo or active control.

Our product candidates may have serious adverse, undesirable or unacceptable side effects which may delay or prevent marketing approval. If such side effects are identified during the development of our product candidates or following approval, if any, we may need to abandon our development of such product candidates, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following marketing approval, if any.

Undesirable side effects that may be caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. To date, the most common adverse events observed in patients treated with FUROSCIX include dizziness, headache and local infusion site skin effects such as erythema, bruising and pain, which were mild or moderate in severity. Results of our trials could reveal a high and unacceptable severity and prevalence of these or other side effects. It is possible that there may be side effects associated with our other product candidates' use. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. 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. Clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate. If our product candidates receive marketing approval and we or others identify undesirable side effects caused by such products (or any other similar products) after such approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such products;
- regulatory authorities may require the addition of labeling statements, such as a “boxed” warning or a contraindication;
- we may be required to change the way such products are distributed or administered, conduct additional clinical trials or change the labeling of the products;
- we may be subject to regulatory investigations and government enforcement actions;
- we may decide to recall or remove such products from the marketplace; or
- we could be sued and held liable for injury caused to individuals exposed to or taking our product candidates; or
- we may fail to secure acceptance of our product candidates from physicians, healthcare payers, patients and the medical community; and
- our reputation may suffer.

We believe that any of these events could prevent us from achieving or maintaining market acceptance of the affected products, and could substantially increase the costs of commercializing our products and significantly impact our ability to successfully commercialize our products and generate revenues. Any of these occurrences may harm our business, financial condition and prospects.

Our failure to successfully identify, develop and market additional product candidates could impair our ability to grow.

As part of our growth strategy, we intend to identify, develop and market additional product candidates beyond FUROSCIX. We are exploring various therapeutic opportunities for our pipeline and product programs for use with West's proprietary on-body infusor. We may spend several years completing our development of any particular current or future internal product candidates, and failure can occur at any stage. The product candidates to which we allocate our resources may not end up being successful. In addition, because our internal research capabilities are limited, we may be dependent upon pharmaceutical companies, academic scientists and other researchers to sell or license product candidates, approved products or the underlying technology to us. The success of this strategy depends partly upon our ability to identify, select, discover and acquire promising product candidates and products.

The process of proposing, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing and sales resources, may compete with us for the license or acquisition of product candidates and approved products. We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses and technologies and integrate them into our current infrastructure. Moreover, we may devote resources to potential acquisitions or in-licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire the rights to additional product candidates on terms that we find acceptable, or at all.

In addition, future acquisitions may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's time and attention to develop acquired products or technologies;
- incurrence of substantial debt, dilutive issuances of securities or depletion of cash to pay for acquisitions;
- higher than expected acquisition and integration costs;
- difficulty in combining the operations and personnel of any acquired businesses with our operations and personnel;
- increased amortization expenses;
- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to motivate key employees of any acquired businesses.

Further, any product candidate that we acquire may require additional development efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and other regulatory authorities.

Risks Related to Acceptance, Sales, Marketing and Competition

The commercial success of FUROSCIX and any other product candidates, if approved, depends upon attaining market acceptance by hospital networks, physicians, patients, third-party payers and the medical community.

Even if our current and future product candidates are approved for commercialization by the appropriate regulatory authorities, physicians may not prescribe our approved product candidates, in which case we would not generate the revenues we anticipate. Market acceptance of any of our product candidates by physicians, patients, third-party payers and the medical community depends on, among other things:

- our ability to provide acceptable evidence of safety and efficacy, at least equivalent to IV-level treatments;
- perceived advantages of our product candidates over alternative treatments, such as oral and IV formulations;
- relative convenience as well as ease of administration of our product candidates compared to existing treatments;
- any labeling restrictions placed upon each product candidate in connection with its approval;
- the prevalence and severity of the adverse side effects of each of our product candidates;
- the clinical indications for which each of our product candidates is approved, including any potential additional restrictions placed upon each product candidate in connection with its approval;
- prevalence of the disease or condition for which each product candidate is approved;
- the cost of treatment in relation to alternative treatments, including generic products;
- the extent to which each product is approved for use at, or included on formularies of, hospitals and managed care organizations;
- any negative publicity related to our or our competitors' products or other formulations of products that we administer subcutaneously, including as a result of any related adverse side effects;
- the effectiveness of our or any current or future collaborators' sales, marketing and distribution strategies;
- pricing and cost effectiveness; and
- the availability of coverage and adequate reimbursement by third parties.

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

- regulatory authorities may withdraw approvals of such products, require us to take our approved product off the market or ask us to voluntarily remove the product from the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;
- regulatory authorities may impose conditions under a risk evaluation and mitigation strategy, or REMS, including distribution of a medication guide to patients outlining the risks of such side effects or imposing distribution or use restrictions and/or requiring special training for prescribers of the product;
- we may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us, our collaborators or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of our products.

Successful commercialization will also depend on whether we can adequately protect against and effectively respond to any claims by holders of patents and other intellectual property rights that our products infringe upon their rights, whether any unanticipated adverse effects or unfavorable publicity develops in respect of our products, as well as the emergence of new or existing products as competition, which may be proven to be more clinically effective and cost-effective.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our lead product candidate, FUROSCIX, if approved, we may be unable to generate any revenue.

We are in the process of establishing sufficient infrastructure for the sales, marketing or distribution of FUROSCIX, if approved, and for our other product candidates, and the cost of establishing and maintaining such an organization may exceed the benefits of doing so. In order to market FUROSCIX, if approved by the FDA, we must continue to build our sales, marketing, managerial, and other non-technical capabilities or make arrangements with third parties to perform these services.

We are in the early stages of establishing a sales force to promote FUROSCIX to hospital networks, healthcare providers and third-party payers in the United States, if we obtain FDA approval. There are significant expenses and risks involved with establishing our own sales and marketing capabilities, including our ability to hire, retain and appropriately 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 could delay any product launch, which would adversely impact the commercialization of FUROSCIX. For example, if we recruit any sales representatives or establish marketing capabilities prior to the commercial launch of FUROSCIX and the commercial launch is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

We cannot be sure that we will be able to hire a sufficient number of sales representatives or that they will be effective at promoting FUROSCIX. In addition, we will need to commit significant additional management and other resources to establish and grow our sales organization. We may not be able to achieve the necessary

development and growth in a cost-effective manner or realize a positive return on our investment. We will also have to compete with other companies to recruit, hire, train and retain sales and marketing personnel.

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

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians in order to educate physicians about our product candidates, once approved; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, our business, results of operations, financial condition and prospects will be materially adversely impacted.

Beyond FUROSCIX, we intend to leverage the sales and marketing capabilities that we establish for FUROSCIX to commercialize additional product candidates, if approved by the FDA, in the United States. If we are unable to do so for any reason, we would need to expend additional resources to establish commercialization capabilities for those product candidates, if approved.

In addition, we intend to establish collaborations to commercialize our product candidates, if approved by the relevant regulatory authorities, outside of the United States. Therefore, our future success will depend, in part, on our ability to enter into and maintain collaborative relationships for such efforts, the collaborator's strategic interest in the product and such collaborator's ability to successfully market and sell the product. We cannot assure you that we will be able to establish or maintain such collaborative arrangements, or if able to do so, that they will have effective sales forces. To the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, and there can be no assurance that such efforts will be successful.

We face substantial competition, which may result in others discovering, developing or commercializing drugs before or more successfully than we do, or limit the market potential of our product candidates, if approved.

We face and will continue to face competition from other companies in the pharmaceutical and medical device industries. We believe our technology and approach of developing proprietary formulations of medicines to be delivered subcutaneously will compete with the efforts of other companies seeking to develop similar therapies. These and other pharmaceutical companies are applying significant resources and expertise to the challenges of drug delivery. Some of these current and potential future competitors may be addressing the same therapeutic areas or indications as we are. Many of our current and potential future competitors have significantly greater research and development capabilities than we do, have substantially more marketing, manufacturing, financial, technical, human and managerial resources than we do, and have more institutional experience than we do.

As a result of these factors, our competitors may obtain regulatory approval of their products more rapidly than we are able to or may obtain patent protection or other intellectual property rights that allow them to develop and commercialize their products before us and limit our ability to develop or commercialize our product candidates. Our competitors may also develop drugs or devices that are more effective, more widely used and less costly than ours, and they may also be more successful than us in manufacturing and marketing their products.

If the FDA approves a competitor's application for a product candidate or drug-device combination product before our application for a similar product candidate or drug-device combination product, and grants such competitor a period of exclusivity, the FDA may take the position that it cannot approve our 505(b)(2) application for a similar product candidate until the exclusivity period expires. Additionally, even if our 505(b)(2) application for FUROSCIX is approved first, we may still be subject to competition from other producers of heart failure and infectious disease therapies with approved products or approved 505(b)(2) NDAs for different conditions of use that would not be restricted by any grant of exclusivity to us.

The widespread acceptance of currently available therapies with which our product candidates will compete may limit market acceptance of our product candidates even if commercialized. Oral medication and IV drug delivery are currently available treatments for heart failure and are widely accepted in the medical community and have a long history of use. For example, the use of IV furosemide to treat decompensation in heart failure patients is well-established and has received widespread market acceptance. These treatments will compete with our FUROSCIX product candidate, if approved, and the established use of IV furosemide may limit the potential for FUROSCIX to receive widespread acceptance if commercialized.

Risks Related to the COVID-19 Pandemic

The ongoing and evolving COVID-19 pandemic may materially and adversely affect our business and our financial results, including the activities required for the resubmission of the FUROSCIX NDA and our intended commercial launch of FUROSCIX, if approved.

The ongoing and evolving COVID-19 pandemic may continue to have a negative impact on the global economy which could impact our business and results of operations. The continued spread of COVID-19, and any current or new variants of the virus, could adversely impact our operations. For instance, the COVID-19 pandemic may negatively affect the operations of third-party suppliers, which could result in delays or disruptions in the supply of our product candidates. Furthermore, COVID-19 may delay enrollment in any future clinical trials due to prioritization of hospital resources toward the pandemic and restrictions in travel. Some patients may be unwilling to enroll in future clinical trials or be unable to comply with clinical trial protocols if quarantines or travel restrictions impede patient movement or interrupt healthcare services. On December 3, 2020, we received a CRL from the FDA, which indicated that, among other things, the FDA needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities, two of which could not be conducted due to travel restrictions related to COVID-19. Based on our interactions with the FDA, we anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities. The FDA may not be able to conduct these required inspections in a timely manner due to restrictions on travel and public health concerns related to COVID-19. As of May 26, 2021, the FDA noted it is continuing to ensure timely reviews of applications for medical products during the COVID-19 pandemic in line with its user fee performance goals; however, the FDA may not be able to continue its current pace and review timelines could be extended, including where a pre-approval inspection or an inspection of clinical sites is required. Moreover, we recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022. Our resubmission and subsequent review by the FDA may be delayed and/or impacted by the COVID-19 pandemic. Any delay in the inspections could negatively impact our ability to obtain regulatory approval for and to commercialize our product candidates, particularly on our current projected timelines, increase our operating expenses and have a material adverse effect on our business and financial results.

In addition, COVID-19 resulted in significant governmental measures being implemented to control the spread of the virus, including quarantines, travel restrictions and business shutdowns. Since the start of the COVID-19 pandemic, we have taken precautionary measures intended to help minimize the risk of the virus to our employees, including, at the start of the pandemic, encouraging employees to periodically work remotely, suspending non-essential travel worldwide for employees and discouraging employee attendance at large gatherings. We have resumed in-office operations, however, strict protocols have been established for any employee working in the office. These measures could negatively affect our business. For instance, encouraging all employees to work remotely may disrupt our operations or increase the risk of a cybersecurity incident. COVID-19 has also caused volatility in the global financial markets and threatened a slowdown in the global economy, which may negatively affect our ability to raise additional capital on attractive terms or at all.

The extent to which COVID-19 may impact our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the duration of the pandemic, the severity of new variants of COVID-19 or the effectiveness of actions to contain and treat COVID-19, such as the effectiveness and availability of vaccines, as well as individual willingness to take the vaccine, particularly in the geographies where we or our third party suppliers or contract research organizations operate. To date, the third parties that perform our manufacturing, assembly, packaging and testing of our products have experienced delays relating to supply chain logistics but have remained operational. An extended period of global supply chain and economic disruption may continue to impact us and could materially affect our business, results of operations, access to sources of liquidity and financial condition. We cannot presently predict the scope and severity of any potential business shutdowns or disruptions. If we or any of the third parties with whom we engage, however, were to

experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively affected, which could have a material adverse impact on our business and our results of operations and financial condition.

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

During the COVID-19 public health emergency, the FDA has noted it is continuing to work to ensure timely reviews of applications for medical products during the COVID-19 pandemic in line with its user fee performance goals and conducting mission critical domestic and foreign inspections to ensure compliance of manufacturing facilities with FDA quality standards. However, the FDA may not be able to maintain this pace and delays or setbacks are possible. For example, the FDA's Center for Devices and Radiological Health noted that it has experienced some delays in meeting review timelines for certain submissions as a result of increased COVID-19 related activities. Since March 2020 when foreign and domestic inspections of facilities were largely placed on hold, the FDA has been working to resume routine surveillance, bioresearch monitoring and pre-approval inspections on a prioritized basis. Since April 2021, the FDA has conducted limited inspections and employed remote interactive evaluations, using risk management methods, to meet user fee commitments and goal dates. Ongoing travel restrictions and other uncertainties continue to impact oversight operations both domestic and abroad and it is unclear when standard operational levels will resume. The FDA is continuing to complete mission-critical work, prioritize other higher-tiered inspectional needs (e.g., for-cause inspections), and carry out surveillance inspections using risk-based approaches for evaluating public health. Should FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, and the FDA does not determine a remote interactive evaluation to be adequate, the agency has stated that it generally intends to issue, depending on the circumstances, a complete response letter or defer action on the application until an inspection can be completed. During the COVID-19 public health emergency, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the ongoing COVID-19 pandemic and may experience delays in their regulatory activities. On December 3, 2020, we received a CRL from the FDA, which indicated that, among other things, the FDA needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities, two of which could not be conducted due to travel restrictions related to COVID-19. We cannot guarantee that the FDA will be able to complete the inspection or take other necessary actions with respect to our NDA in a timely fashion. A delay in the review of our NDA could have a material impact on our results of operations.

Risks Related to Manufacturing, Supply and Use

If we fail to produce FUROSCIX in the volumes that we require on a timely basis, we may face delays in our commercialization efforts, if it is approved.

We do not currently own or operate manufacturing facilities for the production of any of our product candidates, including FUROSCIX. We currently depend on third parties to manufacture our product candidates, including the drug formulation and device components for FUROSCIX, and expect to continue to rely on such third parties to produce the final commercial product, if approved. Any future curtailment in the availability of materials could result in production or other delays with consequent adverse effects on us. In addition, because regulatory authorities must generally approve raw material sources for pharmaceutical products, changes in raw material suppliers may result in production delays or higher raw material costs.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Pharmaceutical companies often encounter difficulties in production, particularly in scaling up production, of their products. These problems include manufacturing difficulties relating to production costs and yields, quality control, including stability of the product and quality assurance testing, shortages of qualified personnel, as well as compliance with federal, state and foreign regulations. If we are unable to demonstrate stability in accordance with commercial requirements, or if our manufacturers were to encounter difficulties or otherwise fail to comply with their obligations to us, our ability to obtain FDA approval and market our product candidates would be jeopardized. In addition, any delay or interruption in the supply of clinical trial supplies could delay or prohibit the completion of our bioequivalence

and/or clinical trials, increase the costs associated with conducting our bioequivalence and/or clinical trials and, depending upon the period of delay, require us to commence new trials at significant additional expense or to terminate a trial.

Manufacturers of combination products need to comply with both pharmaceutical current good manufacturing practice requirements, or cGMPs, and medical device Quality System Regulations, or QSRs, enforced by the FDA through its facilities inspection programs. These requirements include, among other things, quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our product candidates may be unable to comply with these cGMP and QSR requirements and with other FDA and foreign regulatory requirements. For certain commercial prescription drug products, manufacturers and other parties involved in the supply chain must also meet chain of distribution requirements and build electronic, interoperable systems for product tracking and tracing and for notifying the FDA of counterfeit, diverted, stolen and intentionally adulterated products or other products that are otherwise unfit for distribution in the United States. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval. If the safety of any of our product candidates is compromised due to failure to adhere to applicable laws or for other reasons, we may not be able to successfully commercialize such product candidate, and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay in the commercialization of our product candidates, entail higher costs or even prevent us from effectively commercializing our product candidates.

Even if we successfully obtain approval for, produce and distribute FUROSCIX, its success will be dependent on the proper use of FUROSCIX by patients, healthcare professionals and caregivers.

While we believe FUROSCIX can be self-administered by patients, caregivers and healthcare practitioners in a clinic and home environment, we cannot control the successful use of the product by patients, caregivers and healthcare professionals. We make use of packaging and instructions for use to provide guidance to users of FUROSCIX, but we cannot ensure that the product will be used properly.

For example, in our Phase 3 Product Design Clinical Validation study, there were four cases in which the FUROSCIX administered doses fell below the predefined criteria. One case was determined to be a dispensing failure, and the remaining three cases were determined to be caused by an undetected incomplete filling of our first generation device, likely due to user errors. As a result, the study did not meet its specified primary endpoints. If we are not successful in promoting the proper use of FUROSCIX, if approved, by patients, healthcare professionals and caregivers, we may not be able to achieve market acceptance or effectively commercialize FUROSCIX.

Even in the event of proper use of FUROSCIX by patients, healthcare professionals and caregivers, individual devices may fail.

We have increased manufacturing capabilities for production of FUROSCIX, but increasing scale of production inherently creates increased risk of manufacturing errors. We may not be able to adequately inspect every device that is produced, and it is possible that individual devices may fail to perform as designed. Manufacturing errors could negatively impact market acceptance of FUROSCIX, result in negative press coverage, or increase the risk that we may be sued.

Risks Related to Our Financial Position and Capital Requirements

Risks Related to Past Financial Condition

We have a history of significant operating losses and expect to incur significant and increasing losses for the foreseeable future; we may never achieve or maintain profitability.

We do not expect to generate revenue or profitability that is necessary to finance our operations in the short term. We incurred net losses of \$32.2 million and \$28.0 million for the years ended December 31, 2020 and 2021, respectively. In addition, our accumulated deficit as of December 31, 2021 was \$189.7 million. To date, we have not commercialized any products or generated any revenues from the sale of products, and absent the realization of sufficient revenues from product sales, if any, of our current or future product candidates, if approved, we may never attain profitability in the future. We have devoted substantially all of our financial resources and efforts to

date to research and development, including preclinical studies and our clinical trials, and preparation for commercialization of our lead product candidate, FUROSCIX, if approved.

We anticipate that our expenses will increase substantially if and as we:

- continue pursuing regulatory approval of FUROSCIX incorporating West's proprietary on-body infusor;
- build our sales, marketing, distribution and other commercial infrastructure and manufacture commercial inventory in anticipation of the potential regulatory approval of FUROSCIX;
- initiate and continue research, preclinical and clinical development efforts for FUROSCIX and any additional or future product candidates;
- seek to identify additional product candidates;
- seek regulatory and marketing approvals for other product candidates that successfully complete clinical trials;
- manufacture larger quantities of product candidates for clinical development and, potentially, commercialization;
- maintain, expand and protect our intellectual property portfolio;
- hire and retain additional personnel, such as clinical, quality control, commercial, scientific and sales and marketing personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and help us comply with our obligations as a public company; and
- add equipment and physical infrastructure to support our research and development.

Our ability to become and remain profitable depends on our ability to generate revenue. We do not expect to generate significant revenue unless and until we are able to obtain marketing approval for, and successfully commercialize, FUROSCIX or any other product candidates that we may develop. Successful commercialization will require achievement of key milestones, including completing clinical trials of our product candidates that are under clinical development, obtaining marketing approval for our product candidates, manufacturing, marketing and selling those products for which we, or any of our future collaborators, may obtain marketing approval, satisfying any post-marketing requirements and obtaining reimbursement for our products from private insurance or government payers. Because of the uncertainties and risks associated with these activities, we are unable to accurately predict the timing and amount of revenues, and if or when we might achieve profitability. We and any future collaborators may never succeed in these activities and, even if we or any future collaborators do, we may never generate revenues that are large enough for us 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 would depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations. If we continue to suffer losses as we have in the past, investors may not receive any return on their investment and may lose their entire investment.

