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, 2024

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 001-34375

PLUS THERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

DELAWARE **(State or Other Jurisdiction of Incorporation or Organization)**	**33-0827593** **(I.R.S. Employer Identification No.)**
2710 REED ROAD, SUITE 160, HOUSTON, TX **(Address of principal executive offices)**	**77051** **(Zip Code)**

Registrant's telephone number, including area code: (737) 255-7194

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 $0.001 per share	PSTV	Nasdaq Capital Market

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

None.

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 Section 15(d) of the Exchange 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 definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	☐	Accelerated Filer	☐
Non-Accelerated Filer	☒	Smaller reporting company	☒
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate 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. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 common stock of the registrant held by non-affiliates of the registrant on June 28, 2024, the last business day of the registrant's most recently completed second fiscal quarter, was $8.2 million based on the closing sales price of the registrant's common stock on June 28, 2024 as reported on the Nasdaq Capital Market, of $1.47 per share.

As of March 21, 2025, there were 16,999,626 shares of the registrant's common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant's definitive proxy statement for its 2025 Annual Meeting of Stockholders, which will be filed with the United States Securities and Exchange Commission within 120 days of December 31, 2024, are incorporated by reference into Part III of this Annual Report on Form 10-K.

PLUS THERAPEUTICS, INC.
ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2024
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PART IV

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This report contains certain statements that may be deemed "forward-looking statements" within the meaning of U.S. securities laws, including statements regarding clinical trials, expected operations and upcoming developments. All statements, other than statements of historical fact, that address activities, events or developments that we intend, expect, project, believe or anticipate and similar expressions or future conditional verbs such as will, should, would, could or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate.

These statements include, without limitation, statements about our anticipated expenditures, including research and development, and general and administrative expenses; our strategic collaborations and license agreements, intellectual property, U.S. Food and Drug Administration and European Medicines Agency approvals and interactions and government regulation; the potential size of the market for our product candidates; our research and development efforts; results from our pre-clinical and clinical studies and the implications of such results regarding the efficacy or safety of our product candidates; the safety profile, pathways, and efficacy of our product candidates and formulations; anticipated advantages of our product candidates over other products available in the market and being developed; the populations that will most benefit from our product candidates and indications that will be pursued with each product candidate; anticipated progress in our current and future clinical trials; plans and strategies to create novel technologies; our IP strategy; competition; future development and/or expansion of our product candidates and therapies in our markets; sources of competition for any of our product candidates; our pipeline; our ability to generate product or development revenue and the sources of such revenue; our ability to effectively manage our gross profit margins; our ability to obtain and maintain regulatory approvals; expectations as to our future performance; portions of the "Liquidity and Capital Resources" section of this Annual Report on Form 10-K ("Form 10-K," including our potential need for additional financing and the availability thereof; our ability to integrate into our business and operations, develop, fully utilize and monetize acquired assets; our ability to continue as a going concern; our ability to remain listed on The Nasdaq Capital Market; our ability to repay or refinance some or all of our outstanding indebtedness and our ability to raise capital in the future; our ability to transfer the drug and medical device product manufacturing to a contract drug and medical device manufacturing organization; the potential enhancement of our cash position through development, marketing, and licensing arrangements; and a material security breach or cyber security attack affecting our operations and property. The forward-looking statements included in this report could differ materially from those expressed or implied by these forward-looking statements because of risks, uncertainties and other factors that include, but are not limited to, the risks described under the "Risk Factor Summary" and the "Risk Factors" included below.

We encourage you to read the risks described under "Risk Factors" and elsewhere in this report carefully. We caution you not to place undue reliance on the forward-looking statements contained in this report. These statements, like all statements in this report, speak only as of the date of this report (unless an earlier date is indicated) and we undertake no obligation to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made unless we have an obligation under U.S. federal securities laws to do so. Such forward-looking statements are not guarantees of future performance.

RISK FACTOR SUMMARY

Below is a summary of the principal factors that may affect our business, financial condition, and results of operations. This summary does not address all of the risks that we face. Additional risks not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or results of operations in future periods. Further discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found below under the heading "Risk Factors" and should be carefully considered, together with other information in this Form 10-K and our other filings with the Securities and Exchange Commission ("SEC").

Risks Related to Our Financial Position and Capital Requirements

- We have incurred losses since inception, we expect to incur significant net losses in the foreseeable future and we may never become profitable and our operating results have been and will likely continue to be volatile.
- Uncertainties relating to our ability to fund our operations for at least the next 12 months raises substantial doubt about our ability to continue as a going concern.
- We could be delisted from Nasdaq for failure to comply with the minimum stockholders' equity continued listing requirement or other applicable continued listing requirements and standards of Nasdaq, which would seriously harm the liquidity of our stock and our ability to raise capital.
- We will need substantial additional funding to develop our product candidates and conduct our future operations and to repay our outstanding debt obligations. If we are unable to obtain the funds necessary to do so, we may be required to delay, scale back or eliminate our product development activities or may be unable to continue our business operations.
- We maintain our cash at financial institutions, often in balances that exceed federally insured limits.

Risks Related to Our Business and Industry

- If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.
- Our future success is in large part dependent upon our ability to successfully develop our nanomedicine platform and commercialize REYOBIQ™ and ^{188}RNL-BAM and any failure to do so could significantly harm our business and prospects.
- ^{188}RNL-BAM will be regulated as a medical device, which may result in additional regulatory and other risks.
- If we are unable to successfully partner with other companies to commercialize our product candidates, our business could materially suffer.
- Our success depends in substantial part on our ability to obtain regulatory approvals for our RNL product candidates. However, we cannot be certain that we will receive regulatory approval for these product candidates or our other product candidates.
- If we or any party to a key collaboration, licensing, development, acquisition or similar arrangement fail to perform material obligations, or commit a breach, under such arrangement, or any arrangement is terminated for any reason, there could be an adverse effect on our business.
- Our current business strategy is high-risk and may not be successful.
- Reliance on government funding for our programs may impose requirements that limit our ability to take certain actions, and subject it to potential financial penalties, which could materially and adversely affect our business, financial condition and results of operations.
- If our competitors market or develop products that are marketed more effectively, approved more quickly than our product candidates, or demonstrated to be safer or more effective than our product candidates, our commercial opportunities could be reduced or eliminated.
- Product development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- Pre-clinical studies and preliminary and interim data from clinical trials of our product candidates are not necessarily predictive of the results or success of ongoing or future clinical trials of our product candidates.
- Because we have limited resources, we may decide to pursue a particular product candidate and fail to advance product candidates that later demonstrate a greater chance of clinical and commercial success.
- Clinical trial results may fail to support approval of our product candidates.
- We may have difficulty enrolling, or fail to enroll patients in our clinical trials, which could delay or prevent clinical trials of our drug candidates.
- If a particular product candidate causes significant adverse events, then we may be unable to receive regulatory approval or market acceptance for such product candidate.
- If our product candidates and technologies receive regulatory approval but do not achieve broad market acceptance, especially by physicians, the revenue that we generate will be limited.

- All potential applications of our product candidates are investigational, which subjects us to development and marketing risks.
- We and our product candidates are subject to extensive regulation, and the requirements to obtain regulatory approvals in the United States and other jurisdictions can be costly, time-consuming, and unpredictable. If we or our partners are unable to obtain timely regulatory approval for our product candidates, our business may be substantially harmed.
- We will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant expense, and if we or our collaborators fail to comply with such requirements, regulatory agencies may take action against us or them, which could significantly harm our business.
- Changing, new and/or emerging government regulations, including healthcare legislative reform measures, may adversely affect us.
- Adequate coverage and reimbursement from third party payors may not be available for our product candidates, which could diminish our sales or adversely affect our ability to sell our products profitably.
- Some intellectual property that we have in-licensed has been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights, and limit our ability to contract with non-U.S. manufacturers.
- Orphan drug designation may not ensure that we will enjoy market exclusivity in a particular market, and if we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.
- If we experience an interruption in supply from a material sole source supplier, our business may be harmed.
- We may engage in strategic transactions that could impact our liquidity, increase our expenses, and present significant distractions to our management.
- We must maintain quality controls and compliance with manufacturing standards.
- If we are unable to identify, hire and/or retain key personnel, we may not be able to sustain or grow our business.
- We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability if our insurance coverage for those claims is inadequate.
- A failure to adequately protect health information could result in severe harm to our reputation and subject us to significant liabilities, each of which could have a material adverse effect on our business.
- We and our collaborators must comply with environmental laws and regulations, including those pertaining to use of hazardous and biological materials in our business, and failure to comply with these laws and regulations could expose us to significant liabilities.

Risks Relating to Our Intellectual Property

- Our success depends in part on our ability to protect our intellectual property.
- We may not be able to protect our trade secrets.
- We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.
- We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, and we may be unable to protect our rights to our product candidates and technology.
- If we are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation would have a material adverse effect on our business.

Risks Relating to the Issuance of Capital Stock, the Securities Markets and an Investment in Our Common Stock

- Our stockholders may experience substantial dilution in the value of their investment if we issue additional shares of our capital stock.
- Stockholders will suffer substantial dilution if certain provisions in the outstanding March 2025 Warrants are utilized.
- There are a large number of shares of common stock underlying our outstanding Warrants and Prefunded Warrants and the sale of these shares may depress the market price of our common stock and cause immediate and substantial dilution to our existing stockholders.
- The market price of our common stock may be volatile and fluctuate significantly, which could result in substantial losses for stockholders.
- We may be or become the target of securities litigation, which is costly and time-consuming to defend.
- We may issue debt and equity securities or securities convertible into equity securities, any of which may be senior to our common stock as to distributions and in liquidation, which could negatively affect the value of our common stock.
- Our charter documents contain anti-takeover provisions.
- We presently do not intend to pay cash dividends on our common stock.
- If securities and/or industry analysts fail to continue publishing research about our business, if they change their recommendations adversely, or if our results of operations do not meet their expectations, our stock price and trading volume could decline.

PART I

Item 1. Business

References to "Plus Therapeutics," the "Company," "we," "us" and "our" refer to Plus Therapeutics, Inc. References to "Notes" refer to the Notes to Financial Statements included herein (refer to Item 8).

General

Plus Therapeutics is a U.S. pharmaceutical company developing targeted radiotherapeutics with advanced platform technologies for central nervous system ("CNS") cancers. Our novel radioactive drug formulations and medical devices and therapeutic candidates are designed to deliver safe and effective doses of radiation to tumors. To achieve this, we have developed innovative approaches to drug formulation, including encapsulating radionuclides such as rhenium isotopes with nanoliposomes and microspheres. Our formulations are intended to achieve elevated patient-absorbed radiation doses and extend retention times such that the clearance of the isotope occurs after significant and essentially complete radiation decay, which will contribute and provide less normal tissue/organ exposure and improved safety margins.

Traditional approaches to radiation therapy for cancer, such as external beam radiation, have many disadvantages including continuous treatment for four to six weeks (which is onerous for patients), that the radiation damages healthy cells and tissue, and that the amount of radiation delivered is very limited and, therefore, is frequently inadequate to fully destroy the cancer.

Our targeted radiotherapeutic platform and unique investigational drugs have the potential to overcome these disadvantages by directing higher, more powerful radiation doses at the tumor—and only the tumor—potentially in a single treatment. By minimizing radiation exposure to healthy tissues while simultaneously maximizing locoregional delivery and, thereby, efficacy, we hope to reduce the radiation toxicity for patients, improving their quality of life and life expectancy. Our radiotherapeutic platform, combined with advances in surgery, nuclear medicine, interventional radiology, and radiation oncology, affords us the opportunity to target a broad variety of cancer types.

Our lead radiotherapeutic candidate, REYOBIQ™ (rhenium (^{186}Re) obisbemeda), is designed specifically for CNS cancers including recurrent glioblastoma ("GBM"), leptomeningeal metastases ("LM"), and pediatric brain cancers ("PBC") by direct localized delivery utilizing approved standard-of-care tissue access such as with convection-enhanced delivery ("CED") and intraventricular brain (Ommaya reservoir) catheters. Our acquired radiotherapeutic candidate, Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere ("^{188}RNL-BAM") is designed to treat many solid organ cancers including primary and secondary liver cancers by intra-arterial injection.

On April 26, 2024, we acquired all of the right, title and interest in a cerebrospinal fluid cancer diagnostic portfolio known as the "CNSide® Platform" from Biocept, Inc. ("Biocept"), which is currently being utilized in the ReSPECT-LM clinical trial funded by the Cancer Prevention and Research Institute of Texas ("CPRIT"). In connection with our business plan for developing the CNSide™ Platform, we formed CNSide Diagnostics, LLC ("CNSide Diagnostics"), a wholly owned subsidiary of the Company, and our board of directors appointed a board of managers for CNSide Diagnostics. We are planning for the CNSide Cerebrospinal Fluid Tumor Cell Enumeration test (the "CNSide™ Test"), which is a laboratory developed test ("LDT"), to be re-introduced to the U.S. market starting in the second quarter of 2025 after we complete a number of steps related to certifications, state licensure, payor coverages, reimbursement codes and financing.

In March 2025, we moved our headquarters to Houston, Texas, in proximity to world-class cancer institutions and researchers.

Pipeline

Our most advanced investigational drug, REYOBIQ™, is a patented radiotherapy potentially useful for patients with CNS and other cancers. We announced in March 2025 that U.S. Food and Drug Administration ("FDA") conditionally accepted the proprietary name, REYOBIQ™, to be used by us for rhenium (^{186}Re) obisbemeda. Preclinical study data describing the use of REYOBIQ™ for several cancer targets have been published in peer-reviewed journals and reported at a variety of medical society peer-reviewed meetings. Besides GBM, LM and PBC, REYOBIQ™ has been reported to have potential applications for head and neck cancer, ovarian cancer, breast cancer and peritoneal metastases.

The REYOBIQ™ technology was part of a licensed radiotherapeutic portfolio that we acquired from NanoTx, Corp. ("NanoTx") on May 7, 2020. The licensed radiotherapeutic has been evaluated in preclinical studies for several cancer targets and we have an active $3.0 million award from U.S. National Institutes of Health/National Cancer Institute which is expected to provide financial support for the continued clinical development of REYOBIQ™ for recurrent GBM through the completion of a Phase 2 clinical trial, including enrollment of up to 55 patients.

On August 29, 2022, we announced feedback from a Type C meeting with the FDA regarding Chemistry, Manufacturing and Controls practices. The FDA indicated agreement with our proposed application of cGMP guidance for radiotherapeutics, small

molecule drug products and liposome drug products for REYOBIQ™ in support of ongoing and future GBM clinical trials, manufacturing scale up, and commercialization. Alignment with the FDA includes support of our proposed controls and release strategy for new drug substance and new drug product. Because this product is identical for recurrent GBM, LM, and PBC, we believe alignment will be consistent for REYOBIQ™ used in other clinical development programs, including LM and PBC.

REYOBIQ™ versus External Beam Radiation Therapy for Recurrent GBM

REYOBIQ™ is a novel injectable radiotherapy designed to deliver targeted, high dose radiation directly into GBM tumors in a safe, effective, and convenient manner that may ultimately prolong patient survival. REYOBIQ™ is composed of the radionuclide Rhenium-186 and a nanoliposomal carrier, and is infused in a highly targeted, controlled fashion, directly into the tumor via precision brain mapping and CED catheters. Potential benefits of REYOBIQ™ compared to standard external beam radiotherapy or external beam radiation therapy ("EBRT") include:

- The REYOBIQ™ radiation dose delivered to patients may be up to 20 times greater than what is possible with commonly used EBRT, which, unlike EBRT and proton beam devices, spares normal tissue and the brain from radiation exposure.
- REYOBIQ™ can be visualized in real-time during administration, possibly giving clinicians better control of radiation dosing, distribution and retention.
- REYOBIQ™ potentially more effectively treats a bulk tumor and microscopic disease that has already invaded healthy tissue.
- REYOBIQ™ is infused directly into the targeted tumor by CED catheter insertion using MRI guided software to avoid critical patient neurological structures and neural pathways and also bypasses the blood brain barrier, which delivers the therapeutic product where it is needed. Importantly, it reduces radiation exposure to healthy cells, in contrast to EBRT, which passes through normal tissue to reach the tumor, continuing its path through the tumor, hence being less targeted and selective.
- REYOBIQ™ is given during a single, short, in-patient hospital visit, and is available in all hospitals with nuclear medicine and neurosurgery, while EBRT requires out-patient visits five days a week for approximately four to six weeks.

ReSPECT-GBM Trial for Recurrent GBM

GBM affects approximately 15,000 patients annually in the U.S. and is the most common and lethal form of brain cancer. The average life expectancy with GBM is less than 24 months, with a one-year survival rate of 40% and a five-year survival rate of around 5%. There is no clear standard of care for recurrent GBM and the few currently approved treatments provide only marginal survival benefit and are associated with significant side effects, which limit dosing and prolonged use. Approximately 90% of patients experience GBM tumor recurrence at or near the original tumor location, yet there are no FDA-approved treatments in the recurrent or progressive setting that can significantly extend a patient's life. GBM routinely presents with headaches, seizures, vision changes and other significant neurological complications, with a significant compromise in quality of life. Despite the best available medical treatments, the disease remains incurable. Even after efforts to manage the presenting signs and symptoms and completely resect the initial brain tumor, some microscopic disease almost always remains and tumor regrowth occurs within months. Complete surgical removal of GBM is usually not possible and GBM is often resistant or quickly develops resistance to most available current and investigational therapies. Today, the treatment of GBM remains a significant challenge and it has been nearly a decade since the FDA approved a new therapy for this disease, and these more recent approvals have not improved the overall survival ("OS") for GBM patients over past decades, and a significant unmet medical need persists.