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

We commenced operations in 2013. Our operations to date have been limited to financing and staffing our company, developing our technology and conducting preclinical research and clinical trials for our product candidates. We resubmitted our NDA for FUROSCIX with the FDA on June 30, 2020. The resubmission was a response to a CRL from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA, which required device modifications necessary to advance the development of FUROSCIX using the then current technology, we decided to transition to our next generation device, which is being developed through a partnership with West, using its proprietary on-body infusor. On December 3, 2020, we received a CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. There can be no assurance that our

resubmitted FUROSCIX NDA, if submitted, will be approved by the FDA. We have not yet demonstrated an ability to obtain marketing approvals, manufacture a commercial-scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to transition from a company with a development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

In addition, we expect our financial condition and operating results to continue to fluctuate significantly from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control.

We have not generated any revenue from FUROSCIX and may never be profitable.

Our ability to become profitable depends upon our ability to generate revenue. To date, we have not generated any revenue from FUROSCIX, and we do not know when, or if, we will generate any revenue.

There can be no guarantee that the FDA will approve FUROSCIX in a timely fashion, if at all. We do not expect to generate significant revenue unless or until we obtain marketing approval of, and begin to sell, FUROSCIX. Our ability to generate revenue depends on a number of factors, including, but not limited to, our ability to:

- obtain marketing approval for FUROSCIX;
- set an acceptable price for FUROSCIX, if approved;
- obtain commercial quantities of FUROSCIX, if FUROSCIX is approved, at acceptable cost levels;
- commercialize FUROSCIX, if approved, by developing our own sales force for commercialization in the United States or in other key territories by entering into partnership or co-promotion arrangements with third parties;
- obtain third-party coverage or adequate reimbursement for FUROSCIX, if approved;
- achieve market acceptance of FUROSCIX, if approved, in the medical community and with third-party payers, including placement in accepted clinical guidelines for the conditions for which FUROSCIX is intended to target; and
- delay the introduction by third parties of alternate versions of FUROSCIX, if approved.

If FUROSCIX is approved for commercial sale, we expect to incur significant sales and marketing costs as we prepare for its commercialization. Even if we receive marketing approval and expend these costs, FUROSCIX may not be a commercially successful device-drug combination. We may not achieve profitability soon after generating product sales, if ever. If we are unable to generate product revenue, we will not become profitable and may be unable to continue operations without continued funding.

Risks Related to Future Financial Condition

We may need additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.

Developing our product programs is a time-consuming, expensive and uncertain process that takes years to complete. We resubmitted our NDA for FUROSCIX to the FDA on June 30, 2020. On July 23, 2020, the FDA accepted the resubmission of our NDA and assigned a PDUFA target action date of December 30, 2020 for completion of its review of the NDA; however, on December 3, 2020, we received a CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. In addition, if FUROSCIX or any of our other product candidates are approved, we may incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. 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 may be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

We plan to continue to use our existing unrestricted cash primarily for development activities related to the advancement of FUROSCIX, pre-commercial planning and commercialization of FUROSCIX, if approved, automation necessary to increase capacity for our delivery technology, research and development, and for working capital and other general corporate purposes. We will be required to expend significant funds in order to commercialize FUROSCIX, as well as other product candidates we may seek to develop. In any event, our existing unrestricted cash may not be sufficient to fund all of the efforts that we plan to undertake, including the development of any of our product candidates. Accordingly, we may be required to obtain further funding through public or private equity offerings, debt financings, royalty-based financing arrangements, collaborations and licensing arrangements or other sources. We do not have any committed external source of funds. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy.

Our future funding requirements, both short-term and long-term, will depend on many factors, including:

- the time and expense required to resubmit an NDA for FUROSCIX;
- the outcome, timing and costs of completing development and seeking regulatory approvals for FUROSCIX and other product candidates that we may develop;
- the costs of commercialization activities for FUROSCIX, if approved, and any other of our product candidates that receive marketing approval, including the costs and timing of establishing product sales, marketing, distribution and manufacturing capabilities;
- subject to receipt of marketing approval, revenue, if any, received from commercial sales of FUROSCIX or any other of our current and future product candidates;
- the pricing and reimbursement of FUROSCIX, if approved, and of other product candidates that may be approved;
- the number of future product candidates that we pursue and their development requirements;
- the scope, progress, timing, costs and results of clinical trials of, and research and preclinical development efforts for, our other product candidates;
- our ability to enter into, and the terms and timing of, any collaborations, licensing or other arrangements;
- our headcount growth and associated costs as we establish a commercial infrastructure and continue our research and development activities;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights including enforcing and defending intellectual property related claims; and
- the costs of operating as a public company.

We may not have cash available to us in an amount sufficient to enable us to make interest or principal payments on our indebtedness when due.

In September 2019, we restructured our loan and security agreement with SLR Investment Corp. (f/k/a Solar Capital Ltd.) and Silicon Valley Bank, providing for term loans of \$20.0 million. All obligations under our secured loan are secured by substantially all of our existing property and assets (including our intellectual property assets), subject to certain exceptions. This debt financing may create additional financial risk for us, particularly if our business or prevailing financial market conditions are not conducive to paying off or refinancing our outstanding debt obligations at maturity.

Failure to satisfy our current and future debt obligations, including covenants to take or avoid specific actions, under our secured credit facility could result in an event of default and, as a result, our lenders could accelerate all of the amounts due. In the event of an acceleration of amounts due under our secured credit facility as a result of an event of default, we may not have sufficient funds or may be unable to arrange for additional financing to repay our indebtedness while still pursuing our current business strategy. In addition, our lenders could seek to enforce their security interests in any collateral securing such indebtedness.

Risks Related to Government Regulation

Risks Related to Ongoing Regulatory Obligations

If we are unable to achieve and maintain coverage and adequate levels of reimbursement for our product candidates, if approved, their commercial success may be severely hindered.

Successful sales of FUROSCIX and any other product candidates that receive regulatory approval depend on the availability of adequate coverage and reimbursement rates from third-party payers, including governmental healthcare programs, such as Medicare and Medicaid, commercial payers, and health maintenance organizations. Patients who are prescribed medications for the treatment of their conditions generally rely on third-party payers to reimburse all or part of the costs associated with their prescription drugs. Coverage and adequate reimbursement rates from governmental healthcare programs and commercial payers is critical to new product acceptance. Coverage decisions may depend upon clinical and economic standards that disfavor new products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Even if we obtain coverage for a given product, the resulting reimbursement rates might not be sufficient to achieve or sustain profitability or may require co-payments that patients find unacceptably high, thereby discouraging their use of our products. Additionally, third-party payers may not cover, or provide adequate reimbursement for, long-term follow-up evaluations required following the use of our product candidates. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products.

In addition, the market for FUROSCIX and any other product candidates that we attempt to commercialize will depend significantly on access to third-party payers' drug formularies, or lists of medications for which third-party payers provide coverage. The industry competition to be included in such formularies often leads to downward pricing pressures on pharmaceutical companies. Also, third-party payers may refuse to include a particular branded drug in their formularies, or may apply formulary controls (e.g., prior authorization or step therapy requirements, higher co-payments) to restrict patient access to a branded drug when a less costly generic equivalent or other alternative is available.

Third-party payers, whether foreign or domestic, and whether governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In the United States, the principal decisions about reimbursement for new medications are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services, or HHS. CMS decides whether and to what extent products will be covered and reimbursed under Medicare. Third-party payers often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, no uniform policy for coverage and reimbursement of products exists among third-party payers. Reimbursement by a third-party payer may depend upon a number of factors, including the third-party payer's determination that a medication is safe, effective and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and neither cosmetic, experimental nor investigational. Therefore, coverage of and reimbursement rates for products can differ significantly from payer to payer. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific, clinical, and cost-effectiveness data for the use of our products to each payer separately, with no assurance that coverage will be applied consistently or obtained in the first instance.

There may also be delays in obtaining coverage for newly approved drugs, and coverage may be more limited than the indications for which the drug is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Reimbursement rates may vary, for example, according to the use of the product and the clinical setting in which it is used. Reimbursement rates may also be based on reimbursement levels already set for lower cost drugs or may be incorporated into existing payments for other services. We may also increasingly be required to provide discounts on our products to governmental healthcare programs, commercial payers and health maintenance organizations.

Further, we believe that future coverage and reimbursement rates will likely be subject to increased restrictions both in the United States and in international markets. Third-party coverage for our product candidates for which we may receive regulatory approval may not be available or adequate in either the United States or international markets, which could have a material adverse effect on our business, results of operations, financial condition and prospects.

If the FDA or other applicable regulatory authorities approve generic products that compete with any of our product candidates, the sales of our product candidates, if approved, could be adversely affected.

Once an NDA, including a Section 505(b)(2) application, is approved, the product covered becomes a "listed drug" which can be cited by potential competitors in support of approval of an abbreviated new drug application, or ANDA. FDA regulations and other applicable regulations and policies provide incentives to manufacturers to create modified versions of a drug to facilitate the approval of an ANDA or other application for similar substitutes. If these manufacturers demonstrate that their product has the same active ingredient(s), dosage form, strength, route of administration, and conditions of use, or labeling, as our product candidate, they might only be required to conduct a relatively inexpensive study to show that their generic product is absorbed in the body at the same rate and to the same extent as, or is bioequivalent to, our product candidate (and in some cases even this limited bioequivalence testing can be waived by the FDA). Competition from generic equivalents to our product candidates could substantially limit our ability to generate revenues and therefore to obtain a return on the investments we have made in our product candidates.

An NDA submitted under 505(b)(2) may subject us to a patent infringement lawsuit that would delay or prevent the review or approval of FUROSCIX.

Section 505(b)(2) permits the submission of an NDA where at least some of the information required for approval comes from preclinical studies and/or clinical trials that were not conducted by, or for, the applicant and for which the applicant has not obtained a right of reference. An NDA under 505(b)(2) would enable us to reference published literature and/or the FDA's previous findings of safety and effectiveness for a previously approved drug.

For NDAs submitted under section 505(b)(2), the patent certification and related provisions of the Hatch-Waxman Act apply. Accordingly, if we rely for approval on the safety or effectiveness information for a previously approved drug, referred to as a listed drug, we will be required to include patent certifications in our 505(b)(2) application regarding any patents covering the listed drug. If there are patents listed in the FDA publication Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book, for the listed drug, and we seek to obtain approval prior to the expiration of one or more of those patents, we will be required to submit a Paragraph IV certification indicating our belief that the relevant patents are invalid, unenforceable or will not be infringed by the manufacture, use or sale of the product that is the subject of our 505(b)(2) application. Otherwise, our 505(b)(2) application cannot be approved by the FDA until the expiration of any patents listed in the Orange Book for the listed drug. In connection with our NDA for FUROSCIX that we resubmitted to the FDA in July 2020, we certified that there were no unexpired patents for furosemide contained in the Orange Book.

In addition, a 505(b)(2) application will not be approved until any non-patent exclusivity listed in the Orange Book for the listed drug, or for any other drug with the same, protected conditions of approval as our product, has expired. The FDA also may require us to perform one or more additional clinical trials or measurements to support the change from the listed drug, which could be time consuming and could substantially delay our achievement of regulatory approval. The FDA also may reject any future 505(b)(2) submissions and require us to submit traditional NDAs under 505(b)(1), which would require extensive data to establish safety and effectiveness of the product for the proposed use and could cause delay and additional costs. Or the FDA could reject any future 505(b)(2) application and require us to submit an ANDA if, before the submission of our 505(b)(2) application, the FDA approves an application for a product that is pharmaceutically equivalent to ours. These factors, among others, may limit our ability to commercialize our product candidates successfully.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. From time to time and in the future, our operations may involve the use of hazardous and flammable materials, including chemicals and biological materials, and may also produce hazardous waste products. Even if we contract with third parties for the disposal of these materials and waste products, we cannot completely eliminate the risk of contamination or injury resulting from these materials. In the event of contamination or injury resulting from the use or disposal of our hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

We maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, but this insurance may not provide adequate coverage against potential liabilities. However, we do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us.

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

We will need to obtain FDA approval of any proposed product names, and any failure or delay associated with such approval may adversely impact our business.

Any name we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a trademark registration from the U.S. Patent and Trademark Office, or USPTO. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. The FDA may object to any product name we submit if it believes the name inappropriately implies medical claims. If the FDA objects to any of our proposed product names, we may be required to adopt an alternative name for our product candidates. If we adopt an alternative name, we would lose the benefit of any existing trademark applications for such product candidate, and may be required to expend significant additional resources in an effort to identify a suitable product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

Laws and regulations governing any international operations we may have in the future may preclude us from developing, manufacturing and selling certain products outside of the United States and require us to develop and implement costly compliance programs.

If we expand our operations outside of the United States, we must dedicate additional resources to comply with numerous laws and regulations in each jurisdiction in which we plan to operate. The Foreign Corrupt Practices Act, or FCPA, prohibits offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to a non-United States government official in order to influence official action, or otherwise obtain or retain business. The FCPA also obligates companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Our business is heavily regulated and therefore involves significant interaction with public officials, which may in the future include officials of non-United States governments. Additionally, in many other countries, the healthcare providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, our dealings with these prescribers and purchasers would be subject to regulation under the FCPA. Recently the Securities and Exchange Commission, or SEC, and Department of Justice have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies. There is no certainty that all of our employees, agents, suppliers, manufacturers, contractors, or collaborators, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. If we expand our presence outside of the United States, it will require us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing, or selling certain products and product candidates outside of the United States, which could limit our growth potential and increase our development costs.

The failure to comply with anti-bribery and anti-corruption laws, and other laws governing international business practices, may result in substantial fines, criminal sanctions against us, our officers, or our employees, the closing down of facilities, including those of our suppliers and manufacturers, requirements to obtain export licenses,

cessation of business activities in sanctioned countries, implementation of heightened monitoring by governmental authorities, and prohibitions on the conduct of our business. The SEC also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, such as the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after coverage and reimbursement have been obtained. Reference pricing used by various countries and parallel distribution or arbitrage between low-priced and high-priced countries, can further reduce prices. To obtain reimbursement or pricing approval in some countries, we, or any future collaborators, may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidates to other available therapies, which is time-consuming and costly. If reimbursement of our product candidates is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed.

Any of our product candidates for which we obtain marketing approval in the future will be subject to ongoing requirements and continued regulatory review, could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to substantial penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products following approval.

Any of our product candidates for which we, or any future collaborators, obtain marketing approval, as well as the manufacturing processes, post-approval studies and measures, labeling, advertising and promotional activities for such product, among other things, will be subject to ongoing requirements of and review by the FDA, the European Medicines Agency, or EMA, and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, including the requirement to implement a Risk Evaluation and Mitigation Strategy.

The FDA or the EMA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of a product. The FDA and other agencies, including the Department of Justice, closely regulate and monitor the post-approval marketing and promotion of products to ensure that they are manufactured, marketed and distributed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use and if we, or any future collaborators, do not market any of our products for which we, or they, receive marketing approval in a manner consistent with the approved labeling, we, or they, may be subject to warnings or enforcement action for off-label marketing. Violation of the FDCA and other statutes, including the False Claims Act, relating to the promotion and advertising of prescription drugs may lead to investigations or allegations of violations of federal and state healthcare fraud and abuse laws and state consumer protection laws.

In response to the COVID-19 pandemic, the United States passed the CARES Act. Throughout the COVID-19 outbreak, there has been public concern over the availability and accessibility of critical medical products, and the CARES Act enhances the FDA's existing authority with respect to drug shortage measures. Under the CARES Act, we must have in place a risk management plan that identifies and evaluates the risks to the supply of any approved drugs for certain serious diseases or conditions for each establishment where the drug or API is manufactured. The risk management plan will be subject to FDA review during an inspection. If we obtain any product approvals and experience shortages in the supply of our marketed products, our results could be materially impacted.

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

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

We may be liable if the FDA or other U.S. enforcement agencies determine we have engaged in the off-label promotion of our products or have disseminated false or misleading labeling, advertising or promotional materials.

Our promotional materials and training methods must comply with the FDA and other applicable laws and regulations, including laws and regulations prohibiting marketing claims that promote the off-label use of our products or that omit material facts or make false or misleading statements about the safety or efficacy of our products. We are responsible for training our marketing and sales force against promoting our product candidates for off-label use, but healthcare providers may use our products off-label, as the FDA does not restrict or regulate a physician's choice of treatment within the practice of medicine. The FDA also could conclude that a claim is misleading if it determines that there are inadequate nonclinical and/or clinical data supporting the claim, or if a claim fails to reveal material facts about the safety or efficacy of our products. If the FDA determines that our promotional labeling or advertising materials promote an off-label use or make false or misleading claims, it could request that we modify our promotional materials or training content or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fines and criminal penalties.

It is also possible that other federal, state or foreign enforcement authorities might take action if they determine that our promotional or training materials promote an unapproved use or make false or misleading claims, which could result in significant fines or penalties. Although our policy is to refrain from statements that could be considered off-label promotion of our products or false or misleading claims, the FDA or another regulatory agency could disagree with the manner in which we advertise and promote our products. Violations of the FDCA may also lead to investigations alleging violations of federal and state health care fraud and abuse laws, as well as state consumer protection laws, which may lead to costly penalties and may adversely impact our business. Recent court decisions have impacted FDA's enforcement activity regarding off-label promotion in light of First Amendment considerations; however, there are still significant risks in this area, in part due to the potential for False Claims Act exposure. In addition, the off-label use of our products may increase the risk of product liability claims. Product liability claims are expensive to defend and could result in substantial damage awards against us and harm our reputation.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize FUROSCIX and may affect the prices we may obtain.

In the United States and many foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of FUROSCIX, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, collectively referred to as the ACA, is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to our product candidates are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics that are inhaled, infused, instilled, implanted or injected;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- expansion of potential liability under federal healthcare fraud and abuse laws, including the False Claims Act, or FCA, and the Anti-Kickback Statute, or AKS;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% (70% as of January 1, 2019 due to the Bipartisan Budget Act of 2018, or the BBA) point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the 340B drug pricing program;
- new requirements to annually report to CMS certain data on payments and other transfers of value to physicians and teaching hospitals;
- a requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

There remain judicial and Congressional challenges to certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have been signed into law. The 2020 federal spending package permanently eliminated, effective January 1, 2020, the ACA-mandated “Cadillac” tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. The BBA, among other things, amended the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole.” In December 2018, CMS published a new final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment.

Further, the Tax Cuts and Jobs Act of 2017, or Tax Act, includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate.” On 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 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 such litigation and other efforts to repeal and replace the ACA will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013, and due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022 due to the COVID-19 pandemic. Following the temporary suspension, a 1% payment reduction will occur beginning April 1, 2022 through June 30, 2022, and the 2% payment reduction will resume on July 1, 2022. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These laws and similar future initiatives may result in additional reductions in Medicare and other healthcare funding, which could have an adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

There also has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, President Biden signed an Executive Order on July 9, 2021 affirming the administration’s policy to (i) support legislative reforms that would lower the prices of prescription drug and biologics, including by allowing Medicare to negotiate drug prices, by imposing inflation caps, and, by supporting the development and market entry of lower-cost generic drugs and biosimilars; and (ii) support the enactment of a public health insurance option. Among other things, the Executive Order also directs HHS to provide a report on actions to combat excessive pricing of prescription drugs, enhance the domestic drug supply chain, reduce the price that the Federal government pays for drugs, and address price gouging in the industry; and directs the FDA to work with states and Indian Tribes that propose to develop section 804 Importation Programs in accordance with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, and the FDA’s implementing regulations. FDA released such implementing regulations on September 24, 2020, which went into effect on November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. On September 25, 2020, CMS stated drugs imported by states under this rule will not be eligible for federal rebates under Section 1927 of the Social Security Act and manufacturers would not report these drugs for “best price” or Average Manufacturer Price purposes. Since these drugs are not considered covered outpatient drugs, CMS further stated it will not publish a National Average Drug Acquisition Cost for these drugs. If implemented, importation of drugs from Canada may materially and adversely affect the price we receive for any of our product candidates. Further, on November 20, 2020 CMS issued an Interim Final Rule implementing the Most Favored Nation, or MFN, Model

under which Medicare Part B reimbursement rates would have been calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. However, on December 29, 2021 CMS rescinded the MFN rule. Additionally, on November 30, 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 1, 2026. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, both the Biden administration and Congress have indicated that they will continue to seek new legislative measures to control drug costs.