While EBRT has been shown to be safe and has temporary efficacy in many malignancies including GBM, typically at absorbed, fractionated radiation dose of ~30 Gray in GBM, this maximum possible administered dose is always limited by toxicity to the normal tissues surrounding the malignancy and because EBRT requires fractionation to manage toxicity and maximum EBRT limits are typically reached before long-term efficacy reached. Because of this limitation, EBRT cannot provide a cure or long-term control of GBM and GBM always recurs within months after EBRT. In contrast, locally delivered and targeted radiopharmaceuticals that precisely deliver radiation in the form of beta particles such as Iodine-131 for thyroid cancer, are known to be safe and effective and minimize exposure to normal cells and tissues especially with optimal administered dose and minimizing exposure to normal tissue. The locally delivered REYOBIQ™ is designed for and provides patient tolerability and safety. Though no REYOBIQ™ head-to-head trial with chemo, immune, EBRT or systemic radiopharmaceutical products have been conducted, patient tolerability and safety considerations have been reported as expected.

In September 2020, the FDA granted both orphan drug designation and Fast Track designations to REYOBIQ™ for the treatment of patients with GBM.

REYOBIQ™ is under clinical investigation in a Phase 1/2 multicenter, sequential cohort, open-label, volume and dose escalation study ("ReSPECT-GBM") of the safety, tolerability, and distribution of REYOBIQ™ given by CED catheters to patients

with recurrent or progressive malignant glioma after standard surgical, radiation, and/or chemotherapy treatment. The trial is funded through Phase 2 in large part by a National Institute of Health/National Cancer Institute grant.

On January 18, 2023, we announced that the first patient was dosed in Phase 2 of the ReSPECT-GBM Phase 1/2 trial evaluating REYOBIQ™ for the treatment of recurrent GBM. Phase 2 of the trial is expected to enroll up to 34 total patients with small- to medium-sized tumors and is targeted for full enrollment by the end of 2025. We currently have four clinical sites, and expect a data read-out by the end of 2025.

On September 30, 2024, we showcased new interim ReSPECT-GBM Phase 2 Trial Data at the 2024 Congress of Neurological Surgeons Annual Meeting that included the following findings as of that date:

- 42 total patients enrolled in ReSPECT-GBM trial at 3 sites, with 19 out of 42 patients having been treated at the recommended Phase 2 dose (22.3 mCi in 8.8 mL) in tumors of approximately 20 cm^3 or less.
- All Phase 2 patients have recurrent, histologically confirmed glioblastoma; 1 recurrence, bevacizumab naïve, single tumor of approximately 20 cm^3 or less (small-to-medium sized tumors).
- Average tumor size in Phase 2 was 7.5 mL (range 0.9-22.8 mL).
- Increases in absorbed dose correlated with specific drug delivery parameters such as infused dose and volume, maximal convection flow rate, and number of catheters.
- REYOBIQ™ continues to show a favorable safety profile in the 42 enrolled patients; one dose-limiting toxicity (hemiplegia) has been reported, which was observed in Cohort 8 (41.5 mCi and 16.3 mL).
- In Phase 2, most adverse events were mild (73.5%) or moderate (18.8%), and largely unrelated (37.7%), or unlikely related (27.1%) to the drug. Of the 9 severe adverse events, only 2 were related to the study drug.
- Average absorbed radiation dose to the tumor in Phase 2 was 300 Gy (n=18, 1 patient still under analysis).
- 88.9% of Phase 2 patients met key CED drug delivery parameters shown to correlate with overall survival, achieving a tumor absorbed dose >100 Gy and radiation coverage of >70%.
- 29 out of 42 patients treated thus far participated in the Phase 1 dose escalation phase of the trial (as per protocol, 6 out of 42 patients were included in both the Phase 1 and Phase 2 trial arms and related analyses).
- Phase 1 dose-escalation increased administered doses from 1.0 mCi to 41.5 mCi and volumes from 0.66 mL to 16.3 mL.
- In terms of objective tumor response based on quantitative image analysis, a statistically significant reduction in tumor volume rate change was seen in tumors receiving > 100 Gy absorbed dose (n=11 patients analyzed to date, $p<0.005$). Sufficient tumor coverage correlated with tumor control, while regrowth occurred outside treated areas.

We completed Phase 1 of our ReSPECT-GBM Trial and are targeting full enrollment into Phase 2 by the end of 2025.

ReSPECT-LM Clinical Trials for LM

LM is a rare complication of cancer in which the disease spreads to the membranes (meninges) surrounding the brain and spinal cord. The incidence of LM is growing and occurs in approximately 5%, or more, of people with late-stage cancer, or 110,000 people in the U.S. each year. It is highly lethal with an average one-year survival of just 7%. All solid cancers, particularly breast, lung, GI, and melanoma, have the potential to spread to the leptomeninges.

The ReSPECT-LM Phase 1 clinical trial was preceded with preclinical studies in which tolerance to doses of REYOBIQ™ as high as 1,075 Gy were shown in animal models with LM without significant observed toxicity. Furthermore, treatment led to a marked reduction in tumor burden in both C6 and MDA-231 LM models.

Upon receiving acceptance of our Investigational New Drug application and Fast Track designation by the FDA for REYOBIQ™ for the treatment of LM in November 2021, we initiated the trial and began screening patients for the ReSPECT-LM Phase 1 clinical trial in the fourth quarter of 2021.

ReSPECT-LM is a multi-center, sequential cohort, open-label, dose escalation study evaluating the safety, tolerability, and efficacy of a single-dose application of REYOBIQ™ administered through intrathecal infusion to the ventricle of patients with LM after standard surgical, radiation, and/or chemotherapy treatment. The primary endpoint of the study is the incidence and severity of adverse events and dose limiting toxicities, together with determining the maximum tolerated and recommended Phase 2 dose. Full enrollment in the Phase 1 trial was achieved at the end of 2024, and we announced the trial completion on February 26, 2025. Trial closeout procedures are now taking place including final data review and monitoring, and a clinical study report and manuscript will be prepared.

On September 19, 2022, we entered into a Cancer Research Grant Contract (the "CPRIT Contract"), effective as of August 31, 2022, with CPRIT, pursuant to which CPRIT provides us a grant of up to $17.6 million (the "CPRIT Grant") over a three-year period to fund the continued development of REYOBIQ™ for the treatment of patients with LM through Phase 2 of the ReSPECT LM clinical trial. The CPRIT Grant is subject to customary CPRIT funding conditions, including, but not limited to, a matching fund requirement (one dollar from us for every two dollars awarded by CPRIT), revenue sharing obligations upon commercialization of REYOBIQ™ based on specific dollar thresholds until CPRIT receives the aggregate amount of 400% of the proceeds awarded under the CPRIT Grant, and certain reporting requirements. As of December 31, 2024, we had received approximately $10.4 million in milestone payments under the CPRIT Contract.

Interim results showed that a single treatment with REYOBIQ™ resulted in a consistent decreased cerebrospinal fluid ("CSF") tumor cell count/ml and was tolerated by all LM patients. REYOBIQ™ is an outpatient administration and treatment and is easily and safely administered through a standard intraventricular catheter (Ommaya Reservoir), distributed promptly throughout the CSF, and with durable retention in the leptomeninges at least through day seven. All patients have shown well tolerated prompt and durable REYOBIQ™ distribution throughout the subarachnoid space.

In November 2023, the FDA granted orphan drug designation to REYOBIQ™ for the treatment of patients with breast cancer with LM.

On December 12, 2023, we announced our partnership with K2bio to implement novel analysis for CSF tumor and molecular biomarkers for CNS cancers.

On February 26, 2025, we announced the completion of the ReSPECT-LM Phase 1 single-dose escalation trial, having determined a recommended Phase 2 dose. Enrollment in Cohort 6 was completed (75.0 mCi). The Cohort 4 dose (44.1 mCi) was determined to be the recommended Phase 2 dose with no dose-limiting toxicities observed at that dose level. One patient at the Cohort 4 dose was observed to have achieved a complete response, as evidenced by the eradication of tumor cells in the cerebrospinal fluid—a key therapeutic endpoint.

We anticipate beginning enrollment for a ReSPECT-LM Multi-Dose trial in the first half of 2025. In March 2025, the FDA granted orphan drug designation to REYOBIQ™ for the treatment of LM in patients with lung cancer.