In addition, there have been several changes to the 340B drug pricing program, which imposes ceilings on prices that drug manufacturers can charge for medications sold to certain health care facilities. On December 27, 2018, the District Court for the District of Columbia invalidated a reimbursement formula change under the 340B drug pricing program, and CMS subsequently altered the FYs 2019 and 2018 reimbursement formula on specified covered outpatient drugs. The court ruled this change was not an “adjustment” which was within the Secretary’s discretion to make but was instead a fundamental change in the reimbursement calculation. However, most recently, on July 31, 2020, the U.S. Court of Appeals for the District of Columbia Circuit overturned the district court’s decision and found that the changes were within the Secretary’s authority. On September 14, 2020, the plaintiffs-appellees filed a Petition for Rehearing En Banc (i.e., before the full court), but was denied on October 16, 2020. Plaintiffs-appellees filed a petition for a writ of certiorari at the Supreme Court on February 10, 2021. On Friday July 2, 2021, the Supreme Court granted the petition. It is unclear how these developments could affect covered hospitals who might purchase our future products and affect the rates we may charge such facilities for our approved products in the future, if any.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Additionally, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to an order entered by the U.S. District Court for the District of Columbia, the portion of the rule eliminating safe harbor protection for certain rebates related to the sale or purchase of a pharmaceutical product from a manufacturer to a plan sponsor under Medicare Part D has been delayed to January 1, 2023. Further, implementation of this change and new safe harbors for point-of-sale reductions in price for prescription pharmaceutical products and pharmacy benefit manager service fees are currently under review by the Biden administration and may be amended or repealed. While some of these and other measures may require additional authorization to become effective, and the Biden administration may reverse or otherwise change these measures, Congress has indicated that they will continue to seek new legislative and/or administrative measures to control drug costs.

We may face competition in the United States for our product candidates, if approved, from therapies sourced from foreign countries that have placed price controls on pharmaceutical products. In the United States, the FDA issued a final guidance document on October 1, 2020 outlining a pathway for manufacturers to obtain an additional National Drug Code for an FDA-approved drug that was originally intended to be marketed in a foreign country and that was authorized for sale in that foreign country. The market implications of the final guidance are unknown at this time. Proponents of drug reimportation may attempt to pass legislation that would directly allow reimportation under certain circumstances. Legislation or regulations allowing the reimportation of drugs, if enacted, could decrease the price we receive for any products that we may develop and adversely affect our future revenues and prospects for profitability.

We expect that the ACA, as well as 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 payers. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

Our relationships with customers and payers will be subject to applicable anti-kickback, fraud and abuse, transparency, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens, and diminished profits and future earnings.

Healthcare providers, including physicians, and third-party payers will play a primary role in the recommendation and prescription of any products for which we obtain marketing approval. Our future arrangements with principal investigators, healthcare professionals, consultants, third-party payers and customers, if any, will subject us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws and regulations 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. The laws that will affect our operations include, but are not limited to, the following:

- ***Anti-Kickback Statute.*** The federal AKS prohibits, among other things, individuals or entities from knowingly and willfully soliciting, offering, receiving or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, lease, order or recommendation or arranging of 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. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers, on the one hand, and prescribers, purchasers and formulary managers, on the other. Although there are several statutory exceptions and regulatory safe harbors to the AKS protecting certain common activities from prosecution, they are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing or ordering of products may be subject to scrutiny if they do not qualify for an exception or safe harbor. A person can be found guilty of violating the federal AKS without actual knowledge of the statute or specific intent to violate it. Violations may result in significant civil, criminal and administrative fines and penalties for each violation, plus up to three times the remuneration involved, imprisonment, and exclusion from government healthcare programs. In addition, the government may assert that a claim including items or services resulting from a violation of the federal AKS constitutes a false or fraudulent claim for purposes of the federal FCA or federal Civil Monetary Penalties Law.
- ***False Claims Laws.*** The federal civil and criminal false claims laws and civil monetary penalty laws, including the FCA, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment to, or approval by Medicare, Medicaid, or other federal healthcare programs, knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim or an obligation to pay or transmit money to the federal government, or knowingly concealing or knowingly and improperly avoiding or decreasing or concealing an obligation to pay money to the federal government. Manufacturers can be held liable under the FCA even when they do not submit claims directly to government payers if they are deemed to “cause” the submission of false or fraudulent claims. The FCA also permits a private individual acting as a “whistleblower” to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery. When an entity is determined to have violated the FCA, the government may impose civil fines and penalties for each false claim, plus treble damages, and exclude the entity from participation in Medicare, Medicaid and other federal healthcare programs. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies’ marketing of products for unapproved, and thus non-reimbursable, uses.

- **HIPAA.** The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payer (i.e., public or private), and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false, fictitious, or fraudulent statements, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the federal AKS, a person does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Additionally, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and its implementing regulations, imposes obligations on covered healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform services on their behalf that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information. Such obligations include mandatory contractual terms and physical, technical and administrative safeguards, with respect to maintaining the privacy and security of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorneys' fees and costs associated with pursuing federal civil actions.
- **Transparency Requirements.** The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, medical devices, biologics, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to CMS information related to payments or transfers of value made to physicians (defined to include doctors of medicine or osteopathy, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as information regarding ownership and investment interests held by the physicians described above and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made during the previous year to certain non-physician providers such as physician assistants and nurse practitioners.
- **Analogous State and Foreign Laws.** Analogous state and foreign fraud and abuse laws and regulations, such as state anti-kickback and false claims laws, can apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements, and claims involving healthcare items or services reimbursed by non-governmental third-party payers, and are generally broad and are enforced by many different federal and state agencies as well as through private actions. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources. In some cases, state laws require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or drug pricing information, while other state and local laws require registration of pharmaceutical sales representatives. State and foreign laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not pre-empted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge and may not comply under one or more of such laws, regulations, and guidance. Law enforcement authorities are increasingly focused on enforcing fraud and abuse laws, and it is possible that some of our practices may be challenged under these laws. Efforts to ensure that our business arrangements with third parties, and our business generally, will comply with applicable healthcare laws and regulations will involve substantial costs. Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that our business practices, including our arrangements with physicians and other healthcare providers, some of whom received stock options as compensation for services provided, may be subject to challenge under current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties,

damages, fines, individual imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, disgorgement, 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, contractual damages, diminished profits and future earnings, reputational harm, and the curtailment or restructuring of our operations. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by applicable regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Efforts to ensure that our business arrangements with third parties, and our business generally, will comply with applicable healthcare laws and regulations will involve substantial costs, including but not limited to, building out appropriate compliance program policies and procedures, processes and systems to promote ethical and compliant conduct. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. The shifting compliance environment and the need to build and maintain robust and expandable systems to comply with multiple jurisdictions with different compliance and/or reporting requirements increases the possibility that a healthcare company may run afoul of one or more of the requirements.

Failure to comply with health and data protection laws and regulations could lead to 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.

We and any potential collaborators may be subject to federal, state, and foreign data protection laws and regulations (i.e., laws and regulations that address privacy and data security). In the United States, numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. 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, as amended by HITECH. Depending on the facts and circumstances, we could be subject to civil, criminal, and administrative penalties if we knowingly obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

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, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with these laws and regulations could result in government enforcement actions (which could include civil, criminal and administrative penalties), private litigation, and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects, employees and other individuals about whom we or our potential collaborators obtain personal information, as well as the providers who share this information with us, may limit our ability to collect, use and disclose the 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 and could result in adverse publicity that could harm our business.

Risks Related to Our Intellectual Property

Risks Related to Protecting our Intellectual Property

Our success depends on our ability to protect our intellectual property and proprietary technology, as well as the ability of our collaborators to protect their intellectual property and proprietary technology.

Our success depends in large part on our ability to obtain and maintain patent protection and trade secret protection in the United States and other countries with respect to our proprietary product candidates. If we do not adequately protect our intellectual property rights, competitors may be able to erode or negate any competitive

advantage we may have, which could harm our business and ability to achieve profitability. To protect our proprietary position, we file patent applications in the United States and abroad related to our novel product candidates that are important to our business; we also license or purchase patent applications filed by others. The patent application and approval process is expensive and time-consuming. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner.

Agreements through which we license patent rights may not give us control over patent prosecution or maintenance, so that we may not be able to control which claims or arguments are presented and may not be able to secure, maintain, or successfully enforce necessary or desirable patent protection from those patent rights. We have not had and do not have primary control over patent prosecution and maintenance for certain of the patents and patent applications we license, and therefore cannot guarantee that these patents and applications will be prosecuted or maintained in a manner consistent with the best interests of our business. We are reliant on patents and patent applications that we license for our product candidates and failure by owners of this intellectual property to enforce claims could have a negative impact on our business. We cannot be certain that patent prosecution and maintenance activities by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents.

If the scope of the patent protection we or our licensors obtain is not sufficiently broad, we may not be able to prevent others from developing and commercializing technology and products similar or identical to ours. The degree of patent protection we require to successfully compete in the marketplace may be unavailable or severely limited in some cases and may not adequately protect our rights or permit us to gain or keep any competitive advantage. We cannot provide any assurances that any of our licensed patents have, or that any of our pending licensed patent applications that mature into issued patents will include, claims with a scope sufficient to protect our current and future product candidates or otherwise provide any competitive advantage, nor can we assure you that our licenses are or will remain in force. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Furthermore, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally twenty years after it is filed. Various extensions may be available; however, the life of a patent, and the protection it affords, is limited. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our licensed patent portfolio may not provide us with adequate and continuing patent protection sufficient to exclude others from commercializing products similar to our product candidates. In addition, the patent portfolio licensed to us is, or may be, licensed to third parties, such as outside our field, and such third parties may have certain enforcement rights. Thus, patents licensed to us could be put at risk of being invalidated or interpreted narrowly in litigation filed by or against another licensee or in administrative proceedings brought by or against another licensee in response to such litigation or for other reasons.

Even if they are unchallenged, our owned and licensed patents and pending patent applications, if issued, may not provide us with any meaningful protection or prevent competitors from designing around our patent claims to circumvent our or our licensors' patents by developing similar or alternative technologies or therapeutics in a non-infringing manner. For example, a third party may develop a competitive therapy that provides benefits similar to one or more of our product candidates but that uses a formulation and/or a device that falls outside the scope of our patent protection or license rights. If the patent protection provided by the patents and patent applications we hold or pursue with respect to our product candidates is not sufficiently broad to impede such competition, our ability to successfully commercialize our product candidates could be negatively affected, which would harm our business. Similar risks would apply to any patents or patent applications that we may own or in-license in the future.

We, or any future partners, collaborators, or licensees, may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, we may miss potential opportunities to strengthen our patent position.

It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example, with respect to proper priority claims, inventorship, claim scope, or requests for patent term adjustments. If we or our partners, collaborators, licensees, or licensors, whether current or future, fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our partners, collaborators, licensees, or licensors, are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If

there are material defects in the form, preparation, prosecution, or enforcement of our patents or patent applications, such patents may be invalid and/or unenforceable, and such applications may never result in valid, enforceable patents. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain. No consistent policy regarding the breadth of claims allowed in biotechnology and pharmaceutical patents has emerged to date in the United States or in many foreign jurisdictions. In addition, the determination of patent rights with respect to pharmaceutical compounds commonly involves complex legal and factual questions, which has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain.

Moreover, because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, our patents or pending patent applications may be challenged in the courts or patent offices in the United States and abroad. There is no assurance that all of the potentially relevant prior art relating to our patents and patent applications has been found. If such prior art exists, it may be used to invalidate a patent, or may prevent a patent from issuing from a pending patent application. For example, such patent filings may be subject to a third-party preissuance submission of prior art to the USPTO or to other patent offices around the world.

Patent applications are generally maintained in confidence until publication. In the United States, for example, patent applications are typically maintained in secrecy for up to 18 months after their filing date. Similarly, publication of discoveries in scientific or patent literature often lags behind actual discoveries. Consequently, we cannot be certain that we were the first to file patent applications on our product candidates. Any of the foregoing could harm our competitive position, business, financial condition, results of operations, and prospects.

Alternately or additionally, we may become involved in post-grant review procedures, oppositions, derivations proceedings, reexaminations, *inter partes* review or interference proceedings, in the United States or elsewhere, challenging patents or patent applications in which we have rights, including patents on which we rely to protect our business. An adverse determination in any such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products.

Pending and future patent applications may not result in patents being issued which protect our business, in whole or in part, or which effectively prevent others from commercializing competitive products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. In addition, the laws of foreign countries may not protect our rights to the same extent or in the same manner as the laws of the United States. For example, patent laws in various jurisdictions, including significant commercial markets such as Europe, restrict the patentability of methods of treatment of the human body more than United States law does.

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

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

Issued patents that we have or may obtain or license may not provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our or our licensors' patents by developing similar or alternative technologies or products in a non-infringing manner. Our competitors may also seek approval to market their own products similar to or otherwise competitive with our products. Alternatively, our competitors may seek to market generic versions of any approved products by submitting ANDAs to the FDA in which they claim that patents owned or licensed by us are invalid, unenforceable or not infringed. In these circumstances, we may need to defend or assert our patents, or both, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find our patents invalid or unenforceable, or that our competitors are competing in a non-infringing manner. Thus, even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

Pursuant to the terms of potential license agreements with third parties, some of our third-party licensors may have the right, but not the obligation in certain circumstances to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents. Even if we are permitted to pursue such enforcement or defense, we will require the cooperation of our licensors, and cannot guarantee that we would receive it and on what terms. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. If we cannot obtain patent protection, or enforce existing or future patents against third parties, our competitive position and our financial condition could suffer.

In addition, we rely on the protection of our trade secrets and proprietary know-how. Although we have taken steps to protect our trade secrets and unpatented know-how, including entering into confidentiality agreements with third parties, and confidential information and inventions agreements with employees, consultants and advisors, we cannot provide any assurances that all such agreements have been duly executed, and third parties may still obtain this information or may come upon this or similar information independently. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating our trade secrets. If any of these events occurs or if we otherwise lose protection for our trade secrets or proprietary know-how, our business may be harmed.

It is difficult and costly to protect our intellectual property and our proprietary technologies, and we may not be able to ensure their protection.

Our commercial success will depend, in part, on obtaining and maintaining patent protection and trade secret protection for the formulations and compounds of our product candidates, the methods used to manufacture them, and associated methods of treatment as well as on successfully defending these patents against potential

third-party challenges. Our ability to protect our products and product candidates from unauthorized making, using, selling, offering to sell or importing by third parties is dependent on the extent to which we have rights under valid and enforceable patents that cover these activities.

The patent positions of pharmaceutical, biotechnology and other life sciences companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. Further, the determination that a patent application or patent claim meets all of the requirements for patentability is a subjective determination based on the application of law and jurisprudence. The ultimate determination by the USPTO or by a court or other trier of fact in the United States, or corresponding foreign national patent offices or courts, on whether a claim meets all requirements of patentability cannot be assured. We have not conducted searches for third-party publications, patents and other information that may affect the patentability of claims in our various patent applications and patents, so we cannot be certain that all relevant information has been identified. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or patent applications, in our licensed patents or patent applications or in third-party patents.

We cannot provide assurances that any of our patent applications will be found to be patentable, including over our own prior art patents, or will issue as patents. Neither can we make assurances as to the scope of any claims that may issue from our pending and future patent applications nor to the outcome of any proceedings by any potential third parties that could challenge the patentability, validity or enforceability of our patents and patent applications in the United States or foreign jurisdictions. Any such challenge, if successful, could limit patent protection for our product candidates and/or materially harm our business.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- we may not be able to generate sufficient data to support full patent applications that protect the entire breadth of developments in one or more of our programs;
- it is possible that one or more of our pending patent applications will not become an issued patent or, if issued, that the patent(s) will not: (a) be sufficient to protect our technology, (b) provide us with a basis for commercially viable products or (c) provide us with any competitive advantages;
- we may not be the first to make the inventions covered by each of our patents and pending patent applications;
- we may not be the first to file patent applications for these inventions;
- if our pending applications issue as patents, they may be challenged by third parties as not infringed, invalid or unenforceable under U.S. or foreign laws; or
- if issued, the patents under which we hold rights may not be valid or enforceable.

In addition, to the extent that we are unable to obtain and maintain patent protection for one of our product candidates or in the event that such patent protection expires, it may no longer be cost-effective to extend our portfolio by pursuing additional development of a product candidate for follow-on indications.

We also may rely on trade secrets to protect our technologies or product candidates, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisers may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third-party entity illegally obtained and is using any of our trade secrets is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and patent applications are required to be paid to the USPTO and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process and after a patent has issued. There are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Under the terms of some of our licenses, we do not have the ability to maintain or prosecute patents in the portfolio, and must therefore rely on third parties to comply with these requirements.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time and if we do not obtain protection under the Hatch-Waxman Act and similar non-U.S. legislation for extending the term of patents covering each of our product candidates, our business may be materially harmed.

Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. We expect to seek extensions of patent terms in the United States, if available, and, if available, in other countries where we are prosecuting patents. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 (or Hatch-Waxman Act) permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication. However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

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

As is the case with other biotechnology and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology and pharmaceutical industries involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Recent patent reform legislation in the United States, including the Leahy-Smith America Invents Act, or the America Invents Act, could increase those uncertainties and costs. The America Invents Act was signed into law on September 16, 2011, and many of the substantive changes became effective on March 16, 2013. The America Invents Act reforms United States patent law in part by changing the U.S. patent system from a "first-to-invent" system to a "first-inventor-to-file" system, expanding the definition of prior art, and developing a post-grant review system. This legislation changes United States patent law in a way that may weaken our ability to obtain patent protection in the United States for those applications filed after March 16, 2013.

Further, the America Invents Act created new procedures to challenge the validity of issued patents in the United States, including post-grant review and *inter partes* review proceedings, which some third parties have been using to cause the cancellation of selected or all claims of issued patents. For a patent with an effective filing date of March 16, 2013 or later, a petition for post-grant review can be filed by a third party in a nine month window from issuance of the patent. A petition for *inter partes* review can be filed immediately following the issuance of a patent if the patent has an effective filing date prior to March 16, 2013. A petition for *inter partes* review can be filed after the nine month period for filing a post-grant review petition has expired for a patent with an effective filing date of March 16, 2013 or later. Post-grant review proceedings can be brought on any ground of invalidity, whereas *inter partes* review proceedings can only raise an invalidity challenge based on published prior art including patents. In these adversarial actions, the USPTO reviews patent claims without the presumption of validity afforded to U.S. patents in lawsuits in U.S. federal courts and uses a lower burden of proof than used in litigation in U.S. federal courts. Therefore, it is generally considered easier for a competitor or third party to have a U.S. patent invalidated in a USPTO post-grant review or *inter partes* review proceeding than invalidated in

litigation in a U.S. federal court. If any of our or our licensors' patents are challenged by a third party in such a USPTO proceeding, there is no guarantee that we or our licensors or collaborators will be successful in defending the patent, which would result in a loss of the challenged patent rights to us.

Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

If we are unable to protect the confidentiality of our trade secrets, the value of our technology could be negatively impacted and our business would be harmed.

In addition to the protection afforded by patents, we also rely on trade secret protection for certain aspects of our intellectual property. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, consultants, independent contractors, advisors, contract manufacturers, suppliers and other third parties. We also enter into confidentiality and invention or patent assignment agreements with employees and certain consultants. Any party with whom we have executed such an agreement may breach that agreement and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating such trade secrets. Further, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our business and competitive position could be harmed.

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

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We rely on both registration and common law protection for our trademarks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. During the trademark registration process, we may receive Office Actions from the USPTO objecting to the registration of our trademark. Although we would be given an opportunity to respond to those objections, we may be unable to overcome such rejections. 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/or to seek the cancellation of registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

Risks Related to Intellectual Property Claims or Litigation

Our drug development strategy relies heavily upon the 505(b)(2) regulatory approval pathway, which requires us to certify that we do not infringe upon third-party patents covering approved drugs that we rely upon for approval if we want to obtain approval prior to patent expiry. Such certifications typically result in third-party claims of intellectual property infringement, the defense of which would be costly and time consuming, and an unfavorable outcome in any litigation may prevent or delay our development and commercialization efforts which would harm our business.

Our commercial success depends in large part on our avoiding infringement of the patents and proprietary rights of third parties for existing approved drug products. Because we utilize the 505(b)(2) regulatory approval pathway for the approval of our product candidates, we rely in whole or in part on studies conducted by third parties related to those approved drug products. As a result, upon filing with the FDA for approval of our product candidates, we will be required to certify to the FDA that either: (1) there is no patent information listed in the Orange Book for the listed drug; (2) the patents listed in the Orange Book have expired; (3) the listed patents have not expired, but will

expire on a particular date and approval is sought after patent expiration; or (4) the listed patents are invalid or will not be infringed by the manufacture, use or sale of our proposed drug product. We can avoid certifying to a method-of-use patent if we do not seek approval of the patented condition of use. If we certify to the FDA that a patent is invalid or not infringed, or a Paragraph IV certification, a notice of the Paragraph IV certification must also be sent to the patent owner and NDA holder shortly after our 505(b)(2) NDA is accepted for filing by the FDA. The third party may then initiate a lawsuit against us asserting infringement of the patents identified in the notice. The filing of a patent infringement lawsuit within 45 days of receipt of the notice automatically prevents the FDA from approving our 505(b)(2) application until the earliest of 30 months or the date on which the patent expires, the lawsuit is settled, or the court reaches a decision in the infringement lawsuit in our favor. If the third party does not file a patent infringement lawsuit within the required 45-day period, our application will not be subject to the 30-month stay. However, even if the third party does not sue within the 45-day time limit, thereby invoking the 30-month stay, it may still challenge our right to market our product upon FDA approval; therefore, some risk of an infringement suit remains even after the expiry of the 45-day limit.

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

Filing, prosecuting, enforcing and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. The requirements for patentability may differ in certain countries, particularly in developing countries; thus, even in countries where we do pursue patent protection, there can be no assurance that any patents will issue with claims that cover our product candidates.

Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws. Additionally, laws of some countries outside of the United States and Europe do not afford intellectual property protection to the same extent as the laws of the United States and Europe. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, including India, China and other developing countries, do not favor the enforcement of patents and other intellectual property rights. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. Consequently, we may not be able to prevent third parties from practicing our inventions in certain countries outside the United States and Europe. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop and market their own products and, further, may export otherwise infringing products to territories where we have patent protection, if our ability to enforce our patents to stop infringing activities is inadequate. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Agreements through which we license patent rights may not give us sufficient rights to permit us to pursue enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents (or control of enforcement or defense) of such patent rights in all relevant jurisdictions as requirements may vary.

Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and resources from other aspects of our business. Moreover, such proceedings could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Furthermore, while we intend to protect our intellectual property rights in major markets for our products, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our products. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate.

Others may claim an ownership interest in our intellectual property which could expose us to litigation and have a significant adverse effect on our prospects.

A third party may claim an ownership interest in one or more of our or our licensors' patents or other proprietary or intellectual property rights. A third party could bring legal actions against us and seek monetary damages and/or enjoin clinical testing, manufacturing and marketing of the affected product or products. While we are presently

unaware of any claims or assertions by third parties with respect to our patents or other intellectual property, we cannot guarantee that a third party will not assert a claim or an interest in any of such patents or intellectual property. If we become involved in any litigation, it could consume a substantial portion of our resources, and cause a significant diversion of effort by our technical and management personnel. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license to continue to manufacture or market the affected product, in which case we may be required to pay substantial royalties or grant cross-licenses to our patents. We cannot, however, assure you that any such license will be available on acceptable terms, if at all. Ultimately, we could be prevented from commercializing a product candidate, or be forced to cease some aspect of our business operations as a result of claims of patent infringement or violation of other intellectual property rights. Further, the outcome of intellectual property litigation is subject to uncertainties that cannot be adequately quantified in advance, including the demeanor and credibility of witnesses and the identity of any adverse party. This is especially true in intellectual property cases that may turn on the testimony of experts as to technical facts upon which experts may reasonably disagree.

If we are sued for infringing intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our product candidates.

Our commercial success depends, in part, on our ability to develop, manufacture, market and sell our product candidates without infringing the intellectual property and other proprietary rights of third parties. Third parties may have U.S. and non-U.S. issued patents and pending patent applications relating to compounds, formulations, methods of manufacturing compounds and/or formulations, and/or methods of use for the treatment of the disease indications for which we are developing our product candidates. If any third-party patents or patent applications are found to cover our product candidates or their methods of use or manufacture, we may not be free to manufacture or market our product candidates as planned without obtaining a license, which may not be available on commercially reasonable terms, or at all.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and we may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property rights with respect to our product candidates, including interference and post-grant proceedings before the USPTO. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the formulations, use or manufacture of our product candidates. We cannot guarantee that any of our patent analyses including, but not limited to, the scope of patent claims or the expiration of relevant patents are complete or thorough, nor can we be certain that we have identified each and every patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may be accused of infringing. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Accordingly, third parties may assert infringement claims against us based on intellectual property rights that exist now or arise in the future. The outcome of intellectual property litigation is subject to uncertainties that cannot be adequately quantified in advance. The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of products or methods of use or manufacture. The scope of protection afforded by a patent is subject to interpretation by the courts, and the interpretation is not always uniform. If we were sued for patent infringement, we would need to demonstrate that our product candidates, or methods of use or of making either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted in pursuing these proceedings, which could significantly harm our business and operating results. In addition, we may not have sufficient resources to bring these actions to a successful conclusion.

If we are found to infringe a third party's intellectual property rights, we could be forced, including by court order, to cease developing, manufacturing or commercializing the infringing product candidate. Alternatively, we may be required to obtain a license from such third party in order to use the infringing technology and continue developing, manufacturing or marketing the infringing product candidate. However, we may not be able to obtain

any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us; alternatively or additionally, it could include terms that impede or destroy our ability to compete successfully in the commercial marketplace. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our current and former employees, including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including some which may be competitors or potential competitors. Some of these employees, including each member of our senior management, executed proprietary rights, non-disclosure and non-competition agreements, or similar agreements, in connection with such previous employment. Although we try to ensure that our employees 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 employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such third party. Litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or product candidates. Such a license may not be available on commercially reasonable terms or at all. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

In addition, while we typically require our employees, consultants and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, which may result in claims by or against us related to the ownership of such intellectual property. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our senior management and scientific personnel.

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

Competitors may infringe our patents, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time consuming and divert the time and attention of our management and scientific personnel. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents, in addition to counterclaims asserting that our patents are invalid or unenforceable, or both. In any patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention. An adverse outcome in a litigation or proceeding involving one or more of our patents could limit our ability to assert those patents against those parties or other competitors, and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are unenforceable, that the alleged infringing mark does not infringe our trademark rights, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this last instance, we could ultimately be forced to cease use of such trademarks.

Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is

a risk that some of our confidential information could be compromised by disclosure during litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could adversely affect the price of shares of our common stock. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings.

Additionally, for certain of our in-licensed patent rights, we do not have the right to bring suit for infringement and must rely on third parties to enforce these rights for us. If we cannot or choose not to take action against those we believe infringe our intellectual property rights, we may have difficulty competing in certain markets where such potential infringers conduct their business, and our commercialization efforts may suffer as a result.

Risks Related to Our Reliance on Third Parties

Risks Related to Third Party Performance

Use of third parties to manufacture our product candidates may increase the risk that we will not have sufficient quantities of our product candidates, products, or necessary quantities at an acceptable cost.

We do not own or operate manufacturing facilities for the production of clinical or commercial quantities of our product candidates, and we lack the resources and the capabilities to do so. As a result, we currently rely on third parties for supply of the active pharmaceutical ingredients, or API, in our product candidates, and our furosemide formulation, as well as the device components of our drug-device combination product candidates. Our current strategy is to outsource all manufacturing of our product candidates and products to third parties.

We currently engage third-party manufacturers to manufacture FUROSCIX and related supplies and packaging. For example, we have engaged a third-party manufacturer for the manufacture of the furosemide formulation used in FUROSCIX and we have engaged a third party designer and manufacturer to develop and manufacture the on-body infusor for FUROSCIX. There is no guarantee that we can maintain our relationships with these manufacturers and we may incur added costs and delays in identifying and qualifying any replacements for such manufacturers. There is no assurance that we will be able to timely secure further needed supply arrangements on satisfactory terms, or at all. Our failure to secure these arrangements as needed could have a material adverse effect on our ability to commercialize FUROSCIX. There may be difficulties and delays in scaling up to commercial quantities of FUROSCIX and the costs of manufacturing could be prohibitive. Beyond FUROSCIX, third parties also manufacture the materials that we require for the development of our other product candidates, and our reliance on these manufacturers for these activities carries similar risks as our reliance on third-party manufacturers in connection with FUROSCIX.

Reliance on third-party manufacturers entails additional risks, including:

- reliance on third parties for manufacturing process development, regulatory compliance and quality assurance;
- limitations on supply availability resulting from capacity and scheduling constraints of third parties;
- the possible breach of manufacturing agreements by third parties because of factors beyond our control; and
- the possible termination or non-renewal of the manufacturing agreements by the third party, at a time that is costly or inconvenient to us.

If we do not maintain our key manufacturing relationships or if our third-party manufacturers fail to comply with applicable regulations, we may need to find replacement manufacturers or develop our own manufacturing capabilities, which could delay or impair our ability to obtain regulatory approval for our products. If we do find replacement manufacturers, we may not be able to enter into agreements with them on terms and conditions favorable to us and there could be a substantial delay before new facilities could be qualified and registered with the FDA and other foreign regulatory authorities.

If any third-party manufacturer with whom we contract fails to perform its obligations, we may be forced to manufacture the materials ourselves, for which we may not have the capabilities or resources, or enter into an

agreement with a different third-party manufacturer, which we may not be able to do on reasonable terms, if at all. In either scenario, our product supply could be delayed significantly as we establish alternative supply sources. In some cases, the technical skills required to manufacture our products or product candidates may be unique or proprietary to the original third-party manufacturer and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all. In addition, if we are required to change third-party manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations. We will also need to verify, such as through a manufacturing comparability study, that any new manufacturing process will produce our product candidate according to the specifications previously submitted to the FDA or another regulatory authority. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates or commercialize our products in a timely manner or within budget. Furthermore, a third-party manufacturer may possess technology related to the manufacture of our product candidate that such manufacturer owns independently. This would increase our reliance on such third-party manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture our product candidates. In addition, changes in manufacturers often involve changes in manufacturing procedures and processes, which could require that we conduct bridging studies between our prior clinical supply used in our clinical trials and that of any new manufacturer. We may be unsuccessful in demonstrating the comparability of clinical supplies which could require the conduct of additional clinical trials.

Our lead product candidate, FUROSCIX, is a drug-device combination product that will be regulated under the drug regulations of the FDA based on its primary mode of action as a drug. Third-party manufacturers may not be able to comply with the regulatory requirements, known as cGMP, applicable to drug-device combination products, including applicable provisions of the FDA's drug cGMP regulations, device cGMP requirements embodied in the QSR or similar regulatory requirements outside the United States. 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, license revocation, seizures or recalls of product candidates, operating restrictions and criminal prosecutions, any of which could significantly affect supplies of our product candidates. The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our NDA to the FDA.

We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with cGMPs and QSRs. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which could cause significant delays in our operating timelines and would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Contract manufacturers may face manufacturing or quality control problems causing drug substance production and shipment delays or a situation where the contractor may not be able to maintain compliance with the applicable cGMP and QSR requirements. Any failure to comply with cGMP or QSR requirements or other FDA, EMA and comparable foreign regulatory requirements could adversely affect our clinical research activities and our ability to develop our product candidates and market our products following approval.

The FDA and other foreign regulatory authorities require manufacturers to register manufacturing facilities. The FDA and corresponding foreign regulators also inspect these facilities to confirm compliance with applicable cGMPs and QSRs. Contract manufacturers may face manufacturing or quality control problems causing drug substance or device component production and shipment delays or a situation where the contractor may not be able to maintain compliance with the applicable cGMP or QSR requirements. Any failure to comply with cGMP or QSR requirements or other FDA, EMA and comparable foreign regulatory requirements could adversely affect our clinical research activities and our ability to develop our product candidates and market our products following approval.

If our third-party manufacturers of our product candidates are unable to increase the scale of their production of our product candidates, or increase the product yield of manufacturing, then our costs to manufacture the product may increase and commercialization may be delayed.

In order to produce sufficient quantities to meet the demand for any additional clinical trials and subsequent commercialization of FUROSCIX or any of our other product candidates in our pipeline or that we may develop, our third-party manufacturers will be required to increase their production and automate and otherwise optimize their manufacturing processes while maintaining the quality of the product. The transition to larger scale production could prove difficult. In addition, if our third-party manufacturers are not able to automate and otherwise optimize their manufacturing process to increase the product yield for West's proprietary on-body infusor and other components of our product candidates, or if they are unable to produce increased amounts of our product candidates while maintaining quality, then we may not be able to meet the demands of clinical trials or market demands, which could decrease our ability to generate revenues and have a material adverse impact on our business and results of operations.

We rely on third parties to conduct our preclinical studies and clinical trials. If they do not perform satisfactorily or fail to meet expected deadlines, our business could be harmed.

We do not independently conduct clinical trials of any of our product candidates. We rely on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators, to conduct these clinical trials and expect to rely on these third parties to conduct clinical trials of any other product candidate that we develop. Any of these third parties may terminate their engagements with us under certain circumstances. We may not be able to enter into alternative arrangements or do so on commercially reasonable terms. In addition, there is a natural transition period when a new CRO begins work. As a result, delays would likely occur, which could negatively impact our ability to meet our expected clinical development timelines and harm our business, financial condition and prospects.

Further, although our reliance on these third parties for clinical development activities limits our control over these activities, we remain responsible for ensuring that each of our trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards. For example, notwithstanding the obligations of a CRO for a trial of one of our product candidates, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practices, or GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. The FDA enforces these GCPs through periodic inspections of trial sponsors, principal investigators, clinical trial sites and IRBs. If we or our third-party contractors fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA may require us to perform additional clinical trials before approving our product candidates, which would delay the marketing approval process. We cannot be certain that, upon inspection, the FDA will determine that any of our clinical trials comply with GCPs. We are also required to register clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Furthermore, the third parties conducting clinical trials on our behalf are not our employees, and except for remedies available to us under our agreements with such contractors, we cannot control whether or not they devote sufficient time, skill and resources to our ongoing development programs. These contractors may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could impede their ability to devote appropriate time to our clinical programs. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we may not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates. If that occurs, we will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates. In such an event, our financial results and the commercial prospects for any product candidates that we seek to develop could be harmed, our costs could increase and our ability to generate revenues could be delayed, impaired or foreclosed.

Risks Related to Third Party Contracts

We enter into various contracts in the normal course of our business in which we indemnify the other party to the contract. In the event we have to perform under these indemnification provisions, it could have a material adverse effect on our business, financial condition and results of operations.

In the normal course of business, we periodically enter into academic, commercial, service, collaboration, licensing, consulting and other agreements that contain indemnification provisions. With respect to our academic and other research agreements, we typically indemnify the institution and related parties from losses arising from claims relating to the products, processes or services made, used, sold or performed pursuant to the agreements for which we have secured licenses, and from claims arising from our or our sublicensees' exercise of rights under the agreement. With respect to our commercial agreements, we indemnify our vendors from any third-party product liability claims that could result from the production, use or consumption of the product, as well as for alleged infringements of any patent or other intellectual property right by a third party.

Should our obligation under an indemnification provision exceed applicable insurance coverage or if we were denied insurance coverage, our business, financial condition and results of operations could be adversely affected. Similarly, if we are relying on a collaborator to indemnify us and the collaborator is denied insurance coverage or the indemnification obligation exceeds the applicable insurance coverage and does not have other assets available to indemnify us, our business, financial condition and results of operations could be adversely affected.

We expect to seek to establish collaborations and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

We expect to seek one or more collaborators for the development and commercialization of one or more of our product candidates. For example, we started collaborating with West in 2019 for development of our next generation device. Likely collaborators may include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. In addition, if we are able to obtain marketing approval for product candidates from foreign regulatory authorities, we intend to enter into strategic relationships with international biotechnology or pharmaceutical companies for the commercialization of such product candidates outside of the United States.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the potential differentiation of our product candidate from competing product candidates, design or results of clinical trials, the likelihood of approval by the FDA, the EMA or comparable foreign regulatory authorities and the regulatory pathway for any such approval, the potential market for the product candidate, the costs and complexities of manufacturing and delivering the product to patients and the potential of competing products. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available for collaboration and whether such a collaboration could be more attractive than the one with us for our product candidate. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

Collaborations are complex and time-consuming to negotiate and document. Further, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. Any collaboration agreements that we enter into in the future may contain restrictions on our ability to enter into potential collaborations or to otherwise develop specified product candidates. We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense.

Risks Related to Employee Matters, Managing Growth and Business Operations

Risks Related to Employee Matters

We only have a limited number of employees to manage and operate our business.

As of March 22, 2022, we had 26 full-time employees. Our focus on the development of FUROSCIX has required us to optimize cash utilization and to manage and operate our business in a lean manner. We cannot assure you that we will be able to hire and/or retain adequate staffing levels to commercialize FUROSCIX or run our operations and/or to accomplish all of the objectives that we otherwise would seek to accomplish.

We depend heavily on our executive officers, directors, and principal consultants and the loss of their services would materially harm our business.

Our success depends, and will likely continue to depend, upon our ability to hire, retain the services of our current executive officers, directors, principal consultants and others. In addition, we have established relationships with universities and research institutions which have historically provided, and continue to provide, us with access to research laboratories, clinical trials, facilities and patients. Our ability to compete in the biotechnology and pharmaceuticals industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel.

Our industry has experienced a high rate of turnover of management personnel in recent years. Any of our personnel may terminate their employment at will. If we lose one or more of our executive officers or other key employees, our ability to implement our business strategy successfully could be seriously harmed. Departed personnel have sought to compete with us historically and may continue to do so in the future. Furthermore, replacing executive officers or other key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to develop, gain marketing approval of and commercialize products successfully.

Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these additional key employees on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions.

We rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by other entities and may have commitments under consulting or advisory contracts with those entities that may limit their availability to us. If we are unable to continue to attract and retain highly qualified personnel, our ability to develop and commercialize our product candidates will be limited.

Our company lacks experience commercializing products, which may have a material adverse effect on our business.

We will need to transition from a company with a development focus to a company capable of supporting commercial activities. We are in the process of building our sales force and preparing for the launch of FUROSCIX, if approved. Since FUROSCIX, if approved, will be our first commercial product approved, we have not yet demonstrated an ability to commercialize a product candidate or to obtain marketing approval for a product candidate outside of the U.S. Therefore, our clinical development, and commercialization processes and our regulatory approval process in the U.S. or countries outside of the U.S. may involve more inherent risk, take longer, and cost more than it would if we were a company with a more significant operating history and had experience obtaining approval and marketing approval for and commercializing a product candidate.

Our employees, independent contractors, consultants, collaborators and contract research organizations may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation.

We are exposed to the risk that our employees, independent contractors, consultants, collaborators, contract research organizations, principal investigators, suppliers and vendors may engage in fraud or other misconduct, including intentional, reckless and/or negligent conduct that fails to comply with FDA regulations or similar regulations of comparable non-U.S. regulatory authorities, to provide true, complete and accurate information to

the FDA or comparable non-U.S. regulatory authorities, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable non-U.S. regulatory authorities, to report financial information or data accurately or to disclose unauthorized activities to us. Such misconduct could also involve the improper use or misrepresentation of information obtained in the course of clinical trials, creating fraudulent data in our preclinical studies or clinical trials or illegal misappropriation of product materials, which could result in regulatory sanctions and serious harm to our reputation.

We have adopted a Code of Business Conduct and Ethics to aid our directors, officers, employees and certain designated agents in making ethical and legal decisions when conducting business on our behalf and performing their day-to-day duties. However, it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws, standards or regulations. Additionally, we are subject to the risk that a private person or governmental agency could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

General Risk Factors

Risks Related to Business Operations and Growth

We expect to expand our organization and, as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug manufacturing, regulatory affairs and sales, marketing and distribution, as well as to support our public company operations. To manage these growth activities, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Our management may need to devote a significant amount of its attention to managing these growth activities. Moreover, our expected growth could require us to relocate to a different geographic area of the country. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion or relocation of our operations, retain key employees, or identify, recruit and train additional qualified personnel. Our inability to manage the expansion or relocation of our operations effectively may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. Our expected growth could also require significant capital expenditures and may divert financial resources from other projects, such as the commercialization and development of FUROSCIX or additional product candidates. If we are unable to effectively manage our expected growth, our expenses may increase more than expected, our ability to generate revenues could be reduced and we may not be able to implement our business strategy, including the successful commercialization of our product candidates.

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

Despite the implementation of security measures, our internal computer systems, and those of other third parties on which we rely are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

Our business and operations would suffer in the event of computer system failures, cyber-attacks or deficiencies in cyber security.

Our internal computer systems and those of current and future third parties on which we rely may fail and are vulnerable to damage from computer viruses and unauthorized access. Unauthorized access to, or security breaches of, our systems and databases could result in unauthorized access to data and information and loss, compromise or corruption of such data and information. The systems of any manufacturers that we may engage in the future, and present and future contract research organizations, contractors and consultants also could experience breaches of security leading to the exposure of confidential and sensitive information. Cyber incidents have been increasing in sophistication and frequency and can include third parties gaining access to employee or customer data using stolen or inferred credentials, computer malware, viruses, spamming, phishing attacks, ransomware, card skimming code, and other deliberate attacks and attempts to gain unauthorized access. Because the techniques used by computer programmers who may attempt to penetrate and sabotage our network security or our website change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques.

Product liability lawsuits could divert our resources, result in substantial liabilities and reduce the commercial potential of our product candidates.