ReSPECT-PBC Clinical Trial for Pediatric Brain Cancer

The average annual age adjusted mortality rate for children aged 0-14 for malignant brain (and other CNS) tumors is 0.71/100,000, making it the most common cause of death and cancer death in this age group. The 2021 World Health Organization Classification of CNS Tumors classifies gliomas, glioneuronal tumors, and neuronal tumors into six different families: (1) adult-type diffuse gliomas; (2) pediatric-type diffuse low-grade gliomas; (3) pediatric-type diffuse high-grade gliomas ("HGG"); (4) circumscribed astrocytic gliomas; (5) glioneuronal and neuronal tumors; and (6) ependymomas.

In August 2021, we announced plans for treating pediatric brain cancer at the 2021 American Association of Neurological Surgeons Annual Scientific Meeting. In July 2021, we reported that we had received FDA feedback pertaining to a pre-Investigational New Drug Application ("IND") meeting briefing package in which the FDA stated that we are not required to perform any additional preclinical or toxicology studies.

Given the initial FDA feedback, receipt of adult GBM data and experience with REYOBIQ™ and follow-up communications with the FDA, we submitted a pediatric brain tumor IND for our ReSPECT-PBC clinical trial to investigate the use of REYOBIQ™ in two pediatric brain cancers, high-grade glioma and ependymoma, in the fourth quarter of 2024.

Pediatric high-grade gliomas can be found almost anywhere within the CNS; however, they are most commonly found within the supratentorium. The highest incidence of supratentorial, high-grade gliomas in pediatrics appears to occur in children aged 15 to 19 years, with a median age of approximately nine years. Overall, pediatric high-grade glioma confers a three-year progression free survival ("PFS") of 11 ± 3% and three-year OS of 22 ±5%. One-year PFS is as low as 40% in recent trials. Ependymomas are slow-growing central nervous system tumors that involve the ventricular system. Diagnosis is based on MRI and biopsy and survival rate depends on tumor grade and how much of the tumor can be removed. Grade II pathology was associated with significantly improved OS compared to Grade III (anaplastic) pathology (five-year OS = 71 ± 5% vs. 57 ± 10%; p = 0.026). Gross total resection compared to subtotal resection was associated with significantly improved OS (five-year OS = 75 ± 5% vs. 54 ± 8%; p = 0.002).

Overall, pediatric HGG and ependymoma are extremely difficult-to-treat pediatric brain tumors, frequently aggressive, and in recurrent settings, carry an extremely poor prognosis.

Effective September 1, 2024, we entered into an agreement with the Department of Defense office of the Congressionally Directed Medical Research Programs to receive a $3.0 million fund for research and development purposes ("DoD Award") over a three-year period. The DoD Award will be used to support the planned expansion of our clinical trial for pediatric brain cancer. We anticipate beginning enrollment for our Phase 1 ReSPECT-PBC clinical trial in the first half of 2025.

Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere Technology

In January 2022, we announced that we licensed Biodegradable Alginate Microsphere ("BAM") patents and technology from The University of Texas Health Science Center at San Antonio ("UTHSCSA") to expand our tumor targeting capabilities and precision radiotherapeutics pipeline. We intend to combine our Rhenium NanoLiposome technology with the BAM technology to create a novel radioembolization technology. Initially, we intend to utilize the Rhenium-188 isotope, ^{188}RNL-BAM for the intra-arterial embolization and local delivery of a high dose of targeted radiation for a variety of solid organ cancers such as hepatocellular cancer, hepatic metastases, pancreatic cancer and many others.

Preclinical data from an ex vivo embolization experiment in which Technetium99m-BAM was intra-arterially delivered to a bovine kidney perfusion model was presented at the Society of Interventional Radiology Annual Scientific Meeting. The study concluded that the technology required for radiolabeling BAM could successfully deliver, embolize and retain radiation in the target organ. 188RNL-BAM is a preclinical investigational device we intend to further develop and move into clinical trials. Specifically, in 2022 we transferred the 188RNL-BAM technology from UTHSCSA, and began planning to develop the product and complete early preclinical studies to support a future FDA IND submission. Our intended initial clinical target is liver cancer which is the sixth most common and third deadliest cancer worldwide. It is a rare disease with increasing U.S. annual incidence (42,000) and deaths (30,000).

The FDA has informed us that ^{188}RNL-BAM will be regulated as a medical device under the Federal Food, Drug, and Cosmetic Act (the "FDCA").

The CNSide™ FORESEE Trial

The CNSide™ Platform consists of four LDTs used for treatment selection and treatment monitoring of patients with LM. The CNSide™ Platform facilitates tumor cell detection/enumeration and biomarker identification using cellular assays (immunocytochemistry (ICC) and fluorescence in situ hybridization (FISH)) and molecular assays (next-generation sequencing (NGS)). The CNSide™ Test is currently being used in the ReSPECT-LM trial as an exploratory endpoint and we are planning to re-introduce it to the U.S. market starting in the second quarter of 2025.

In August 2024, data from the CNSide™ FORESEE clinical trial in patients with LM was presented at the Society for Neuro-Oncology ("SNO") / American Society for Clinical Oncology ("ASCO") CNS Metastases Conference. The trial met its key primary and secondary endpoints and the data showed that the CNSide™ Test more than doubled the diagnostic sensitivity versus gold standard cerebrospinal fluid cytology and influenced clinical management decisions in over 90% of LM cases.

On November 24, 2024, CNSide Diagnostics presented data at the 2024 SNO Annual Meeting from the FORESEE trial showcasing the CNSide™ Platform's utility in diagnosing and guiding clinical decision making for breast cancer and non-small cell lung cancer patients with LM.

Key highlights included:

- The FORESEE trial achieved its primary endpoint, demonstrating that the CNSide™ Test influenced treatment decisions in over 90% of cases evaluated, surpassing the predetermined 20% primary endpoint target.
- The CNSide™ Test demonstrated enhanced sensitivity in detecting tumor cells (80%) vs. CSF cytology (29%) in patients with LM.
- The CNSide™ Test identified actionable mutations in the CSF, such as HER2 amplification, influencing 24% of therapeutic selection decisions.
- The CNSide™ Test exhibited high specificity, with no tumor cells detected in patients without LM.
- The CNSide™ Test demonstrated improved Negative Predictive Value in ruling out LM (25%) vs. CSF cytology (10%).
- The CNSide™ Test revealed HER2 positivity in LM tumors in 60% of breast cancer patients with HER2-negative primary tumors, informing physician treatment strategies.

Licensing

On December 31, 2021, we entered into a Patent and Technology License Agreement (the "UTHSCSA License Agreement") with UTHSCSA, pursuant to which UTHSCSA granted us an irrevocable, perpetual, exclusive, fully paid-up license, with the right to sublicense and to make, develop, commercialize and otherwise exploit certain patents, know-how and technology related to the development of BAM containing nanoliposomes loaded with imaging and/or therapeutic payloads. Therapeutic payloads may include radiotherapeutics, chemotherapeutics, or thermotherapeutics.

The BAM technology is delivered directly into the intra-arterial vascular system via commonly utilized and standard interventional vascular catheters and techniques that allow precise placement into the arterial blood vessels feeding tumors. Once

injected, the BAM technology provides a potential dual therapeutic delivery—blocking blood flow to the tumors by alginate microsphere tumor capillary embolization with simultaneous delivery of very high doses of cytotoxic compounds including radiation, such as nanoliposome encapsulated bi-functionally chelated Re-188, for an extended time. Weeks later, the delivered BAM are physiologically metabolized allowing excretion from the body. Rhenium-188 is an attractive and ideal therapeutic isotope for this application because of its 16.9 hour half-life, 2.12MEV β-decay and ~3.8mm tissue path-length, and simultaneous 155Kev γ-decay that allow simultaneous SPECT/CT imaging with commonly available imaging equipment to easily and non-invasively monitor product administration, delivery and dosimetry absorbed dose evaluation.

We currently anticipate that we will initially focus on developing ^{188}RNL-BAM as a next-generation radioembolization therapy for liver cancer, in which BAM blocks the hepatic artery segments that supply blood to the malignant tumor while also providing ^{188}RNL radiotherapy directly to the tumor and surrounding tissue. According to the American Cancer Society, liver cancer is a rare disease with an increasing annual incidence and five-year overall survival of only 20%.

The financial terms of the UTHSCSA License Agreement are primarily success-based with milestone and royalty payments contingent on achieving key clinical, regulatory and sales milestones.

The initial inventions and work behind the licensed patents and technologies were developed and led by William Phillips MD, Professor of Nuclear Medicine, and his team at UTHSCSA. The ^{188}RNL-BAM technology incorporates Rhenium-188, or ^{188}Re, a unique isotope for radiotherapeutic embolization owing to its emission of a high energy (2.12Mev) electron (beta particle, 16.9-hour half-life with a 3.8mm decay path length). ^{188}Re also emits 155kev gamma energy that permits high quality, real-time imaging of the BAM construct delivery localization and confirmation. BAMs are not permanent and are anticipated to degrade over time, allowing restoration of blood flow, decreasing radiation resistance, and allowing for safer physiological clearance of ^{188}Re through the kidneys, which may minimize bone marrow toxicity.

The transaction terms include an upfront payment in cash. We are also required to pay development and sales milestone payments, if achieved, and a tiered single-digit royalty on U.S. and European sales. In addition, we may be obligated to pay an annual maintenance fee beginning in 2024.

On March 29, 2020, we entered into a Patent and Know-How License Agreement (the "NanoTx License Agreement") with NanoTx, pursuant to which NanoTx granted us an irrevocable, perpetual, exclusive, fully paid-up license, with the right to sublicense and to make, develop, commercialize and otherwise exploit certain patents, know-how and technology related to the development of radiolabeled nanoliposomes.

The transaction terms included an upfront payment of $0.4 million in cash and $0.3 million in our voting stock. The transaction terms also included success-based milestone and royalty payments contingent on key clinical, regulatory and sales milestones, as well as the requirement to pay 15% of any non-dilutive monetary awards or grants received from external agencies to support product development of the nanoliposome encapsulated BMEDA-chelated radioisotope, which includes grants from CPRIT.

The licensed NanoTx portfolio benefits from proprietary nanoliposome-encapsulated technology to encapsulate radionuclides allowing direct local delivery for several cancer targets.

The licensed radiolabeled nanoliposome platform was developed by a multi-institutional consortium based in Texas at the Mays Cancer Center / UTHSCSA MD Anderson Cancer Center led by Dr. Andrew Brenner, MD, PhD, who is the Kolitz Chair in Neuro-Oncology Research and Co-Leader of the Experimental and Developmental Therapeutics Program. The technology was previously owned by NanoTx and funded by both the NIH/NCI and CPRIT. There is an active $3 million award from NIH/NCI that is expected to financially support the continued clinical development of REYOBIQ™ for recurrent GBM.

Manufacturing

We have entered into master services agreements with third parties, including Piramal Pharma Solutions, Inc., ABX Advanced Biochemical Compounds GmbH, IsoTherapeutics Group, LLC, Radiomedix, Inc., Alamo Nuclear Pharmacy Services, Inc., and Nuke Med, Inc. (aka SpectronRx) in connection with the development, manufacture, and supply of our REYOBIQ™ drug product. Upon completion of the research and development phase of a drug candidate, certain parts of the manufacturing processes for such candidate may be transferred to contract manufacturers to support clinical trials and commercial release. Upon approval of our drug candidates, we expect our manufacturing capabilities to include validated manufacturing processes for the drug product as well as a quality assurance product release process with the ability to ultimately scale-up the process to meet increasing market demands. We believe our strategic investments in our analytical, development and manufacturing capabilities, including personnel with expertise from drug discovery through drug development, will allow us to advance our product candidates more quickly. Expertise gained in manufacturing our drug products may be applied to other formulations in the future, further leveraging our capabilities.

Competition

Our business is conducted in intensely competitive and highly regulated markets. The life science industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary therapeutics. We face competition from a number of sources, some of which may target the same indications as our products, product candidates and laboratory tests, including small and large, domestic and multinational, medical device, biotechnology and pharmaceutical companies, academic institutions, government agencies, private and public research institutions and clinical laboratories. Competitors may have greater experience in, and resources to devote to, developing drugs and clinical laboratory tests, conducting clinical trials, obtaining regulatory clearances or approvals, manufacturing and commercialization.

We expect that product candidates in our pipeline, if approved, would compete on the basis of, among other things, product efficacy and safety; time to market; price, coverage, and reimbursement by third-party payers; extent of adverse side effects; and convenience of treatment procedures.

Competition for our product candidate, particularly REYOBIQ™ and ^{188}RNL-BAM may come from a single or combination therapy in the future.

Currently, there are many other entities pursuing drug development programs for the indications we are currently pursuing with our product candidates.

Significant competitors that have reported drug development programs or clinical laboratory tests at various clinical stages for the various indications listed include, but are not limited to:

Recurrent Glioblastoma

EnGeneIC, Berg, Istari, AstraZeneca, Novartis, PharmAbcine, Kairos, Midatech, Oncovir, Infuseon, Astellas, NanoPharmaceuticals, Erasca, OX2, Crimson BioPharm, TMUNITY, Pfizer, Arcus, Photolitec, Samus, DNAtrix, ImmVira, BerGenBio, Boston Scientific, BeiGene, GSK, Bristol Myers Squibb, Eli Lilly, Sumitomo, QED, Chimerix, Accenda, Oblato, VBI, INIGHTEC, Sonalasense, VBL, Medicenna, Mimiva, Carthera, Gilead, CNS Pharmaceuticals, VAXIMM, Incyte, Celularity, Medicinova, Karyopharm, Nerviano Medical Sciences, Merck, Telix, Neonc, Nuvation Bio, Aadi, ERC, Kazia, Xoft, Basilea, Vigo, Biohaven, Bayer, Kintara, and others have reported drug development programs at various clinical stages for recurrent GBM.

Leptomeningeal Metastases

Angiochem, Y-mAbs, Roche, Bristol Myers Squibb, Merck, Kazia, AstraZeneca, Pfizer, Memorial Sloan Kettering, University of Virginia, Wake Forest University, University of Alabama Birmingham, and others have reported drug development programs at various clinical stages for LM.

Pediatric Brain Cancer

AstraZeneca, Bristol Myers Squibb, Chimerix, Celgene, Eli Lilly, Nektar Therapeutics, Istari Oncology, Novartis, NovoCure, Takeda, Y-mAbs, Cellectar, and others have reported drug development programs at various clinical stages for PBC.

Liver Cancer

Boston Scientific, SIR-TEX, Terumo, ABK Biomedical, and others have reported radioembolization therapy product development programs for liver cancer.

CNSide™ Test

Menarini, Belay Diagnostics, BillionToOne, FYR Diagnostics, Cerevention, Genomic Testing Cooperative are competitors of our CNSide™ Test.

Intellectual Property

Our success depends in large part on our ability to protect our proprietary technology, and to operate without infringing on the proprietary rights of third parties. We rely on a combination of patent, trade secret, copyright and trademark laws, as well as confidentiality agreements, licensing agreements and other agreements, to establish and protect our proprietary rights. Our success also depends, in part, on our ability to avoid infringing patents issued to others.

We license the proprietary formulation and proprietary methods of manufacture of the nanoliposome-encapsulated radionucleotides. REYOBIQ™, ^{188}RNL-BAM, and their method of manufacture are covered by a U.S. patent that will expire in

December 2026. Patent term extension, codified in 35 U.S.C. §156, provides a means of recapturing time lost during the regulatory approval process. Based upon this regulation, we will apply for patent term extension for this patent for the time equal to the regulatory review period for REYOBIQ™. This has the potential to extend patent coverage for this product for up to another five years.

^{188}RNL-BAM is also covered by a licensed patent family directed to a method of producing liposome-containing alginate microspheres. Any patent granted from applications claiming priority to it is expected to expire in May 2040, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. The patent family includes issued patents in Japan, Singapore, Canada, and Mexico, in addition to pending applications in the United States, Canada, Israel, India, Mexico, Saudi Arabia, Thailand, South Africa, Vietnam, Philippines, China, Europe, Brazil, Singapore, Indonesia, Malaysia, Hong Kong, Australia, and New Zealand.

^{188}RNL-BAM is also covered by a licensed patent family directed to a method for post-manufacture loading of a liposome-containing hydrogel microsphere. Patent granted from applications in this family are expected to expire in March 2042, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. The patent family includes applications pending in the United States, Australia, Canada, Brazil, South Korea, China, Europe, Mexico, and Israel.

We co-own a patent family directed to methods of treating a disease, including, but not limited to cancer, comprising administering ^{186}Re and ^{188}Re nanoliposomes via CED. Any patents issued from applications in this family are expected to expire in November 2041, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. The patent family includes applications pending in the U.S., Australia, Brazil, Canada, China, Europe, Indonesia, Israel, Japan, South Korea, Malaysia, Hong Kong, and Mexico.

We co-own a patent family directed to methods of treating leptomeningeal metastases comprising administering 186Re and/or ^{188}Re nanoliposomes via an intraventricular reservoir. Any patent granted from applications in this family are expected to expire in January 2043, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. The patent family includes applications pending in the U.S., Australia, Brazil, Canada, China, Europe, Indonesia, Israel, Japan, South Korea, Malaysia, and Mexico.

We own a patent family directed to a method of manufacturing a polymeric matrix encapsulating microsomes. Any patent granted from applications in this family is expected to expire in December 2043, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. Applications are pending in the PCT and U.S. The 30-month deadline to file national stage applications claiming priority to the PCT application is June 2025.