The risk that we may be sued on product liability claims is inherent in the development of drug formulation and device products. We face a risk of product liability exposure related to the testing of our current and future product candidates in clinical trials and will face even greater risks upon any commercialization by us of our product candidates. Product liability claims might be brought against us by consumers, healthcare providers or others coming into contact with our product candidates. These lawsuits may divert our management from pursuing our business strategy and may be costly to defend. In addition, if we are held liable in any of these lawsuits, we may incur substantial liabilities and may be forced to limit or forego further commercialization of one or more of our products which could adversely affect our stock price and our operations.

We may become involved in litigation or other proceedings with third parties, which may be time consuming, costly and could result in delays in our development and commercialization efforts.

Any disputes with such third parties that lead to litigation or similar proceedings may result in us incurring legal expenses, as well as facing potential legal liability. Such disputes, litigation or other proceedings are also time consuming and may cause delays in our development and commercialization efforts. If we fail to resolve these disputes quickly and on favorable terms, our business, results of operations, and financial condition may be harmed.

We might not be able to utilize a significant portion of our net operating loss carryforwards and research and development tax credit carryforwards.

As of December 31, 2021, we had federal net operating loss carryforwards of \$17.5 million, which expire at various dates through 2037, and \$43.5 million, which may be carried forward indefinitely. At December 31, 2021, we had available state net operating loss carryforwards of \$57.5 million, which expire at various dates through 2041 and \$200,000, which may be carried forward indefinitely. If not utilized, the net operating loss carryforwards will expire. At December 31, 2021, we had federal and state research and development tax credit carryforwards of \$3.0 million and \$0.9 million, respectively. If not utilized, the research and development credits expire at various dates through 2041. Our ability to use our U.S. federal and state net operating loss and tax credit carryforwards to offset potential future taxable income and related income taxes that would otherwise be due is dependent upon our generation of future taxable income. These net operating loss and tax credit carryforwards could expire unused and be unavailable to offset future income tax liabilities. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income may be limited.

In 2017 we experienced an ownership change that we believe under Section 382 of the Code will result in limitations in our ability to utilize net operating losses and credits. In addition, we may experience future ownership changes as a result of future offerings or other changes in ownership of our stock. As a result, the amount of the net operating loss and tax credit carryforwards presented in our consolidated financial statements could be limited and may expire unutilized.

Risks Related to Ownership of Our Common Stock

The trading price of our common stock may be highly volatile and fluctuate substantially.

Our stock price is likely to be highly volatile. The stock market in general and the market for smaller pharmaceutical and biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- the timing and results of our application for FDA approval of FUROSCIX and other regulatory actions with respect to our product candidates, including any delays related to COVID-19;
- the pricing, reimbursement and commercialization of FUROSCIX, if approved, and of other product candidates that may be approved;
- regulatory actions with respect to our competitors' products and product candidates;
- the success of existing or new competitive products or technologies;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- the timing and results of clinical trials of our pipeline product candidates;
- commencement or termination of collaborations for our development programs;
- failure or discontinuation of any of our development programs;
- results of clinical trials of product candidates of our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights, including proprietary rights that we in-license from third parties;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or clinical development programs;
- the results of our efforts to develop additional product candidates or products;
- actual or anticipated changes in estimates as to financial results or development timelines;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or other stockholders;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in estimates or recommendations by securities analysts, if any, that cover our stock;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this "Risk Factors" section.

Additionally, 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 pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

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

We expect our expenses to increase in connection with our planned operations. To the extent that we raise additional capital through the sale of common stock, convertible securities or other equity securities, the

ownership percentages of all our stockholders may be diluted, and the terms of these securities could include liquidation or other preferences and anti-dilution protections that could adversely affect the rights of our stockholders. In addition, royalty-based financing or debt financing, if available, may result in our relinquishing rights to valuable future revenue streams or fixed payment obligations and may involve agreements that include restrictive covenants that limit our ability to take specific actions, such as incurring additional debt, making capital expenditures, creating liens, redeeming stock or declaring dividends, that could adversely impact our ability to conduct our business. In addition, securing financing could require a substantial amount of time and attention from our management and may divert a disproportionate amount of their attention away from day-to-day activities, which may adversely affect our management's ability to oversee the commercialization of FUROSCIX, if approved, and the development of our other product candidates.

If we raise additional funds through collaborations or marketing, distribution or licensing, or royalty-based financing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

We do not anticipate paying any cash dividends on our capital stock in the foreseeable future. Accordingly, stockholders must rely on capital appreciation, if any, for any return on their investment.

We have never declared nor paid cash dividends on our capital stock. We currently plan to retain all of our future earnings, if any, to finance the operation, development and growth of our business. In addition, the terms of any of our existing, and potentially future, debt or credit agreements will preclude us from paying dividends. For example, under our loan and security agreement with SLR Investment Corp. (f/k/a Solar Capital Ltd.) and Silicon Valley Bank, we are restricted from paying any dividends or making any distributions on account of our capital stock. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for our stockholders for the foreseeable future.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Based upon shares outstanding as of December 31, 2021, our executive officers and directors, combined with our stockholders who own more than 5% of our outstanding common stock and their affiliates, in the aggregate, beneficially own shares representing approximately 61.5% of our common stock. As a result, if these stockholders were to choose to act together, they would be able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of ownership control may:

- delay, defer or prevent a change in control;
- entrench our management or the board of directors; or
- impede a merger, consolidation, takeover or other business combination involving us that other stockholders may desire.

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

We are an “emerging growth company,” as defined in the JOBS Act and a “smaller reporting company,” as defined in the Exchange Act, 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 Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and may remain an emerging growth company for up to five years following our completed initial public offering. For so long as we remain an emerging growth company, we are permitted and plan to rely on

exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or SOX Section 404, not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements, reduced disclosure obligations regarding executive compensation 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 choose to take advantage of some, but not all, of the available exemptions.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended, or 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 until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenues are more than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than \$700.0 million measured on the last business day of our second fiscal quarter.

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 certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as either as an "emerging growth company" or "smaller reporting company" which may increase the risk that material weaknesses or significant deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as an "emerging growth company" or a "smaller reporting company" we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

As a public company, we must comply with public company reporting and other obligations. Continued compliance with these requirements will increase our costs and require additional management resources, and do not ensure that we will be able to satisfy them.

As a result of operating as a public company, compliance with the Sarbanes-Oxley Act of 2002, as well as other rules and regulations promulgated by the SEC and the Nasdaq Stock Market LLC, or Nasdaq, results in significant legal, accounting, administrative and other costs and expenses, which will continue to increase after we are no longer an "emerging growth company." The listing requirements of the Nasdaq Global Select Market require that we satisfy certain corporate governance requirements relating to director independence, distributing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel will need to devote a substantial amount of time to ensure that we continue to comply with all of these requirements.

We are subject to SOX Section 404, and the related rules of the SEC that generally require our management and independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. Section 404 requires an annual management assessment of the effectiveness of our internal control over financial reporting. However, for so long as we remain an "emerging growth company" as defined in the JOBS Act, or a "smaller reporting company" as defined in the Exchange Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not emerging growth companies or smaller reporting companies, including, but not limited to, not being required to

comply with the auditor attestation requirements of Section 404. Once we are no longer an “emerging growth company” or a “smaller reporting company” or, if before such date, we opt to no longer take advantage of the applicable exemption, we will be required to include an opinion from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting.

During the course of our review and testing of our internal controls, we may identify deficiencies and be unable to remediate them before we must provide the required reports. Furthermore, if we have a material weakness in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated, especially for so long as our independent registered public accounting firm is not required to provide an attestation report on the effectiveness of such internal controls over financial reporting. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall. In addition, as a public company we are required to timely file accurate quarterly and annual reports with the SEC under the Exchange Act. Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from the Nasdaq Global Select Market or other adverse consequences.

Future sales of our common stock into the market could cause the market price of our common stock to decline significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. Persons who were our stockholders prior to our IPO continue to hold a substantial number of shares of our common stock that many of them are now able to sell in the public market. If these pre-IPO shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Moreover, certain holders of securities issued prior to our IPO have rights, subject to conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders.

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

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. In the event one or more analysts downgrade our stock or change their opinion of our stock, our share price would likely decline. In addition, if one or more analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

An active trading market for our common stock may not be sustainable. If an active trading market is not sustained, our ability to raise capital in the future may be impaired.

We completed our initial public offering in November 2017. Prior to this time, there was no public market for our common stock. Although we have completed our initial public offering and shares of our common stock are listed and trading on the Nasdaq Global Select Market, an active trading market for our shares may not be sustained. If an active market for our common stock is not sustained, it may be difficult for our stockholders to sell shares of our common stock without depressing the market price for the shares or at all. An inactive trading market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management or hinder efforts to acquire a controlling interest in us.

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members

of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Among other things, these provisions:

- establish a classified board of directors such that all members of the board are not elected at one time;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from the board;
- establish advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on at stockholder meetings;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- limit who may call a special meeting of stockholders;
- authorize our board of directors to issue preferred stock without stockholder approval, which could be used to institute a "poison pill" that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and
- require the approval of the holders of at least two-thirds of the votes that all our stockholders would be entitled to cast to amend or repeal certain provisions of our charter or bylaws.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. This could discourage, delay or prevent someone from acquiring us or merging with us, whether or not it is desired by, or beneficial to, our stockholders. This could also have the effect of discouraging others from making tender offers for our common stock. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Our bylaws designate specific courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our bylaws, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for state law claims for any state law claim for (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or other employees to us or our stockholders; (3) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws; or (4) any action asserting a claim governed by the internal affairs doctrine (the "Delaware Forum Provision"). The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Exchange Act. Our bylaws further provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America are the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act (the "Federal Forum Provision"), or the rules and regulations promulgated thereunder, and of all suits in equity and actions at law brought to enforce any liability or duty created by the Securities Act or the rules and regulations thereunder. In addition, our bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our Common Stock is deemed to have notice of and consented to the foregoing Delaware Forum Provision and Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the U.S. federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision may impose additional litigation costs on stockholders in pursuing any such claims. Additionally, these forum selection clauses may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. While the Delaware Supreme Court and other states have upheld the validity of federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court, there is uncertainty as to whether other courts will enforce our Federal

Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on us and/or our stockholders who assert that the provision is invalid or unenforceable. The Court of Chancery of the State of Delaware or the federal district courts of the United States of America may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our principal executive offices are located in a 13,066 square foot facility in Burlington, Massachusetts. The term of the lease for our facility extends through November 2022.

Item 3. Legal Proceedings.

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. We are not currently aware of any such proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition or results of operations.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock is traded on the Nasdaq Global Select Market under the symbol "SCPH".

As of March 21, 2022, there were 27 stockholders of record, which excludes stockholders whose shares were held in nominee or street name by brokers.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be made at the discretion of our board of directors. In addition, the terms of our outstanding indebtedness restrict our ability to pay cash dividends, and any future indebtedness that we may incur could preclude us from paying cash dividends.

Securities authorized for issuance under equity compensation plans

Information about our equity compensation plans in Item 12 of Part III of this Annual Report on Form 10-K is incorporated herein by reference.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

None.

Item 6. [RESERVED]

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes appearing at the end of this Annual Report on Form 10-K. This discussion includes forward-looking statements that involve risks, uncertainties and assumptions such as our plans, objectives, expectations and intentions. You should read the "Forward-Looking Statements" and "Risk Factors" sections of this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

OVERVIEW

We are a pharmaceutical company focused on developing and commercializing products that have the potential to optimize the delivery of infused therapies, advance patient care and reduce healthcare costs. Our strategy is designed to enable the subcutaneous administration of therapies that have previously been limited to intravenous, or IV, delivery. By moving delivery away from the high-cost healthcare settings typically required for IV administration, we believe our technology has the potential to reduce overall healthcare costs and advances the quality and convenience of care. Our lead product candidate, FUROSCIX, consists of our novel formulation of furosemide delivered via an on-body infusor and is under development for treatment of congestion in patients with worsening heart failure who display reduced responsiveness to oral diuretics and do not require hospitalization.

We resubmitted our new drug application, or NDA, for FUROSCIX, with the U.S. Food and Drug Administration, or FDA, on June 30, 2020. The resubmission was a response to a Complete Response Letter, or CRL, from the FDA with respect to our NDA submitted in August 2017, which indicated that, among other things, certain device modifications to our infusor were required. Based on our interactions with the FDA, we decided to transition to our next generation device. The resubmission incorporated our next generation device which is being developed through a partnership with West Pharmaceutical Services, Inc., or West, using its proprietary on-body infusor.

On July 23, 2020, the FDA accepted the resubmission of our NDA and we were given a Prescription Drug User Fee Act, or PDUFA, target action date of December 30, 2020; however, on December 3, 2020, we received a CRL from the FDA, in which, among other things, the FDA raised questions related to testing, labeling and features of the combination product unrelated to the drug constituent. The FDA also indicated that they needed to conduct pre-approval inspections at certain of our third-party manufacturing facilities. No clinical deficiencies were noted. On January 28, 2021, we had a Type A meeting with the FDA to discuss the issues described in the CRL and steps required for the resubmission of the FUROSCIX NDA. On June 2, 2021, we had a Type C meeting with the FDA regarding the requirements for resubmission of the FUROSCIX NDA. Based on the guidance we received during these meetings and subsequently contained within the meeting minutes, we conducted the required bench testing for the West proprietary on-body infusor. We anticipate the FDA will still need to conduct pre-approval inspections at certain of our third-party manufacturing facilities. We recently elected to change packaging vendors, which necessitated minor modifications to our FUROSCIX NDA. As a result, we anticipate resubmitting our NDA by April 15, 2022.

We have funded our operations from inception through December 31, 2021 primarily through the sale of shares of our common stock and, prior to that, through the private placement of our preferred stock and the incurrence of debt. We do not have any products approved for sale and have not generated any revenue from product sales.

For the years ended December 31, 2020 and 2021, our net losses were \$32.2 million and \$28.0 million, respectively. We have not been profitable since inception, and as of December 31, 2021, our accumulated deficit was \$189.7 million. We expect to continue to incur net losses for the foreseeable future as we develop the infrastructure to commercialize our products, if approved, in the United States, including building our sales and marketing organization, continuing research and development efforts, engaging in scale-up manufacturing and seeking regulatory approval for new product candidates and enhancements. We will need additional funding to pay expenses related to our operating activities, including selling, general and administrative expenses and research and development expenses. Adequate funding may not be available to us on acceptable terms, or at all. Our failure to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on our business, results of operations or financial condition.

IMPACT OF COVID-19

A new strain of novel coronavirus which causes a severe respiratory disease (“COVID-19”) was identified in 2019, and subsequently declared a pandemic by the World Health Organization, affecting the populations of the United States as well as the rest of the world. In response to the pandemic, we transitioned our workforce to work from home in March 2020. In July 2020, we opened our offices for limited access to employees integrating all recommendations for workplace safety, including appropriate protocols to ensure social-distancing. The health of our employees remains a top priority and we are continuing to monitor the impact of COVID-19, including the pace of vaccinations and the emergence of new and more contagious strains of the virus, and government regulations.

To date, the third parties that perform our manufacturing, assembly, packaging and testing of our products have experienced delays relating to supply chain logistics but have generally remained operational. The extent of the impact of the evolving COVID-19 pandemic on the timing of our ability to resubmit the FUROSCIX NDA, the FDA’s subsequent review of the FUROSCIX NDA or the ability to timely enroll patients in our upcoming or current clinical trials, and our operational and financial performance will depend on future developments, including the duration, severity and spread of the pandemic, related restrictions on travel and transportation, the impact of new strains of the virus, the effectiveness and availability of vaccines and other actions that may be taken by governmental authorities. Such developments may also impact the ability of the FDA to inspect facilities required for approval of our NDA, the business of our suppliers, service providers or customers, and other items identified under “Risk Factors”, all of which are uncertain and cannot be predicted. An extended period of global supply chain and economic disruption may continue to impact us and could materially affect our business, results of operations, access to sources of liquidity and financial condition.

COMPONENTS OF OUR RESULTS OF OPERATIONS

Research and Development Expenses

Research and development, or R&D, expenses consist of the cost of engineering, clinical trials, regulatory and medical affairs and quality assurance associated with developing our proprietary technology and product candidates. R&D expenses consist primarily of:

- employee-related expenses, including salaries, benefits, travel expense and stock-based compensation expense;
- cost of outside consultants who assist with technology development, regulatory affairs, clinical trials and medical affairs, and quality assurance;
- cost of clinical trial activities performed by third parties;
- cost of pre-approval pharmaceutical batch manufacturing; and
- cost of facilities and supplies used for internal research and development and clinical activities.

We expense R&D costs as incurred. Given the emphasis to date on our lead product candidate FUROSCIX, our R&D expenses have not been allocated on a program-specific basis. In the future, we expect R&D expenses to increase in absolute dollars as we continue to develop new products and enhance existing products and technologies. We anticipate that our expenses will increase significantly as we:

- pursue regulatory approval of FUROSCIX incorporating West’s proprietary on-body infusor;
- continue to advance our pipeline programs beyond FUROSCIX;
- continue our current research and development activity;
- seek to identify additional research programs and additional product candidates;
- initiate preclinical testing and clinical trials for any product candidates we identify and develop, maintain, expand and protect our intellectual property portfolio; and
- hire additional research, clinical and scientific personnel.

General and Administrative Expenses

General and administrative, or G&A, expenses consist of employee-related expenses, including salaries, benefits, travel expense and stock-based compensation expense for personnel in executive, finance, commercial, human

resources, facility operations and administrative functions. Other G&A expenses include pre-approval promotional activities, marketing, conferences and trade shows, professional services fees, including legal, audit and tax fees, insurance costs, general corporate expenses and allocated facilities-related expenses.

If we receive FDA approval for FUROSCIX incorporating West's proprietary on-body infusor, we anticipate that our G&A expenses will increase as we continue to build our corporate and commercial infrastructure to support the development and commercial launch of FUROSCIX in the United States.

RESULTS OF OPERATIONS

Comparison of Years Ended December 31, 2020 and 2021

The following table summarizes our results of operations for the years ended December 31, 2020 and 2021 (in thousands):

(in thousands)	YEAR ENDED DECEMBER 31,		INCREASE (DECREASE)
	2020	2021	
Operating expenses:			
Research and development	\$ 18,149	\$ 16,039	\$ (2,110)
General and administrative	11,784	9,784	(2,000)
Total operating expenses	29,933	25,823	(4,110)
Loss from operations	(29,933)	(25,823)	(4,110)
Other (expense) income	(4)	315	(319)
Interest income	315	49	(266)
Interest expense	(2,587)	(2,575)	(12)
Net loss	\$ (32,209)	\$ (28,034)	\$ (4,175)

Research and development expenses. R&D expenses decreased \$2.1 million to \$16.0 million during the year ended December 31, 2021, compared to \$18.1 million during the year ended December 31, 2020. This decrease was primarily attributable to a \$4.5 million decrease in device development costs and a \$0.4 million decrease in pharmaceutical development costs. The decrease was partially offset by a \$1.5 million increase in contract services for clinical and medical affairs, a \$0.9 million increase in employee-related costs, and a \$0.4 million increase in quality and regulatory consulting costs.

General and administrative expenses. G&A expenses decreased \$2.0 million to \$9.8 million during the year ended December 31, 2021, compared to \$11.8 million during the year ended December 31, 2020. This decrease was primarily attributable to a \$1.1 million decrease in legal costs, a \$1.0 million decrease in costs related to commercial preparation, a \$0.3 million decrease in employee-related costs, and a \$0.3 million decrease in investor relations costs. The decrease was partially offset by a \$0.5 million increase in directors & officers insurance and a \$0.2 million increase in consulting and professional services costs.

Other (expense) income. Other income was \$0.3 million for the year ended December 31, 2021, compared to expense of \$4,000 during the year ended December 31, 2020. The increase in income of \$0.3 million was primarily attributable to the recovery of fees associated with a post-employment matter.

Interest income. Interest income decreased \$0.3 million to \$49,000 during the year ended December 31, 2021 compared to \$0.3 million during the year ended December 31, 2020. This decrease was primarily attributable to lower interest rates on and balances in our financial instruments during the year ended December 31, 2021.

Interest expense. Interest expense decreased \$12,000 from the year ended December 31, 2020 to \$2.6 million during the year ended December 31, 2021. This decrease was due to lower term loan balances in 2021 as a result of principal payments which commenced October 1, 2021.

LIQUIDITY AND CAPITAL RESOURCES

Overview

We have funded our operations from inception through December 31, 2021 primarily through the sale of shares of our common stock, through the private placement of our preferred stock and the incurrence of debt. From inception through December 31, 2021, we had received net cash proceeds of \$92.7 million from our initial public offering, \$56.7 million from sales of our preferred stock, \$18.8 million from borrowings under our term loan, \$13.5 million from sales of convertible notes, \$50.2 million from our public offering of common stock in 2020 and \$14.4 million from the sale of common stock in our 2019 at-the-market offering. As of December 31, 2021, we had cash, cash equivalents and restricted cash of \$74.5 million and short-term investments of \$1.0 million.

On March 23, 2021, we entered into an Open Market Sale AgreementSM (the "2021 ATM Agreement") with Cowen and Company LLC ("Cowen") to sell shares of our common stock, from time to time, with aggregate gross sales proceeds of up to \$50.0 million, through an at-the-market equity offering program under which Cowen will act as our sales agent. As of December 31, 2021, we had received no proceeds from the sale of shares of common stock pursuant to the 2021 ATM Agreement.

We expect to incur substantial additional expenditures in the near future to support our ongoing activities and our plans to obtain regulatory approval for FUROSCIX incorporating West's proprietary on-body infusor. We believe our existing unrestricted cash is sufficient to fund these operations through at least the next 12 months from the date of this annual report. We expect our costs and expenses to increase in the future as we prepare for and, if approved, commence U.S. commercialization of FUROSCIX, including the development of a direct sales force, and as we continue to make substantial expenditures on research and development, including to increase our manufacturing capacity and for conducting clinical trials of our product candidates. Additionally, we continue to incur additional costs as a result of operating as a public company. Our future capital requirements will depend on many factors, including:

- the time and expense required to resubmit the NDA for FUROSCIX;
- the potential FDA approval of FUROSCIX;
- the costs and expenses of establishing our U.S. sales and marketing infrastructure;
- the degree of success we experience in commercializing FUROSCIX, if approved;
- the revenue generated by sales of FUROSCIX, if approved and other products that may be approved;
- the pricing and reimbursement of FUROSCIX, if approved, and of other product candidates that may be approved;
- the costs, timing and outcomes of clinical trials and regulatory reviews associated with our product candidates;
- the emergence of competing or complementary technological developments;
- the extent to which FUROSCIX, if approved, is adopted by the healthcare community;
- the number and types of future products we develop and commercialize;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims;
- the impact of COVID-19 on our operations; and
- the extent and scope of our general and administrative expenses.

Additional financing may not be available on a timely basis on terms acceptable to us, or at all. We may raise funds in equity, royalty-based or debt financings or enter into additional credit facilities in order to access funds for our capital needs. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock. If we raise additional funds through royalty-based financing arrangements, we will likely agree to relinquish rights to potentially valuable future revenue streams and may agree to covenants that restrict our operations or strategic flexibility. Any debt financing obtained by us in the future would cause us to incur additional

debt service expenses and could include restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and pursue business opportunities. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, we may terminate or delay the development of one or more of our products, delay clinical trials necessary to market our products, or delay establishment or expansion of sales and marketing capabilities or other activities necessary to commercialize our products.

Loan and Security Agreement

In May 2017, we entered into a loan and security agreement (the “2017 Loan Agreement”), with SLR Investment Corp (f/k/a Solar Capital Ltd.) and Silicon Valley Bank (together, the “Lenders”), for \$10.0 million. The 2017 Loan Agreement had a maturity date of May 1, 2021. Debt issuance costs for the 2017 Loan Agreement were to be amortized to interest expense over the remaining term of the 2017 Loan Agreement using the effective-interest method.

In September 2019, we replaced the 2017 Loan Agreement with a new \$20.0 million term loan with the Lenders (the “2019 Loan Agreement”). The restructured four-year term loan facility allows for an expansion of the 2017 Loan Agreement. Some of the proceeds from the 2019 Loan Agreement were used to pay off the 2017 Loan Agreement including the final fee of \$325,000. The 2019 Loan Agreement extends the term of the credit facility until September 17, 2023. The payoff of the 2017 Loan Agreement was treated as a modification of the debt. Debt issuance costs for the 2019 Loan Agreement, including unamortized issuance costs for the 2017 Loan Agreement, will be amortized to interest expense over the remaining term of the 2019 Loan Agreement using the effective-interest method.

The interest rate under the 2019 Loan Agreement is the higher of (i) LIBOR plus 7.95% or (ii) 10.18% and there is an interest-only period until September 30, 2021. The rate at December 31, 2021 was 10.18%. Pursuant to the 2019 Loan Agreement, we provided a first priority security interest in substantially all of our assets, including intellectual property, subject to certain exceptions.

We entered into an Exit Agreement in connection with the 2019 Loan Agreement which provides for an aggregate payment of 4% of the loan commitment, or \$800,000, to the lenders upon the occurrence of an exit event (the “Exit Fee”). We concluded that the exit payment obligation met the definition of a derivative that was required to be accounted for as a separate unit of accounting. We recorded the issuance-date fair value of the derivative liability of \$763,000 as a debt discount and as a derivative liability in our balance sheet. The derivative liability is re-measured at each balance sheet date and any changes in estimated fair value is recorded as other income (expense). We paid the Exit Fee during the year ended December 31, 2020 in conjunction with our public offering, which was deemed to be an exit event pursuant to the Exit Agreement. Prior to our public offering in 2020, we recorded \$30,000 in non-cash expense as a fair value adjustment to the derivative liability.

As of December 31, 2021, unpaid borrowings under the 2019 Loan Agreement totaled \$17.5 million. For the year ended December 31, 2021, we recorded \$392,000 related to the amortization of the debt discount associated with the 2019 Loan Agreement. For the year ended December 31, 2020, we recorded \$357,000 related to the amortization of the debt discount associated with the 2019 Loan Agreement.

The 2019 Loan Agreement allows us to voluntarily prepay all (but not less than all) of the outstanding principal at any time. A prepayment premium of 3% or 1% through the one-year anniversary and the two-year anniversary, respectively, would be assessed on the outstanding principal. After the two-year anniversary, a 0.5% prepayment premium would be assessed on the outstanding principal. A final payment fee of \$500,000 is due upon the earlier to occur of the maturity date or prepayment of such borrowings. For the year ended December 31, 2021, we recorded \$162,000 related to the amortization of the final payment fee associated with the 2019 Loan Agreement. For the year ended December 31, 2020, we recorded \$160,000 related to the amortization of the final payment fee associated with the 2019 Loan Agreement.

In an event of default under the 2019 Loan Agreement, the interest rate will be increased by 5% and the balance under the loan may become immediately due and payable at the option of the lenders.

The 2019 Loan Agreement includes restrictions on, among other things, our ability to incur additional indebtedness, change the name or location of our business, merge with or acquire other entities, pay dividends or

make other distributions to holders of our capital stock, make certain investments, engage in transactions with affiliates, create liens, sell assets or pay subordinated debt.

At-the-Market Issuance Sales Agreements

2019 At-the-Market Issuance Sales Agreement

On August 23, 2019, we entered into an Open Market Sale AgreementSM (the "2019 ATM Agreement"), with Jefferies LLC ("Jefferies") with respect to an at-the-market offering program (the "2019 ATM Program") under which we could offer and sell shares of our common stock (the "2019 ATM Shares"), having an aggregate offering price of up to \$15.0 million through Jefferies as our sales agent. The offering and sale of 2019 ATM Shares were made pursuant to our shelf registration statement on Form S-3, which was declared effective by the SEC on February 11, 2019 (the "Registration Statement"). We agreed to pay Jefferies a commission equal to 3.0% of the gross sales proceeds of such 2019 ATM Shares.

During the year ended December 31, 2020, we sold a total of 1,502,892 2019 ATM Shares under the 2019 ATM Agreement, in the open market, at a weighted average gross selling price of \$7.13 per share for net proceeds of \$10.4 million, which completed the program.

We incurred \$189,000 of legal, accounting and other costs to establish and activate the 2019 ATM Program. We charged \$135,000 of these costs against additional paid in capital upon issuance of shares during the year ended December 31, 2020. The program was completed in February 2020.

2021 At-the-Market Issuance Sales Agreement

On March 23, 2021, we entered into the 2021 ATM Agreement with Cowen with respect to an at-the-market offering program (the "2021 ATM Program") under which we could offer and sell shares of our common stock (the "2021 ATM Shares"), having an aggregate offering price of up to \$50.0 million through Cowen as our sales agent. We agreed to pay Cowen a commission up to 3.0% of the gross sales proceeds of such 2021 ATM Shares. As of December 30, 2021, we have received no proceeds from the sale of shares of common stock pursuant to the 2021 ATM Agreement.

Sale of Common Stock

In May 2020, we completed an underwritten public offering of 5,780,347 shares of our common stock (the "2020 Offering Shares"), pursuant to the Registration Statement. The 2020 Offering Shares were sold at an offering price of \$8.65 per share, resulting in net proceeds of \$46.6 million, after deducting underwriting discounts, commissions and offering expenses. In addition, the underwriters of the offering were granted the option for a period of 30 days to purchase up to an additional 867,052 shares of common stock at \$8.65 per share. In June 2020, the underwriters exercised their option and purchased an additional 440,242 shares of common stock at \$8.65 per share, resulting in additional net proceeds to us of \$3.6 million, after deducting underwriting discounts, commissions and offering expenses.

CASH FLOWS

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

(in thousands)	YEAR ENDED DECEMBER 31,	
	2020	2021
Net cash (used in) provided by:		
Operating activities	\$ (27,693)	\$ (27,151)
Investing activities	(33,460)	32,130
Financing activities	60,348	(2,530)
Net (decrease) increase in cash, cash equivalents and restricted cash	\$ (805)	\$ 2,449

Net Cash Used in Operating Activities

During the year ended December 31, 2021, net cash used in operating activities was \$27.2 million, consisting primarily of a net loss of \$28.0 million and a \$2.6 million increase in net operating assets. This was offset by non-cash charges of \$3.5 million. The non-cash charges primarily consisted of stock-based compensation expense, amortization of right-of-use leased assets and non-cash interest expense related to amortization of debt discount associated with the 2019 Loan Agreement.

During the year ended December 31, 2020, net cash used in operating activities was \$27.7 million, consisting primarily of a net loss of \$32.2 million. This was offset by a \$1.4 million increase in net operating liabilities and non-cash charges of \$3.1 million. The non-cash charges primarily consisted of stock-based compensation expense, amortization of right-of-use leased assets and non-cash interest expense related to amortization of debt discount associated with the 2019 Loan Agreement.

Net Cash (Used in) Provided by Investing Activities

During the year ended December 31, 2021, net cash provided by investing activities was \$32.1 million, consisting primarily of maturities of short-term investments, net of purchases.

During the year ended December 31, 2020, net cash used in investing activities was \$33.5 million, consisting of purchases of short-term investments, net of maturities.

Net Cash Provided by (Used in) Financing Activities

During the year ended December 31, 2021, net cash used in financing activities was \$2.5 million, consisting primarily of principal payments on a term loan.

During the year ended December 31, 2020, net cash provided by financing activities was \$60.3 million, consisting primarily of net proceeds of \$50.2 million from the public offering, net proceeds of \$10.4 million from the at-the-market offering and \$0.7 million in proceeds from stock option exercises. The proceeds were offset by the \$0.8 million Exit Fee associated with the 2019 Loan Agreement and \$0.2 million in tax obligations from the settlement of restricted stock units.

CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations as of December 31, 2021 and the effects that such obligations are expected to have on our liquidity and cash flows in future periods.

(in thousands)	PAYMENTS DUE BY PERIOD				
	TOTAL	2022	2023 and 2024	2025 and 2026	After 2026
Operating lease obligations ⁽¹⁾	\$ 496	\$ 496	\$ —	\$ —	\$ —
Term loan	17,500	10,000	7,500	—	—
Total	<u>\$ 17,996</u>	<u>\$ 10,496</u>	<u>\$ 7,500</u>	<u>\$ —</u>	<u>\$ —</u>

⁽¹⁾ Consists of obligations under multi-year, non-cancelable building and equipment leases for our facilities in Salem, New Hampshire, Burlington, Massachusetts and Lexington, Massachusetts. The building leases expire on August 31, 2022, November 30, 2022 and December 31, 2022, respectively.

We have drawn down an aggregate of \$20.0 million from our 2019 Loan Agreement as of December 31, 2021. Our contractual commitments under the 2019 Loan Agreement as of December 31, 2021 consist of an aggregate of \$19.6 million in repayment obligations, inclusive of related interest amounts and final fee in the amount of \$500,000. See “—Loan and Security Agreement” for additional information regarding the 2019 Loan Agreement.

We enter into contracts in the normal course of business with clinical trial sites and manufacturing organizations and with vendors for preclinical studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination after a notice period, and, therefore, are cancelable contracts and not included in the table above.

Due to the discontinuation of use of our first generation device in 2019, we have received notice of termination costs related to the program. Certain of our vendors have claimed or billed for additional costs for which we believe we are not obligated. At this time, we have determined that the possibility of additional costs is remote.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions for the reported amounts of assets, liabilities, revenue, expenses and related disclosures. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions and any such differences may be material.

While our significant accounting policies are more fully described in the notes to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe the following discussion addresses our most critical accounting policies, which are those that are most important to our financial condition and results of operations and require our most difficult, subjective and complex judgments.

Stock-Based Compensation Expense

We are required to determine the fair value of equity incentive awards and recognize compensation expense for all equity incentive awards, including employee stock options and restricted stock units. We recognize this expense over the requisite service period. In addition, we recognize stock-based compensation expense in the statements of operations based on awards expected to vest and, therefore, the amount of expense has been reduced for estimated forfeitures. We use the ratable straight-line method for expense attribution.

The valuation model we used for calculating the fair value of stock options for stock-based compensation expense is the Black-Scholes option-pricing model, or the Black-Scholes model. The Black-Scholes model requires us to make assumptions and judgments about the variables used in the calculation, including:

- *Expected term.* We do not believe we are able to rely on our historical exercise and post-vesting termination activity to provide accurate data for estimating the expected term for use in determining the fair value-based measurement of our options. Therefore, we have opted to use the "simplified method" for estimating the expected term of options, which is the average of the weighted-average vesting period and contractual term of the option.
- *Expected volatility.* Due to the lack of a public market for the trading of our common stock prior to our IPO and a lack of company specific historical volatility, we have determined the share price volatility for options granted based on an analysis of the volatility of a peer group of publicly traded companies. In evaluating similarity, we consider factors such as stage of development, risk profile, enterprise value and position within the industry.
- *Risk-free interest rate.* The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of the grant for zero-coupon U.S. Treasury notes with remaining terms similar to the expected term of the options.
- *Dividend rate.* We assumed the expected dividend to be zero as we have never paid dividends and have no current plans to do so.
- *Expected forfeiture rate.* We estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. We use historical data to estimate pre-vesting option forfeitures and record share-based compensation expense only for those awards that are expected to vest.
- *Service period.* We amortize all stock-based compensation over the requisite service period of the awards, which is generally the same as the vesting period of the awards. We amortize the stock-based compensation cost on a straight-line basis over the expected service periods.

Restricted stock units are valued at the fair market value per share of our common stock on the date of grant.

Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued R&D expenses as of each balance sheet date. 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 invoice us monthly in arrears for services performed or when contractual milestones are met. We make estimates of our accrued expenses as of each balance sheet date based on facts and circumstances known to us at that time. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. The significant estimates in our accrued R&D expenses include the costs incurred for services performed by our vendors in connection with R&D activities for which we have not yet been invoiced.

We base our expenses related to R&D activities on our estimates of the services received and efforts expended pursuant to quotes and contracts with vendors that conduct R&D on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the R&D expense. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or prepaid accordingly. Advance payments for goods and services that will be used in future R&D activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

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

JOBS ACT ACCOUNTING ELECTION

In April 2012, the Jumpstart Our Business Startups Act of 2012, or JOBS Act, was enacted. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies. This election is irrevocable.

NEW ACCOUNTING PRONOUNCEMENTS

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board or other standard setting bodies that are adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on our financial position or results of operations upon adoption.

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing at the end of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks related to changes in foreign currency exchange rates and interest rates.

We contract with vendors in foreign countries. As such, we have exposure to adverse changes in exchange rates of foreign currencies, principally the Swiss franc and the EU euro, associated with our foreign transactions. We believe this exposure to be immaterial. We currently do not hedge against this exposure to fluctuations in exchange rates.

Our exposure to market risk also relates to interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. As of December 31, 2021, our aggregate outstanding indebtedness was \$17.5 million, which bears interest at the higher of (i) LIBOR plus 7.95% or (ii) 10.18%. Due to the short-term duration of our indebtedness, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our debt instruments.

We do not believe that inflation has had a material effect on our business. However, if our costs, in particular costs related to manufacture and supply, were to become subject to significant inflationary pressures, it may adversely impact our business, operating results and financial condition.

Item 8. Consolidated Financial Statements and Supplementary Data.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of scPharmaceuticals Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of scPharmaceuticals Inc. and its subsidiary (the Company) as of December 31, 2020 and 2021, the related consolidated statements of operations and comprehensive loss, stockholders' equity and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ RSM US LLP

We have served as the Company's auditor since 2015.

Boston, Massachusetts
March 22, 2022

SCPHARMACEUTICALS INC.
Consolidated Balance Sheets
(in thousands, except share and per share data)

	DECEMBER 31, 2020	DECEMBER 31, 2021
Assets		
Current assets		
Cash and cash equivalents	\$ 71,819	\$ 74,268
Restricted cash	—	182
Short-term investments	33,276	1,010
Prepaid expenses	2,610	2,791
Other current assets	121	24
Total current assets	107,826	78,275
Restricted cash	182	—
Property and equipment, net	93	69
Right-of-use lease assets - operating, net	815	410
Deposits and other assets	132	283
Total assets	\$ 109,048	\$ 79,037
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	\$ 1,666	\$ 544
Accrued expenses	4,787	3,995
Term loan, short-term	2,408	9,805
Lease obligation - operating, short-term	460	476
Other current liabilities	—	26
Total current liabilities	9,321	14,846
Term loan, long-term	16,858	7,354
Lease obligation - operating, long-term	480	—
Other liabilities	219	367
Total liabilities	26,878	22,567
Commitments and contingencies (Note 12)		
Stockholders' Equity		
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized and no shares issued and outstanding	—	—
Common stock; \$0.0001 par value; 150,000,000 shares authorized at December 31, 2020; 27,325,959 and 27,366,707 shares issued and outstanding at December 31, 2020 and December 31, 2021, respectively	3	3
Additional paid-in capital	243,830	246,166
Accumulated deficit	(161,664)	(189,698)
Accumulated other comprehensive gain (loss)	1	(1)
Total stockholders' equity	82,170	56,470
Total liabilities and stockholders' equity	\$ 109,048	\$ 79,037

The accompanying notes are an integral part of these consolidated financial statements.

SCPHARMACEUTICALS INC.

Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	FOR THE YEAR ENDED DECEMBER 31,	
	2020	2021
Operating expenses:		
Research and development	\$ 18,149	\$ 16,039
General and administrative	11,784	9,784
Total operating expenses	29,933	25,823
Loss from operations	(29,933)	(25,823)
Other (expense) income	(4)	315
Interest income	315	49
Interest expense	(2,587)	(2,575)
Net loss	\$ (32,209)	\$ (28,034)
Net loss per share, basic and diluted	\$ (1.31)	\$ (1.02)
Weighted—average common shares outstanding, basic and diluted	24,568,897	27,351,730
Other comprehensive loss:		
Unrealized gain (loss) on short-term investments	\$ 1	\$ (2)
Comprehensive loss	\$ (32,208)	\$ (28,036)

The accompanying notes are an integral part of these consolidated financial statements.

SCPHARMACEUTICALS INC.
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)

	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	OTHER COMPREHENSIVE INCOME (LOSS)	TOTAL STOCKHOLDER S' EQUITY
	SHARES	AMOUNT				
At December 31, 2019	19,418,955	\$ 2	\$ 180,818	\$ (129,455)	\$ —	\$ 51,365
Net loss	—	—	—	(32,209)	—	(32,209)
Issuance of common stock under at-the-market offering, net of commissions and issuance costs (Note 10)	1,502,892	—	10,253	—	—	10,253
Common stock offering, net of commissions and issuance costs (Note 10)	6,220,589	1	50,187	—	—	50,188
Issuance of common stock upon exercise of stock options	121,671	—	736	—	—	736
Vesting of restricted stock	61,852	—	(164)	—	—	(164)
Stock-based compensation	—	—	2,000	—	—	2,000
Unrealized gain on short term investments	—	—	—	—	1	1
At December 31, 2020	27,325,959	3	243,830	(161,664)	1	82,170
Net loss	—	—	—	(28,034)	—	(28,034)
Issuance of common stock upon exercise of stock options	2,501	—	9	—	—	9
Issuance of common stock purchased through employee stock purchase plan	11,253	—	42	—	—	42
Vesting of restricted stock	26,994	—	(81)	—	—	(81)
Stock-based compensation	—	—	2,366	—	—	2,366
Unrealized loss on short term investments	—	—	—	—	(2)	(2)
At December 31, 2021	<u>27,366,707</u>	<u>\$ 3</u>	<u>\$ 246,166</u>	<u>\$ (189,698)</u>	<u>\$ (1)</u>	<u>\$ 56,470</u>

The accompanying notes are an integral part of these consolidated financial statements.