We have broad patent protection related to the CNSide™ Platform, including our ownership of the following patents, patent families and applications:

- A U.S. patent directed to beads for capturing target cells from a bodily fluid. This patent will expire in December 2025 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A patent family directed to a microflow device for separating or isolating cells from a bodily fluid or other liquid sample. There are patents in the U.S., China, Europe (validated in France, Germany, Italy, Spain, and the United Kingdom), Hong Kong, China, and Japan. There is an application pending in the U.S. The patents will expire in 2026 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A patent family directed to a microflow device for separating or isolating cells from a bodily fluid or other liquid sample. There are patents in the U.S., Canada, China, and Hong Kong. The patents will expire in 2026 and 2027 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A patent family directed to a device and methods for isolating target biomolecules or cells from samples. There are patents in the U.S., Australia, Europe (validated in the United Kingdom, France, Spain, Germany, Switzerland, and Italy), China, Japan, Canada, and Hong Kong. There is an application pending in the U.S. The patents will expire in 2030 and 2031 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A patent family directed to reagents containing binding moieties conjugated to dextran moieties, methods of making such reagents, and use of such reagents in a variety of molecular and cellular assays. There are patents in the U.S., Japan, China, Canada, Europe (validated in France, Germany, Italy, Switzerland, and the United Kingdom), and Hong Kong. The patents will expire in 2031 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.

- A U.S. patent directed to a microarray for assaying for target material in a biological sample. This patent expires in November 2025 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A U.S. patent directed to a microflow apparatus. This patent will expire in May 2030 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- A U.S. patent directed to a method of inhibiting cellular aggregation in a biologically active sample. This patent will expire in September 2031 assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.
- U.S. and European patent applications directed to a formulation to inactivate pathogens. Any patent issuing from these applications is expected to expire in 2041, not including any patent term adjustment or patent term extension and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries and jurisdictions, including the European Union (EU), extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, and import and export of pharmaceutical and medical device products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources. Our nanoparticle oncology drug candidates and our ^{188}RNL-BAM device candidate must receive regulatory approvals from the European Commission and the FDA and from other government authorities prior to sale of the product candidates in their respective jurisdictions.

Government authorities in the United States and in other countries also regulate clinical laboratories and clinical lab tests, including LDTs such as the CNSide™ Test. In order to perform clinical lab tests, report out results and bill payers for these tests, clinical labs must obtain and maintain certification under the federal Clinical Laboratories Improvement Amendments ("CLIA") regulations and they also may be subject to licensure and regulation under certain state laws. Historically, the FDA exercised enforcement discretion with respect to LDTs and did not require these tests to be cleared or approved by FDA as long as they complied with CLIA standards. However, on May 6, 2024, the FDA issued a final rule in which it announced it was phasing out its general enforcement discretion approach so that LDTs manufactured by a laboratory will generally fall under the same enforcement approach as other medical devices; this phase out of enforcement discretion will take place over several years. As a result, CNSide Diagnostics may also be required to comply with these FDA regulations if FDA implements and enforces the final LDT rule, including, among other things, registration and listing, quality system regulations, and premarket authorization. Failure to comply with applicable FDA regulatory requirements may trigger a range of enforcement actions by the FDA, and may disqualify or delay a company from launching an LDT product, or prevent a company with an LDT on the marketing from continuing to sell their test.

FDA Approval Process

In the United States, pharmaceutical and medical device products are subject to extensive regulation by the FDA. Manufacturers of pharmaceutical and medical device products may also be subject to state and local regulation. The FDCA and other federal and state statutes and regulations govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical and medical device products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as the imposition by the FDA or an institutional review board ("IRB") of a clinical hold, FDA refusal to approve pending new drug applications ("NDAs") or supplements, withdrawal of approval, untitled or warning letters, product recalls, import alerts, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal investigation, penalties, or prosecution.

Pharmaceutical Product Approval

Product development for a new pharmaceutical product or certain changes to an approved pharmaceutical product in the United States typically involves:

- Completion of preclinical laboratory studies, formulation studies, and animal studies, some in compliance with the FDA's Good Laboratory Practices ("GLP") regulations, and the Animal Welfare Act administered and enforced by the United States Department of Agriculture;
- Submission to the FDA of an IND to support human clinical testing, which must become effective before clinical testing may commence;

- Approval by an IRB before each trial may be initiated at each clinical site;
- Performance of adequate and well-controlled clinical trials under protocols submitted to the FDA and reviewed and approved by each IRB, conducted in accordance with federal regulations and current Good Clinical Practices ("GCP") to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought;
- Submission of an NDA to the FDA that includes substantial evidence of safety and effectiveness from results of clinical trials, as well as the results of preclinical testing, detailed information about the chemistry, manufacturing and controls, and proposed labeling and packaging for the product;
- Satisfactory completion of an FDA Advisory Committee review, if applicable;
- Potential FDA audit of the preclinical and clinical trial sites that generated the data in support of the NDA; and
- Satisfactory completion of an FDA inspection of the manufacturing facilities at which the product candidate is produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate; and
- FDA review and approval of the NDA, including agreement on post-marketing requirements or commitments, if applicable.

Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation, and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product candidate. The conduct of some preclinical tests must comply with federal regulations and requirements, including as applicable, GLP and the Animal Welfare Act. The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Additional preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted. A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has neither commented on nor questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin.

Clinical trials involve the administration of the investigational drug product to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations; (ii) in compliance with GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND. Foreign studies conducted under an IND generally must meet the same requirements that apply to studies being conducted in the United States. The informed written consent of each study patient must be obtained before the patient may begin participation in the clinical trial. The study protocol, study plan, and informed consent forms for each clinical trial must be reviewed and approved by an IRB for each clinical site, and the study must be conducted under the auspices of an IRB for each trial site. Investigators and IRBs must also comply with FDA regulations and guidelines, including those regarding oversight of study patient informed consent, complying with the study protocol and investigational plan, adequately monitoring the clinical trial, and timely reporting of adverse events.

Clinical trials to support drug products for marketing approval are typically conducted in three sequential phases, but the phases may overlap. Phase 1 involves the initial introduction of the drug product into healthy human subjects or patients. In Phase 1 trials, the product is tested to assess safety, metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses, and, if possible, early evidence on effectiveness. Phase 2 usually involves trials in a limited patient population to determine the effectiveness of the drug for a particular indication, dosage tolerance, and optimal dosage, and to identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit the FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the product. In most cases, the FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug product. A single Phase 3 trial with other confirmatory evidence may be sufficient in certain instances. Additionally, post-approval or Phase 4 studies and trials, may be conducted after initial marketing approval. These studies are often used to gain additional information about use of the product for its approved indication, and may at times be required by the FDA.

The decision to suspend or terminate development of a product candidate may be made by either a health authority body, such as the FDA, by an IRB, or by a company for various reasons and during any phase of clinical trials. The FDA may order the temporary or permanent discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial either is not being

conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. In most cases, in addition to sponsor oversight, clinical trials are also overseen by an independent data safety monitoring board ("DSMB"), which is a separate, independent group of qualified experts organized by the trial sponsor to evaluate at designated points in time whether or not a trial may move forward and/or should be modified. These decisions are based on unblinded access to data from the ongoing trial and generally involve determinations regarding the benefit-risk ratio for study patients and the scientific integrity and validity of the clinical trial.

In addition, the manufacturer of an investigational drug in a Phase 2 or Phase 3 clinical trial for a serious disease or condition is required to make available, such as by posting on its website, its policy on evaluating and responding to requests for expanded access to such investigational drug.

After completion of the required clinical testing, a drug product application is prepared and submitted to the FDA to request marketing approval for the product candidate in specific indications. FDA approval of the drug product is required before marketing of the product may begin in the United States. The drug product must include all relevant results of preclinical, clinical, and other testing and a compilation of data relating to the product candidate's pharmacology, chemistry, manufacture, and controls, including negative or ambiguous results as well as positive findings. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the product candidate to the satisfaction of the FDA. The cost of preparing and submitting a drug product application is substantial. Under the Prescription Drug User Fee Act ("PDUFA"), the submission of most drug product applications is subject to a substantial application user fee, and the applicant under an approved drug product is also subject to an annual program fee for each prescription product, subject to certain limited deferrals, waivers and reductions that may be available. These fees are typically increased annually. The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. The FDA may refuse to accept for filing any NDA that it deems incomplete or not properly reviewable at the time of submission, in which case the NDA will have to be updated and resubmitted. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs. The FDA's PDUFA review goal is to review 90% of priority applications within six months of filing and 90% of standard applications within 10 months of filing. Priority review may be granted to an application for a product candidate that the FDA determines has the potential to treat a serious or life-threatening condition and, if approved, would be a significant improvement in safety or effectiveness compared to available therapies. The review process for both standard and priority review may be extended by the FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA may also refer applications for drug candidates that 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. The FDA is not bound by the recommendation of an advisory committee, but it considers such recommendations carefully when making decisions. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug product is manufactured. The FDA will not approve the product unless compliance with cGMP is satisfactory and the NDA contains data that provides substantial evidence that the drug candidate is safe and effective in the intended indication.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA may issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval and deny approval of a resubmitted NDA.