SCPHARMACEUTICALS INC.
Consolidated Statements of Cash Flows
(in thousands)

	FOR THE YEAR ENDED DECEMBER 31,	
	2020	2021
Cash flows from operating activities		
Net loss	\$ (32,209)	\$ (28,034)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation expense	34	34
Amortization expense - right-of-use leased assets - operating	365	404
Accretion expense	122	124
Stock-based compensation	2,000	2,366
Non-cash interest expense	517	554
Fair value adjustment to derivative liability	30	—
Changes in operating assets and liabilities		
Prepaid expenses and other assets	236	(234)
Accounts payable, accrued expenses and other liabilities	1,212	(2,365)
Net cash flows used in operating activities	<u>(27,693)</u>	<u>(27,151)</u>
Cash flows from investing activities		
Purchases of property and equipment	—	(9)
Maturities of short-term investments	38,700	41,150
Purchases of short-term investments	(72,160)	(9,011)
Net cash flows (used in) provided by investing activities	<u>(33,460)</u>	<u>32,130</u>
Cash flows from financing activities		
Proceeds from common stock offering, net of underwriter discounts and offering costs	50,188	—
Proceeds from at-the-market offering, net	10,388	—
Proceeds from the exercise of stock options	736	9
Proceeds from employee stock purchase plan	—	42
Principal payments on term loan	—	(2,500)
Payment of term loan exit fee	(800)	—
Settlement of restricted stock units for tax withholding obligations	(164)	(81)
Net cash flows provided by (used in) financing activities	<u>60,348</u>	<u>(2,530)</u>
Net (decrease) increase in cash	(805)	2,449
Cash, cash equivalents and restricted cash, beginning of year	72,806	72,001
Cash, cash equivalents and restricted cash, end of year	<u>\$ 72,001</u>	<u>\$ 74,450</u>
Supplemental cash flow information		
Interest paid	\$ 1,986	\$ 2,043
Taxes paid	226	206
Supplemental disclosure of non-cash activities		
Transfer of issuance costs from other noncurrent assets to equity	135	—

The accompanying notes are an integral part of these consolidated financial statements.

1. Description of Business and Basis of Presentation

Description of Business

scPharmaceuticals LLC was formed as a Limited Liability Company under the laws of the State of Delaware on February 19, 2013. On March 24, 2014, scPharmaceuticals LLC was converted to a Delaware Corporation and changed its name to scPharmaceuticals Inc. ("the Company"). The Company is a pharmaceutical company focused on developing and commercializing products that have the potential to optimize the delivery of infused therapies, advance patient care and reduce healthcare costs. The Company's strategy is designed to enable the subcutaneous administration of therapies that have previously been limited to intravenous ("IV") delivery. The Company's headquarters and primary place of business is Burlington, Massachusetts.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") and have been prepared on a basis which assumes that the Company will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The consolidated financial statements reflect the operations of the Company and its wholly-owned subsidiary, scPharmaceuticals Securities Corporation. All significant intercompany balances and transactions have been eliminated in consolidation.

At December 31, 2021, the Company had cash, cash equivalents, restricted cash and investments of \$75.5 million and working capital of \$63.4 million. During the year ended December 31, 2021, the Company incurred a net loss totaling \$28.0 million and used cash in operating activities totaling \$27.2 million. The Company expects to continue to incur losses and use cash in operating activities in 2022.

During the year ended December 31, 2020, the Company received net proceeds of \$50.2 million from the completion of a public offering of 6,220,589 shares of common stock and \$10.4 million from an at-the-market offering of 1,502,892 shares of common stock (Note 10). The Company currently has an at-the-market offering program with Cowen and Company, LLC pursuant to which it may offer and sell up to \$50.0 million of shares of its common stock (Note 10).

The Company believes that, based on its current development plans and activities, its resources will be sufficient to satisfy its liquidity requirements for more than one year from the issuance date of these consolidated financial statements.

2. Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting periods. Significant items subject to such estimates and assumptions include the determination of fair value of financial instruments, accruals related to development costs and clinical activities, and the establishment of the tax valuation allowance. Actual results could differ from those estimates.

Foreign Currency Transactions

The functional currency of the Company is the U.S. dollar. Accordingly, gains and losses resulting from translating transactions denominated in currencies and balances of assets and liabilities outstanding at the balance sheet date, other than U.S. dollars, are included in net loss in the Statements of Operations and Comprehensive Loss.

Cash, Cash Equivalents and Restricted Cash

Cash, cash equivalents and restricted cash consists of bank deposits, certificates of deposit and money market accounts with financial institutions. Cash equivalents are carried at cost which approximates fair value due to their short-term nature and which the Company believes do not have a material exposure to credit risk. The Company considers all highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. The Company places its cash and cash equivalents with institutions with high credit quality. However, at certain times such cash and cash equivalents may be in excess of Federal Deposit Insurance Corporation and Securities Investor Protection Corporation insurance limits. The Company has not experienced any losses with respect to these accounts.

As of December 31, 2020 and 2021, the Company classified \$182,000 as restricted cash related to a letter of credit issued as a security deposit in connection with the Company's lease of its corporate office facilities (Note 12). Cash, cash equivalents and restricted cash consists of the following (in thousands):

	December 31, 2020	December 31, 2021
Cash and cash equivalents	\$ 71,819	\$ 74,268
Restricted cash	182	182
Cash, cash equivalents and restricted cash	<u>\$ 72,001</u>	<u>\$ 74,450</u>

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents and short-term investments. The Company maintains its cash and cash equivalent balances with high-quality financial institutions and, consequently, the Company believes that such funds are subject to minimal credit risk. The Company's short-term investments consist of corporate debt securities. The Company has adopted an investment policy that limits the amounts the Company may invest in any one type of investment and requires all investments held by the Company to hold a minimum rating, thereby reducing credit risk exposure.

Investments

The Company invests excess cash balances in available-for-sale debt securities. The Company determines the appropriate classification of these securities at the time they are acquired and evaluates the appropriateness of such classifications at each balance sheet date. The Company reports available-for-sale investments at fair value at each balance sheet date and includes any unrealized gains and losses in accumulated other comprehensive income (loss), a component of stockholders' equity. Realized gains and losses are determined using the specific identification method and are included in other income (expense). If any adjustment to fair value reflects a decline in the value of the investment, the Company considers all available evidence to evaluate the extent to which the decline is "other than temporary," including the intention to sell and, if so, marks the investment to market through a charge to the Company's consolidated statements of operations and comprehensive loss.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in right-of-use ("ROU") lease assets, current portion of lease obligations, and long term lease obligations on the Company's balance sheets.

ROU lease assets represent the Company's right to use an underlying asset for the lease term and lease obligations represent the Company's obligation to make lease payments arising from the lease. Operating ROU lease assets and obligations are recognized at the commencement date based on the present value of lease payments over the lease term. As most of the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The ROU lease asset excludes lease incentives. The Company's lease

terms include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Research and Development Costs

Research and development costs are expensed as incurred. Nonrefundable advance payments, if any, for goods or services used in research and development are initially recorded as an asset and then recognized as an expense as the related goods are delivered or services are performed. Research and development expenses include contract services, consulting, salaries, materials and supplies and overhead.

Income Taxes

The Company accounts for income taxes in accordance with Accounting Standard Codification ("ASC") 740 *Income Taxes* ("ASC 740"). Deferred tax assets and liabilities are recorded to reflect the impact of temporary differences between amounts of assets and liabilities for financial reporting purposes and such amounts as measured under enacted tax laws. A valuation allowance is required to offset any net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax asset will not be realized.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions. The tax benefits recorded are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is "more likely than not" to be realized following resolution of any uncertainty related to the tax benefit, assuming that the matter in question will be raised by the tax authorities. Potential interest and penalties associated with such uncertain tax positions are recorded as a component of income tax expense. At December 31, 2020 and 2021, the Company had no such accruals.

Stock-Based Compensation

Stock-based compensation expense for stock options is recognized based on the grant-date fair value using the Black-Scholes valuation model. Restricted stock units are valued at the fair market value per share of the Company's common stock on the date of grant. The Company recognizes compensation expense only for those stock-based awards expected to vest after considering expected forfeitures. Cumulative compensation expense is at least equal to the compensation expense for vested awards. Stock-based compensation is recognized on a straight-line basis over the service period of each award.

Segments

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker ("CODM") in making decisions regarding resource allocation and assessing performance. The Company's chief executive officer is the CODM, and he uses consolidated financial information in determining how to allocate resources and assess performance. The Company has determined that it operates in one segment. All of the Company's assets are located in the United States.

Recently Issued Accounting Standards

The Company has reviewed recently issued accounting standards to determine if any of those standards will have a significant impact on its financial reporting. None were noted as of December 31, 2021.

3. Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period without consideration of dilutive common stock equivalents. Diluted net loss per share is the same as basic net loss per common share, since the effects of potentially dilutive securities are anti-dilutive.

Dilutive common stock equivalents are comprised of unexercised stock options outstanding under the Company's equity plan and unvested restricted stock.

The following table sets forth the computation of basic and diluted net loss per share of common stock (in thousands, except shares and per share data):

	FOR THE YEAR ENDED	
	DECEMBER 31, 2020	DECEMBER 31, 2021
Net loss	\$ (32,209)	\$ (28,034)
Weighted—average common shares outstanding, basic and diluted	24,568,897	27,351,730
Net loss per share, basic and diluted	\$ (1.31)	\$ (1.02)

The following table sets forth the outstanding potentially dilutive securities that have been excluded in the calculation of diluted net loss per share because their inclusion would be anti-dilutive (in common stock equivalent shares):

	FOR THE YEAR ENDED	
	DECEMBER 31, 2020	DECEMBER 31, 2021
Stock options to purchase common stock	2,224,913	2,662,752
Unvested restricted stock	80,450	42,250
	2,305,363	2,705,002

4. Investments

Cash in excess of the Company's immediate requirements is invested in accordance with the Company's investment policy that primarily seeks to maintain adequate liquidity and preserve capital.

A summary of the Company's available-for-sale classified investments as of December 31, 2020 and 2021 consisted of the following (in thousands):

	At December 31, 2020			
	Cost Basis	Accumulated Unrealized Gains	Accumulated Unrealized Losses	Fair Value
Investments - Current:				
United States Treasury securities	\$ 8,213	\$ -	\$ -	\$ 8,213
Corporate debt securities	11,972	1	-	11,973
Commercial paper	13,090	-	-	13,090
Total	\$ 33,275	\$ 1	\$ -	\$ 33,276

	At December 31, 2021			
	Cost Basis	Accumulated Unrealized Gains	Accumulated Unrealized Losses	Fair Value
Investments - Current:				
Corporate debt securities	\$ 1,011	\$ -	\$ (1)	\$ 1,010
Total	\$ 1,011	\$ -	\$ (1)	\$ 1,010

The amortized cost and fair value of the Company's available-for-sale investments, by contract maturity, as of December 31, 2021 consisted of the following (in thousands):

	Amortized Cost
Due in one year or less	\$ 1,011
Total	\$ 1,011

5. Property and Equipment

Purchased property and equipment consist of the following as of December 31, 2020 and 2021 (in thousands):

	ESTIMATED USEFUL LIFE	2020	2021
Office equipment	5 years	\$ 10	\$ 10
Office furniture	7 years	116	126
Computer equipment	3 years	8	8
Leasehold improvements	Life of lease	95	95
		229	239
Less: Accumulated depreciation		(136)	(170)
Property and equipment, net		\$ 93	\$ 69

Depreciation expense for the years ended December 31, 2020 and 2021 was \$34,000 and \$34,000, respectively.

6. Accrued Expenses

Accrued expenses at December 31, 2020 and 2021 consist of (in thousands):

	2020	2021
Contract research and development	\$ 2,274	\$ 2,350
Employee compensation and related costs	1,978	1,152
Consulting and professional service fees	364	265
Interest	88	154
Financing related costs	43	60
State taxes	40	5
Other	-	9
Total accrued expenses	\$ 4,787	\$ 3,995

7. Income Taxes

The Company accounts for income taxes in accordance with ASC 740, which requires an asset and liability approach for measuring deferred taxes based on temporary differences between the financial statement and tax bases of assets and liabilities existing at each balance sheet date using enacted tax rates for the years in which taxes are expected to be paid or recovered. The tax benefit arising from the Company's net loss has been offset by an increase in the valuation allowance.

Accordingly, the Company had no net income tax provision or benefit during the years ended December 31, 2020 and 2021. Components of the net deferred tax assets at December 31, 2020 and 2021 are as follows (in thousands):

	2020	2021
Deferred tax assets:		
Federal net operating loss carryforwards	\$ 10,474	\$ 12,813
State net operating loss carryforwards	2,938	3,630
Research and development tax credits	2,963	3,719
Accrued liabilities	588	327
Stock-based compensation	679	1,087
Depreciation and amortization	1,545	247
Capitalized research and development costs	23,977	29,529
Lease liabilities	253	129
Other	—	29
Total deferred tax assets	\$ 43,417	\$ 51,510
Deferred tax liabilities:		
Right-of-use lease assets	(219)	(111)
Other	(119)	—
Total deferred tax liabilities	\$ (338)	\$ (111)
Valuation allowance	\$ (43,079)	\$ (51,399)
Net deferred tax assets	\$ —	\$ —

At December 31, 2021, the Company had available federal net operating loss carryforwards of \$17.5 million, which expire at various dates through 2037, and \$43.5 million, which may be carried forward indefinitely. At December 31, 2021, the Company had available state net operating loss carryforwards of \$57.5 million, which expire at various dates through 2041, and \$200,000, which may be carried forward indefinitely. In assessing the realizability of net deferred tax assets, management considers whether it is more likely than not that the net deferred tax assets will be realized. The ultimate realization of net deferred tax assets is dependent upon the generation of future taxable income during the periods in which temporary differences representing future deductible amounts become deductible. Management has established a full valuation allowance against the net deferred tax assets at December 31, 2020 and 2021 since it is more likely than not that these future tax benefits will not be realized. During 2021, the valuation allowance increased by \$8.3 million.

At December 31, 2021, the Company had federal and state research and development credit carryforwards of \$3.0 million and \$0.9 million, respectively. The net credit carryforwards may be used to offset future income taxes and expire at various dates through 2041. Changes in the Company's ownership, as defined in the U.S. Internal Revenue Code, may limit the Company's ability to utilize the tax credit and net operating loss carryforwards.

A reconciliation of income tax (expense) benefit at the statutory federal income tax rate and income taxes as reflected in the consolidated financial statements at December 31, 2020 and 2021 are as follows:

	2020	2021
Federal income tax at statutory rate	21.00 %	21.00 %
State income tax, net of federal benefit	5.65 %	5.97 %
Research and development credits	2.03 %	3.16 %
Book compensation related to stock options	(0.91) %	0.03 %
Change in income tax rate	0.73 %	0.45 %
Other	(0.30) %	(0.93) %
Increase in valuation allowance	(28.20) %	(29.68) %
Effective tax rate	— %	— %

The Company files tax returns in the United States, Massachusetts and other states. The tax years 2017 through 2021 remain open to examination by major taxing jurisdictions to which the Company is subject, which are primarily the United States federal and Massachusetts. Carryforward attributes generated in years past may still be adjusted upon examination by the Internal Revenue Service or state tax authorities if they have or will be used in a future period. The Company is currently not under examination by the Internal Revenue Service or any other

jurisdictions for any tax years. The Company recognizes both accrued interest and penalties related to unrecognized benefits in income tax expense. The Company has not recorded any interest or penalties on any unrecognized tax benefits since its inception.

A reconciliation of the beginning and ending amount of uncertain tax benefits is as follows (in thousands):

	2020	2021
Beginning uncertain tax benefits	\$ 628	\$ 774
Prior year - increases	1	—
Current year - decreases	—	—
Current year - increases	145	203
Ending uncertain tax benefits	<u>\$ 774</u>	<u>\$ 977</u>

8. Fair Value of Financial Instruments

The Financial Accounting Standards Board (“FASB”) ASC Topic, *Fair Value Measurements and Disclosures* (“ASC 820”), provides a fair value hierarchy, which classifies fair value measurements based on the inputs used in measuring fair value. 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 of the investments and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2—Valuations based on quoted prices for similar assets or liabilities in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3—Valuations that require inputs that reflect the Company’s own assumptions that are both significant to the fair value measurement and observable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument’s level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying values of the Company’s cash and restricted cash, prepaid expenses and deposits approximate their fair values due to their short-term nature. The carrying value of the Company’s loan payable was considered a reasonable estimate of fair value because the Company’s interest rate is near current market rates for instruments with similar characteristics.

The following tables summarize the Company's assets and liabilities that are measured at fair value on a recurring basis and indicates the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	As of December 31, 2020			
	TOTAL	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	\$ 70,797	\$ 68,798	\$ 1,999	\$ —
Total cash equivalents	70,797	68,798	1,999	—
United States Treasury securities	8,213	8,213	—	—
Corporate debt securities	11,973	—	11,973	—
Commercial paper	13,090	—	13,090	—
Investments	33,276	8,213	25,063	—
Total	\$ 104,073	\$ 77,011	\$ 27,062	\$ —

	As of December 31, 2021			
	TOTAL	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	\$ 72,449	\$ 72,449	\$ —	\$ —
Total cash equivalents	72,449	72,449	—	—
Corporate debt securities	1,010	—	1,010	—
Investments	1,010	—	1,010	—
Total	\$ 73,459	\$ 72,449	\$ 1,010	\$ —

Changes in the fair value of the Company's Level 3 derivative liability for the year ended December 31, 2020 are as follows:

At December 31, 2019	\$ 765
Change in fair value of derivative liability	30
Allocation of debt discount to term loan	5
Payment of derivative liability	(800)
At December 31, 2020	\$ —

9. Term Loan

In May 2017, the Company entered into a loan and security agreement (the "2017 Loan Agreement"), with SLR Investment Corp. (f/k/a Solar Capital Ltd.) and Silicon Valley Bank, (together, the "Lenders") for \$10.0 million. The 2017 Loan Agreement had a maturity date of May 1, 2021. Debt issuance costs for the 2017 Loan Agreement were to be amortized to interest expense over the remaining term of the 2017 Loan Agreement using the effective-interest method.

In September 2019, the Company replaced the 2017 Loan Agreement with a new \$20.0 million term loan with the Lenders (the "2019 Loan Agreement"). The restructured four-year term loan facility allows for an expansion of the 2017 Loan Agreement. Some of the proceeds from the 2019 Loan Agreement were used to pay off the 2017 Loan Agreement including the final fee of \$325,000. The 2019 Loan Agreement extends the term of the credit facility

until September 17, 2023. The payoff of the 2017 Loan Agreement was treated as a modification of the debt. Debt issuance costs for the 2019 Loan Agreement, including unamortized issuance costs for the 2017 Loan Agreement, will be amortized to interest expense over the remaining term of the 2019 Loan Agreement using the effective-interest method.

The interest rate under the 2019 Loan Agreement is the higher of (i) LIBOR plus 7.95% or (ii) 10.18% and there is an interest-only period until September 30, 2021. The rate at December 31, 2021 was 10.18%. Pursuant to the 2019 Loan Agreement, the Company provided a first priority security interest in substantially all of the Company's assets, including intellectual property, subject to certain exceptions.

The Company entered into the Exit Agreement in connection with the 2019 Loan Agreement which provides for an aggregate payment of 4% of the loan commitment, or \$800,000, to the Lenders upon the occurrence of an exit event (the "Exit Fee"). The Company concluded that the exit payment obligation met the definition of a derivative that was required to be accounted for as a separate unit of accounting. The Company recorded the issuance-date fair value of the derivative liability of \$763,000 as a debt discount and as a derivative liability in the Company's balance sheet. The derivative liability is re-measured at each balance sheet date and any changes in estimated fair value is recorded as other income (expense). The Company paid the Exit Fee during the year ended December 31, 2020 in conjunction with the Company's public offering, which was deemed to be an exit event pursuant to the Exit Agreement. Prior to its public offering in 2020, the Company recorded \$30,000 in non-cash expense as a fair value adjustment to the derivative liability.

As of December 31, 2021, unpaid borrowings under the 2019 Loan Agreement totaled \$17.5 million. For the years ended December 31, 2020 and 2021, the Company recorded \$357,000 and \$392,000, respectively, related to the amortization of the debt discount associated with the 2019 Loan Agreement.

The 2019 Loan Agreement allows the Company to voluntarily prepay all (but not less than all) of the outstanding principal at any time. A prepayment premium of 3% or 1% through the one-year anniversary and the two-year anniversary, respectively, would be assessed on the outstanding principal. After the two-year anniversary, a 0.5% prepayment premium would be assessed on the outstanding principal. A final payment fee of \$500,000 is due upon the earlier to occur of the maturity date or prepayment of such borrowings. For the years ended December 31, 2020 and 2021, the Company recorded \$160,000 and \$162,000, respectively, related to the amortization of the final payment fee associated with the 2019 Loan Agreement.

In an event of default under the 2019 Loan Agreement, the interest rate will be increased by 5% and the balance under the loan may become immediately due and payable at the option of the lenders.

The 2019 Loan Agreement includes restrictions on, among other things, the Company's ability to incur additional indebtedness, change the name or location of the Company's business, merge with or acquire other entities, pay dividends or make other distributions to holders of its capital stock, make certain investments, engage in transactions with affiliates, create liens, sell assets or pay subordinated debt.

Total term loan and unamortized debt discount balances are as follows (in thousands):

	DECEMBER 31, 2020	DECEMBER 31, 2021
Face value	\$ 20,000	\$ 17,500
Less: debt discount	(734)	(341)
Total	\$ 19,266	\$ 17,159
Less: current portion	(2,408)	(9,805)
Long-term portion	\$ 16,858	\$ 7,354

As of December 31, 2021, future principal payments due under the 2019 Loan Agreement are as follows (in thousands):

Year ended:	
December 31, 2022	\$ 10,000
December 31, 2023	7,500
Total minimum principal payments	\$ 17,500

10. Stockholders' Equity

Common Stock

At December 31, 2020 and 2021, the Company had 150,000,000 shares of common stock authorized with a par value of \$0.0001. There were 27,325,959 and 27,366,707 shares issued and outstanding at December 31, 2020 and 2021, respectively. Voting, dividend and liquidation rights of the holders of the common stock are subject to the Company's articles of incorporation, corporate bylaws and underlying shareholder agreements.

Reserved Shares

The Company has reserved 2,662,752 and 42,250 shares of common stock for the exercise of outstanding options to purchase common stock and for the vesting of restricted stock units ("RSUs"), respectively.

2019 At-the-Market Issuance Sales Agreement

On August 23, 2019, the Company entered into an Open Market Sale AgreementSM ("the 2019 ATM Agreement"), with Jefferies LLC ("Jefferies") with respect to an at-the-market offering program (the "2019 ATM Program") under which the Company could offer and sell shares of its common stock (the "2019 ATM Shares") having an aggregate offering price of up to \$15.0 million through Jefferies as its sales agent. The offering and sale of 2019 ATM Shares were made pursuant to the Company's shelf registration statement on Form S-3, which was declared effective by the SEC on February 11, 2019 (the "Registration Statement").

The Company agreed to pay Jefferies a commission equal to 3.0% of the gross sales proceeds of such 2019 ATM Shares. The Company incurred \$189,000 of legal, accounting and other costs to establish and activate the 2019 ATM Program.

During the year ended December 31, 2020, the Company sold a total of 1,502,892 2019 ATM Shares under the 2019 ATM Agreement, in the open market, at a weighted average gross selling price of \$7.13 per share for net proceeds of \$10.4 million, which completed the program. The Company charged \$135,000 in costs related to establishing and activating the program against additional paid in capital upon issuance of shares in 2020.

2021 At-the-Market Issuance Sales Agreement

On March 23, 2021, the Company entered into an Open Market Sale AgreementSM (the "2021 ATM Agreement") with Cowen and Company, LLC ("Cowen") with respect to an at-the-market offering program (the "2021 ATM Program") under which the Company could offer and sell shares of its common stock (the "2021 ATM Shares"), having an aggregate offering price of up to \$50.0 million through Cowen as its sales agent. The Company agreed to pay Cowen a commission up to 3.0% of the gross sales proceeds of such 2021 ATM Shares. As of December 31, 2021, the Company had received no proceeds from the sale of shares of common stock pursuant to the 2021 ATM Agreement.

Sale of Common Stock

In May 2020, the Company completed an underwritten public offering of 5,780,347 shares of its common stock (the "2020 Offering Shares"), pursuant to the Registration Statement. The 2020 Offering Shares were sold at an offering price of \$8.65 per share, resulting in net proceeds of \$46.6 million, after deducting underwriting discounts, commissions and offering expenses. In addition, the underwriters of the offering were granted the option for a period of 30 days to purchase up to an additional 867,052 shares of common stock at \$8.65 per share. In June 2020, the underwriters exercised their option and purchased an additional 440,242 shares of common stock at \$8.65 per share, resulting in additional net proceeds to the Company of \$3.6 million, after deducting underwriting discounts, commissions and offering expenses.

Preferred Stock

At December 31, 2020 and 2021, the Company had 10,000,000 shares of preferred stock authorized with a par value of \$0.0001 and no shares of preferred stock were issued or outstanding.

11. Stock-Based Compensation

Stock Options

In October 2017, the board of directors approved the 2017 Stock Option and Incentive Plan (the "2017 Stock Plan") which became effective in November 2017, upon the closing of the Company's IPO. The 2017 Stock Plan will expire in October 2027. Under the 2017 Stock Plan, the Company may grant incentive stock options, non-statutory stock options, restricted stock awards, RSUs and other stock-based awards. The Company's 2014 Stock Incentive Plan (the "2014 Stock Plan") terminated in November 2017 effective upon the completion of the Company's IPO. No additional options will be granted under the 2014 Stock Plan. At December 31, 2021, there were 600,688 options outstanding under the 2014 Stock Plan.

At December 31, 2021, there were 5,051,920 shares of the Company's common stock authorized for issuance under the 2017 Stock Plan, including 359,651 options that have been forfeited from the 2014 Stock Plan.

At December 31, 2021, there were 2,917,802 options available for issuance, 2,062,064 options outstanding and 42,250 restricted stock units outstanding under the 2017 Stock Plan. Awards granted under the 2017 Stock Plan have a term of ten years. Vesting of awards under the 2017 Stock Plan is determined by the compensation committee of the board of directors but is generally over one to four-year terms.

The fair value of options at date of grant was estimated using the Black-Scholes option-pricing model with the following assumptions:

	2020	2021
Risk-free interest rate	0.33%—1.71%	0.50%—1.25%
Expected dividend yield	0%	0%
Expected life	5.5—6.6 years	5.5—6.7 years
Expected volatility	72%—75%	72%—74%
Weighted-average grant date fair value	\$ 4.35	\$ 4.18

Due to the lack of a public market for the trading of the Company's common stock prior to its initial public offering and the lack of company-specific historical volatility, volatility was estimated using historical volatilities of similar companies. The expected life of the awards is estimated based on the simplified method, which calculates the expected life based upon the midpoint of the term of the award and the vesting period. The Company uses the simplified method because it does not have sufficient option exercise data to provide a reasonable basis upon which to estimate the expected term. The Company has no history of paying dividends nor does management expect to pay dividends over the contractual terms of these options. The risk-free interest rates are based on the United States Treasury yield curve in effect at the time of grant, with maturities approximating the expected life of the stock options.

The following table summarizes information about stock option activity during 2020 and 2021 (in thousands, except share and per share data):

	NUMBER OF SHARES	WEIGHTED- AVERAGE EXERCISE PRICE	WEIGHTED- AVERAGE REMAINING CONTRACTUAL TERM	AGGREGATE INTRINSIC VALUE
Outstanding, December 31, 2019	1,439,518	\$ 6.09		
Granted	1,021,705	6.79		
Exercised	(121,671)	6.07		
Forfeited	(114,639)	9.01		
Outstanding, December 31, 2020	2,224,913	\$ 6.26		
Granted	953,506	6.57		
Exercised	(2,501)	3.81		
Forfeited	(513,166)	6.72		
Outstanding, December 31, 2021	2,662,752	\$ 6.28	7.47	\$ 993
Vested and exercisable, December 31, 2021	1,368,937	\$ 6.08	6.22	\$ 877
Vested and expected to vest, December 31, 2021	2,238,516	\$ 6.24	7.22	\$ 940

Of the options granted during the year ended December 31, 2021, 112,050 were performance-based options. Vesting of these performance-based options is contingent on the occurrence of certain regulatory and commercial milestones. The Company is recognizing the expense straight-line over the expected performance achievement term.

The following table summarizes information about RSU activity during 2020 and 2021:

	RSUs	AVERAGE GRANT DATE FAIR VALUE (IN DOLLARS PER SHARE)
RSUs outstanding, December 31, 2019	160,900	\$ 3.25
Granted	—	—
Vested	(80,450)	3.25
Forfeited	—	—
RSUs outstanding, December 31, 2020	80,450	3.25
Granted	—	—
Vested	(38,200)	3.25
Forfeited	—	—
RSUs outstanding, December 31, 2021	42,250	\$ 3.25

The number of RSUs vested includes shares of common stock withheld on behalf of employees to satisfy the minimum statutory tax withholding requirements.

During 2020 and 2021, the Company received \$736,000 and \$9,000, respectively, upon exercise of stock options. The intrinsic value of the options exercised in 2020 and 2021 was \$388,000 and \$7,000, respectively.

Unrecognized compensation expense related to unvested options as of December 31, 2021 was \$2.7 million and will be recognized over the remaining vesting periods of the underlying awards. The weighted-average period over which such compensation is expected to be recognized is 2.3 years. Unrecognized compensation expense related to unvested RSUs as of December 31, 2021 was \$22,000 and will be recognized over the remaining vesting periods of the underlying awards. The weighted-average period over which such compensation is expected to be recognized is 0.7 years.

Employee Stock Purchase Plan

In October 2017, the board of directors approved the 2017 Employee Stock Purchase Plan (“the ESPP”) which became effective in November 2017, upon the closing of the Company’s IPO. As part of the ESPP, eligible employees may acquire an ownership interest in the Company by purchasing common stock, at a discount, through payroll deductions. Eligible employees who elected to participate were able to participate in the ESPP beginning September 1, 2021.

During 2021, 11,253 shares of common stock were issued under the ESPP. As of December 31, 2021, there were 983,629 shares of common stock available for issuance under the ESPP.

The Company recorded stock-based compensation expense in the following expense categories of its accompanying condensed consolidated statements of operations and comprehensive loss for employees, directors and non-employees during the years ended December 31, 2020 and 2021 as follows (in thousands):

	2020	2021
Research and development	\$ 619	\$ 947
General and administrative	1,381	1,419
Total	<u>\$ 2,000</u>	<u>\$ 2,366</u>

12. Commitments and Contingencies

Operating Leases

The Company entered into noncancelable operating leases for office facilities located in Lexington, Massachusetts and Burlington, Massachusetts through December 31, 2022 and November 30, 2022, respectively. Rent expense under the operating leases totaled \$0.5 million and \$0.5 million for the years ended December 31, 2020 and 2021, respectively.

Certain leases provide for increases in future minimum annual rental payments as defined in the lease agreements. The leases generally also include real estate taxes and common area maintenance charges in the annual rental payments.

Pursuant to the terms of its lease agreement for the Company’s headquarters in Burlington, Massachusetts, the Company obtained a letter of credit in the amount of approximately \$182,000 as security on the lease obligation. The letter of credit is listed as restricted cash on the Company’s consolidated balance sheets.

Short-term leases are leases having a term of twelve months or less. The Company recognizes short-term leases on a straight-line basis and does not record a related lease asset or liability for such leases.

The following is a maturity analysis of the annual undiscounted cash flows reconciled to the carrying value of the operating lease liabilities as of December 31, 2021 (in thousands):

Year ended:		
December 31, 2022		\$ 496
Total minimum lease payments		496
Less imputed interest		(20)
Total		<u>\$ 476</u>
	<u>2020</u>	<u>2021</u>
Lease cost:		
Operating lease cost	\$ 491	\$ 482
Short-term lease cost	-	20
Sublease income	(51)	(51)
Total lease cost	<u>\$ 440</u>	<u>\$ 451</u>
Other information		
Cash paid for amounts included in the measurement of liabilities	\$ 529	\$ 530
Operating cash flows from operating leases	\$ (45)	\$ (60)
Weighted-average remaining lease term - operating leases	1.9 years	0.9 years
Weighted-average discount rate - operating leases	10.1%	10.1%

In July 2021, the Company signed a lease agreement for a new office facility located in Salem, New Hampshire. The lease commenced on September 1, 2021 and has an initial term of 12 months with an optional extension term through August 2023. The lease is considered short-term and is being recognized on a straight-line basis over the initial term as the Company does not currently intend to exercise the option.

In February 2018, the Company signed a sublease agreement for its facility located in Lexington, Massachusetts. The sublease commenced on April 1, 2018 and has an initial term of three years with an extension term through December 2022. In February 2020, the sublease was extended until December 31, 2022.

Research and Development Agreements

As part of the Company's research and development efforts, the Company enters into research and development agreements with unrelated companies. These agreements contain varying terms and provisions which include fees and milestones to be paid by the Company. Some of these agreements also contain provisions which require the Company to make payments for exclusivity in the development of products in the area of loop diuretics.

Contingencies

The Company follows subtopic 450-20 of the FASB ASC to report accounting for contingencies.

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company but which will only be resolved when one or more future events occur or fail to occur. The Company assesses such contingent liabilities, and such assessment inherently involves an exercise of judgment.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potential material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, and an estimate of the range of possible losses, if determinable and material, would be disclosed. Loss contingencies considered remote are generally not disclosed unless they involve guarantees, in which case the guarantees would be disclosed.

Due to the discontinuation of use of the first generation device in 2019, the Company has received notice of termination costs related to the program. Certain of the Company's vendors have claimed or billed for additional costs for which the Company believes it is not obligated. The Company has evaluated this contingent liability in

accordance with ASC 450, Contingencies, and determined that the possibility of additional costs is remote and no longer probable.

13. 401(k) Savings Plan

In July 2014, the Company established a defined contribution savings plan under Section 401(k) of the Internal Revenue Code covering all of its employees. Employees may make contributions by withholding a percentage of their salary. The plan includes an employer match equal to 100% on the first 3% of deferred compensation and an additional 50% on the next 2% of deferred compensation. During the years ended December 31, 2020 and 2021, the Company has recognized compensation expense of \$151,000 and \$198,000, respectively, for the employer match contribution.

14. Subsequent Events

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the financial statements to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure. During this period, the Company did not have any material subsequent events that impacted its consolidated financial statements or disclosures.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.***Evaluation of Disclosure Controls and Procedures***

Our management, with the participation of our principal executive and financial officer, evaluated, as of the end of the period covered by this Annual Report on Form 10-K, the effectiveness of our disclosure controls and procedures. Based on that evaluation of our disclosure controls and procedures as of December 31, 2021, our principal executive and financial officer concluded that our disclosure controls and procedures as of such date are effective at the reasonable assurance level. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means “controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms.” Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Management’s Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company’s principal executive and financial officer and effected by the company’s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company’s assets that could have a material effect on the financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of the end of the period covered by this Annual Report on Form 10-K. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework (2013 framework). Based on its assessment, management believes that, as of December 31, 2021, our internal control over financial reporting is effective based on those criteria.

Inherent Limitations of Internal Controls

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be contained in our definitive proxy statement to be filed with the SEC in connection with the Annual Meeting of Stockholders within 120 days after the conclusion of our fiscal year ended December 31, 2021, or the Proxy Statement, and is incorporated in this Annual Report on Form 10-K by reference.

Item 11. Executive Compensation.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report Form 10-K by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report Form 10-K by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report Form 10-K by reference.

Item 14. Principal Accounting Fees and Services.

Our independent public accounting firm is RSM US LLP, Boston, MA, PCAOB Auditor ID 49.

The information required by this item will be contained in the Proxy Statement and is incorporated in this Annual Report Form 10-K by reference.

Item 15. Exhibits, Financial Statement Schedules.**(a) Documents filed as a part of this Report:****(1) Consolidated Financial Statements**—Included in Item 8 of this Annual Report on Form 10-K.

Report of Independent Registered Public Accounting Firm	88
Consolidated Financial Statements:	
Consolidated Balance Sheets as of December 31, 2020 and 2021	89
Consolidated Statement of Operations and Comprehensive Loss for the Years Ended December 31, 2020 and 2021	90
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2020 and 2021	91
Consolidated Statements of Cash Flows for the Years Ended December 31, 2020 and 2021	92
Notes to Consolidated Financial Statements	93

(2) Financial Statement Schedules

All financial statement schedules have been omitted because they are not applicable, not required or the information required is shown in the financial statements or the notes thereto.

(3) Index to Exhibits.

Exhibit Number	Description
3.1	Second Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)
3.2	Amended and Restated By-laws of the Registrant (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)
3.3	Amendment No. 1 to the Company's Amended and Restated Bylaws (incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 001-38293) filed on June 10, 2020)
3.4	Amendment No. 2 to the Company's Amended and Restated Bylaws (incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 001-38293) filed on March 12, 2021)
4.1	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated December 22, 2016 (incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-221077) filed on October 23, 2017)
4.2	Description of Registered Securities (incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 001-38293) filed on March 23, 2021)
10.1#	2014 Stock Incentive Plan, as amended, and forms of award agreements thereunder (incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-221077) on October 23, 2017)
10.2#	2017 Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)
10.3#	Senior Executive Cash Incentive Bonus Plan (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)
10.4#	2017 Employee Stock Purchase Plan (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)
10.5#	Form of Indemnification Agreement (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017)

10.6	<u>Office Lease Agreement, dated as of June 2, 2017, by and between the Registrant and NEEP Investors Holdings LLC (incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-221077) filed on October 23, 2017).</u>
10.7	<u>Loan and Security Agreement, dated as of September 17, 2019, by and among the Registrant, Solar Capital Ltd., as collateral agent, and the lenders listed on Schedule 1.1 thereto or otherwise a party thereto from time to time, including Solar Capital Ltd., as a lender, and Silicon Valley Bank, as a lender (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-38293) filed on November 12, 2019).</u>
10.8#	<u>Amended and Restated Employment Agreement, by and between the Registrant and John H. Tucker (incorporated by reference to the Registrant's Registration Statement on Form S-1/A (File No. 333-221077) filed on November 7, 2017).</u>
10.9#	<u>Employment Agreement, by and between the Registrant and Rachael Nokes (incorporated by reference as Exhibit 10.9 to the Registrants Annual Report on Form 10-K (File No. 00138293) filed on March 24, 2020).</u>
10.10	<u>Development Agreement, by and between the Registrant and West Pharmaceutical Services, Inc., dated January 28, 2019 (incorporated by reference as Exhibit 10.2 to the Registrants Quarterly Report on Form 10-Q (File No. 00138293) filed on May 8, 2019).</u>
10.11	<u>Supply Agreement, dated August 15, 2020, by and between West Pharmaceutical Services, Inc. and the Registrant (incorporated by reference as Exhibit 10.1 to the Registrants Quarterly Report on Form 10-Q (File No. 00138293) filed on November 16, 2020).</u>
21.1*	<u>Subsidiaries of the Registrant</u>
23.1*	<u>Consent of RSM US LLP, Independent Registered Public Accounting Firm</u>
31.1*	<u>Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1**	<u>Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded with the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*)

* Filed herewith.

† The Securities and Exchange Commission has granted confidential treatment of certain provisions. Omitted material for which confidential treatment has been granted has been filed separately with the Securities and Exchange Commission.

Indicates a management contract or any compensatory plan, contract or arrangement.

** This certification will not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by reference into such filing.

Item 16. Form 10-K Summary.

Not applicable.

SUBSIDIARIES

Subsidiary

Jurisdiction of Incorporation

scPharmaceuticals Securities Corporation

Massachusetts

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Nos. 333-254636, 333-237361, 333-229122, 333-227071 and 333-221677) on Forms S-8 and the Registration Statement (No. 333-254637) on Form S-3 of scPharmaceuticals Inc. of our report dated March 22, 2022, relating to the consolidated financial statements of scPharmaceuticals Inc., appearing in this Annual Report on Form 10-K of scPharmaceuticals Inc. for the year ended December 31, 2021.

/s/ RSM US LLP

Boston, Massachusetts

March 22, 2022

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, John H. Tucker, certify that:

1. I have reviewed this Annual Report on Form 10-K of scPharmaceuticals Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 22, 2022

By:

/s/ John H. Tucker

John H. Tucker
President, Chief Executive Officer, Principal Executive Officer
and Principal Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of scPharmaceuticals Inc. (the "Company") on Form 10-K for the year ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 22, 2022

By:

/s/ John H. Tucker

John H. Tucker
President, Chief Executive Officer, Principal Executive Officer
and Principal Financial Officer

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.