An approval letter authorizes commercial marketing of the drug candidate with specific prescribing information for specific indications. As a condition of approval, the FDA may require a risk evaluation and mitigation strategy ("REMS,") to help ensure that the benefits of the drug candidate outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use ("ETASU"). ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the product. Moreover, FDA may require post-approval studies or trials and heightened surveillance to characterize or monitor the product's safety or efficacy.

Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing. For example, quality control and manufacturing procedures must conform, on an ongoing basis, to cGMP requirements, and the FDA periodically inspects manufacturing facilities to assess compliance with cGMP. Accordingly, manufacturers must continue to spend time, money and effort to maintain cGMP compliance. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing an NDA.

Expedited Programs

In the United States, a product may be granted Fast Track designation if it is intended for the treatment of a serious or life-threatening condition and demonstrates the potential to address unmet medical needs for such condition. With Fast Track designation, the sponsor may be eligible for more frequent opportunities to obtain the FDA's feedback, and the FDA may initiate review of sections of an NDA before the application is complete. This rolling review is available if the applicant provides, and the FDA approves, a schedule for the remaining information. Even if a product receives Fast Track designation, the designation can be rescinded and provides no assurance that a product will be reviewed or approved more expeditiously than would otherwise have been the case, or that the product will be approved at all.

The FDA may designate a product candidate as a breakthrough therapy if it finds that the product candidate is intended, alone or in combination with one or more other product candidates or approved products, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product candidate may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. For product candidates designated as breakthrough therapies, more frequent interaction and communication between the FDA and the sponsor can help to identify the most efficient path for clinical development. Product candidates designated as breakthrough therapies by the FDA may also be eligible for six month priority review. The receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to product candidates considered for approval under conventional FDA procedures and, in any event, does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product candidates no longer meet the conditions for designation.

Accelerated approval under FDA regulations allows a product designed to treat a serious or life-threatening disease or condition that provides a meaningful therapeutic advantage over available therapies to be approved on the basis of either an intermediate clinical endpoint or a surrogate endpoint that is reasonably likely to predict clinical benefit. Approvals of this kind typically include requirements for confirmatory clinical trials to be conducted with due diligence to validate the surrogate endpoint or otherwise confirm clinical benefit and for all promotional materials to be submitted to the FDA for review prior to dissemination. The Consolidated Appropriations Act ("CCA") of 2023 amended the FDCA to provide FDA additional authorities to help ensure timely completion of such trials. Specifically, the FDA is now permitted to require that such post-approval studies be underway prior to approval or within a specific time period after the date accelerated approval is granted, and the agency has issued guidance as to what constitutes such a study being "underway." The CCA of 2023 also established new procedures for withdrawing products if they fail to demonstrate a clinical benefit.

The FDA may grant priority review to a product candidate, which sets the target date for FDA action on the application at six months from FDA filing, or eight months from the sponsor's submission. Priority Review may be granted where a product is intended to treat a serious or life-threatening disease or condition and, if approved, has the potential to provide a safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in safety or efficacy compared to available therapy. If criteria are not met for Priority Review, the standard FDA review period is ten months from FDA filing or 12 months from sponsor_submission. Priority Review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drug candidate products intended to treat a rare disease or condition, meaning one that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making a product available in the United States for such disease or condition will be recovered from sales of the product in the United States.

After the FDA grants orphan drug designation, the generic identity of the drug product and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. However, orphan drug designation does entitle a party to financial incentives, such as opportunities for grant funding towards clinical trial costs, tax credits for certain research and user fee waivers under certain circumstances. In addition, if a product receives the first FDA approval for the indication for which it has orphan drug designation, the product is entitled to seven years of market exclusivity, which means the FDA may not approve any other application for the "same drug" for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity. The FDA can revoke a product's orphan drug exclusivity under certain circumstances, including when the product sponsor is unable to assure the availability of sufficient quantities of the product to meet patient needs. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition.

Rare Pediatric Disease Priority Review Voucher Program

Under the Rare Pediatric Disease Priority Review Voucher program, the FDA may grant Rare Pediatric Disease designation for serious and life-threatening diseases that primarily affect children aged 18 years or younger and fewer than 200,000 individuals in

the United States. The FDA may award a priority review voucher to the sponsor of an approved marketing application for a product that treats or prevents a Rare Pediatric Disease. The voucher entitles the sponsor to priority review of one subsequent marketing application.

A voucher may be awarded only for an application that:

- is a human drug application for the prevention or treatment of a Rare Pediatric Disease and does not contain an active ingredient (including any ester or salt of the active ingredient) that has been previously approved in any other application;
- FDA deems eligible for priority review;
- is an original NDA or Biologics License Application;
- relies on clinical data derived from studies examining a pediatric population and dosages of the drug intended for that population;
- does not seek approval for an adult indication in the original rare pediatric disease product application; and
- is approved after September 30, 2016.

Before NDA or IND approval, the FDA may designate a product in development as a product for a rare pediatric disease, but such designation is not required to receive a voucher.

To receive a rare pediatric disease priority review voucher, a sponsor must notify the FDA, upon submission of the NDA or IND, of its intent to request a voucher. If the FDA determines that the NDA or IND is a rare pediatric disease product application, and if the NDA or IND is approved, the FDA will award the sponsor of the NDA or IND a voucher upon approval of the NDA or IND. The FDA may revoke a rare pediatric disease priority review voucher if the product for which it was awarded is not marketed in the U.S. within 1 year of the product's approval.

The voucher, which is transferable to another sponsor, may be submitted with a subsequent application and entitles the holder to priority review of the application. The sponsor submitting the priority review voucher must notify the FDA of its intent to submit the voucher with the application at least 90 days prior to submission of the application and must pay a priority review user fee in addition to any other required user fee. The FDA must take action on an application under priority review within six months of receipt of the application.

The Rare Pediatric Disease Priority Review Voucher began to sunset on December 20, 2024, upon Congress' failure to pass a continuing resolution package that included its reauthorization. Under the amended statutory sunset provisions, after December 20, 2024, the FDA may award a PRV for an approved rare pediatric disease product application only if the sponsor has rare pediatric disease designation for the drug and if that designation was granted by December 20, 2024. After September 30, 2026, the FDA may not award any rare pediatric disease priority review vouchers. Although there has been discussion of further extending the RPDPRV program, it is unclear if any such legislation will be adopted.

Disclosure of Clinical Trial Information

Sponsors of clinical trials of the FDA-regulated products are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed in certain circumstances for up to two years after the date of completion of the trial. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs.

Pediatric Information

Under the Pediatric Research Equity Act ("PREA"), certain NDAs must include an assessment, generally based on clinical trial data, of the safety and effectiveness of the product candidate in relevant pediatric populations. The FDA may waive or defer the requirement for a pediatric assessment, either at a company's request or by its own initiative, including waivers for certain products not likely to be used in a substantial number of pediatric patients. Products with orphan drug designation are exempt from these requirements for orphan-designated indications with no formal waiver process required. Any original NDA submitted on or after August 18, 2020 for a new active ingredient must contain reports on molecularly targeted pediatric cancer investigations, unless the requirement is waived or deferred, if the drug that is the subject of the application is intended for the treatment of an adult cancer and is directed at a molecular target that the FDA has determined is substantially relevant to the growth or progression of a pediatric cancer. This requirement applies

even if the adult cancer indication does not occur in the pediatric population, and even if the drug is for an adult indication for which orphan designation has been granted.

Patent Term Restoration

After approval, owners of relevant drug patents may apply for up to a five-year patent extension as compensation for patent term lost during product development and the FDA regulatory review process. The allowable patent term extension is calculated as one half of the drug's testing phase—the time between the effective date of an IND and NDA submission—and all of the review phase—the time between NDA submission and approval, up to a maximum of five years. The time can be shortened if the FDA determines that the applicant did not pursue approval with due diligence. The total patent term after the extension may not exceed 14 years. Only one patent applicable to an approved product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The United States Patent and Trademark Office ("USPTO"), in consultation with the FDA, reviews and approves the application for any patent term extension or restoration.

For patents that might expire during the application phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The director of the USPTO must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted.

Market Exclusivity

In the United States and elsewhere, certain regulatory exclusivities and patent rights can provide an approved drug product with protection from certain competitors' products for a period of time and within a certain scope. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 ("the Hatch-Waxman Act") amended the FDCA to establish two abbreviated approval pathways for pharmaceutical products that are in some way follow-on versions of already approved products. In exchange, the Hatch-Waxman Act also provides certain periods of exclusivity for a branded drug product that would serve as a reference listing drug ("RLD") for a generic drug applicant filing an abbreviated new drug application ("ANDA") under section 505(j) of the FDCA or as a listed drug for an applicant filing an NDA under section 505(b)(2) of the FDCA. If such a product is a "new chemical entity" ("NCE") generally meaning that the active moiety has never before been approved in any drug product, there is a period of five years from the product's approval during which the FDA may not accept for filing any ANDA or 505(b)(2) application for a drug with the same active moiety. However, there are circumstances under which the follow-on application can be submitted at four years, and there are provisions that operate to preclude approval of the application for an additional period of time. NCE exclusivity does not block approval of a "full" NDA (generally, an NDA in which the data are the sponsor's or for which the sponsor has obtained a right of reference). A drug product that is not an NCE may qualify for a three-year period of exclusivity if its NDA contains new clinical data (other than bioavailability studies), derived from studies conducted by or for the sponsor, that were necessary for approval. In this instance, the three-year exclusivity period does not preclude filing or review of an ANDA or 505(b)(2) application; rather, the FDA is precluded from granting final approval to the ANDA or 505(b)(2) application during the three-year exclusivity period. This three-year exclusivity applies only to the conditions of approval that required submission of the clinical data.

Post-Approval Regulation

Once approved, drug products are subject to continuing extensive regulation by the FDA. If ongoing regulatory requirements are not met, or if safety problems occur after a product reaches market, the FDA may take actions to change the conditions under which the product is marketed, such as requiring labeling modifications, restricting distribution, or even withdrawing approval. In addition to FDA regulation, our business is also subject to extensive federal, state, local and foreign regulation.

Good Manufacturing Practices. We rely and expect to continue to rely on third parties for the production of clinical and commercial quantities of our product candidates. Companies engaged in manufacturing drug products or their components must comply with applicable cGMP requirements, which include requirements regarding organization and training of personnel, building and facilities, equipment, control of components and drug product containers, closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls and records and reports. The FDA inspects equipment, facilities and manufacturing processes before approval and conducts periodic re-inspections after approval. If, after receiving approval, a company makes a material change in manufacturing equipment, location, or process (all of which are, to some degree, incorporated in the NDA), additional regulatory review and approval may be required. Failure to comply with applicable cGMP requirements or the conditions of the product's approval may lead the FDA to take enforcement actions, such as issuing a warning letter, or to seek sanctions, including fines, civil penalties, injunctions, suspension of manufacturing operations, imposition of operating restrictions, withdrawal of FDA approval, seizure or recall of products, and criminal prosecution. Although we periodically monitor FDA compliance of the third parties on which we rely for manufacturing our product candidates, we cannot be certain that our present or future third-party manufacturers will consistently comply with cGMP or other applicable FDA regulatory requirements.

Sales and Marketing. Once a product is approved, the advertising, promotion and marketing of the product will be subject to regulation, including with regard to promotion to healthcare practitioners, direct-to-consumer advertising, communications regarding

unapproved uses, industry-sponsored scientific and educational activities and promotional activities involving the internet. In addition to FDA restrictions on marketing of pharmaceutical products, state and federal fraud and abuse laws have been applied to restrict certain marketing practices in the pharmaceutical industry. Failure to comply with applicable requirements in this area may subject a company to adverse publicity, investigations and enforcement action by the FDA, the Department of Justice, the Office of the Inspector General of the Department of Health and Human Services, and/or state authorities. This could subject a company to a range of penalties that could have a significant commercial impact, including civil and criminal fines and agreements that materially restrict the manner in which a company promotes or distributes drug products.

Other Requirements. Companies that manufacture or distribute drug products pursuant to approved NDAs must meet numerous other regulatory requirements, including adverse event reporting, submission of periodic reports, and record-keeping obligations.

Medical Device Premarketing Authorization

Under the FDCA, unless a device is exempt or marketed under an FDA enforcement discretion, premarketing authorization is required to commercially distribute a new medical device in the U.S. market. A new medical device could either be a device that has not previously received marketing authorization in the US, or a previously authorized device that has been changed in such a way that would require a new marketing application. Changes that could require a new marketing application for an existing device may relate to, but are not limited to, the intended use of the device, the indications for use, manufacturing, and technological characteristics or functionalities. The type of marketing authorization is generally linked to the classification of the device.

The FDA classifies medical devices into three classes based on risk. Regulatory control increases from Class I (lowest risk) to Class III (highest risk). As the risk of the device increases, so do FDA's requirements to obtain market authorization. Generally, all Class III and some Class II medical devices will require clinical testing to adequately demonstrate the safety and effectiveness of the device prior to FDA approval or clearance of the device for commercialization. The extent to which FDA is involved in the development of clinical trial protocols depends, in part, on whether the study is a significant risk (SR) study or a nonsignificant risk (NSR) study. Before testing begins, all clinical studies must obtain Institutional Review Board (IRB) approval and for SR medical devices an Investigational Device Exemption (IDE) must be obtained from the FDA. This exemption allows for clinical testing while ensuring participant safety and adherence to ethical standards. Though the regulatory requirements for an NSR study are less burdensome than those for a SR study, all clinical trials can be time consuming and costly and may not result in our desired outcomes.

Class I devices are those for which safety and effectiveness can be reasonably assured by adherence to a set of regulations referred to as general controls, which require compliance with the applicable portions of FDA's Quality System Regulation (QSR), facility registration and device listing, reporting of adverse events and malfunctions, which is referred to as medical device reporting, and truthful and non-misleading labeling and promotional materials. Most Class I devices are exempt from the premarket notification requirements (i.e., 510(k)-exempt).

510(k) Clearance Process

Class II devices are those that are subject to general controls, as well as special controls, which can include performance standards, specialized labeling and post-market surveillance. Most Class II devices are subject to the premarket notification requirements or the 510(k) process. To obtain 510(k) clearance, a premarket notification, or 510(k), must be submitted to the FDA that demonstrates that the proposed medical device is substantially equivalent to a previously cleared medical device or a device commercially distributed prior to May 28, 1976, for which the FDA has not yet called for the submission of a PMA.

The previously cleared device is known as a predicate device. A proposed device is substantially equivalent to a predicate device if, with respect to the predicate device, it has the same intended use and has either (i) the same technological characteristics or (ii) different technological characteristics that do not raise different questions of safety and effectiveness.

If the FDA determines that a device is "not substantially equivalent" to a previously cleared device, for example, due to a finding of a lack of a predicate device, or that the proposed device has a new intended use or different technological characteristics that raise different questions of safety or effectiveness from the proposed predicate device, the device is automatically designated as a Class III device. The device sponsor must then fulfill more rigorous PMA requirements, or can request a risk-based classification determination for the device in accordance with the de novo process. As a result, FDA clearance requirements may extend the development process for a considerable length of time. If the FDA agrees that the proposed device is substantially equivalent to the predicate device proposed by the manufacturer, it will grant 510(k) clearance to commercially market the device.

De Novo Classification Process

For novel medical devices that are low to moderate risk and are not substantially equivalent to a predicate device, a manufacturer may request a risk-based classification determination for the device in accordance with de novo classification process. This procedure allows a de novo requester whose novel device is automatically classified into Class III to request down-classification of its medical device into Class I or Class II on the basis that the device presents low or moderate risk, rather than requiring the submission and approval of a PMA. A requestor may submit a de novo request for classification after receiving a "not substantially

equivalent" determination in response to a 510(k) submission or, absent the prior submission of a 510(k), when the sponsor determines that there is no legally marketed device upon which to base a determination of substantial equivalence.

The FDA may reject the de novo request if it identifies a legally marketed predicate device that would be appropriate for a 510(k) or determines that the device is not low to moderate risk or that general controls would be inadequate, and special controls cannot be developed, to control the risks. In the event the FDA determines that the data and information submitted demonstrate that general controls or general and special controls are adequate to provide reasonable assurance of safety and effectiveness, the FDA will grant the de novo request and a classification regulation will be established for the device type. When the FDA grants a de novo request for classification, the device is granted marketing authorization and can further serve as a predicate device for a future 510(k) submissions of that device type.

PMA Process

Class III devices include devices deemed by FDA to pose the greatest risk, such as life-supporting or life-sustaining devices, or implantable devices. With a few exceptions for certain types of devices classified into Class III that were in commercial distribution in the U.S. before May 28, 1976, Class III devices are subject to the pre-market approval ("PMA") process which requires the manufacturer to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) or de novo processes. The PMA process involves a complex and lengthy testing process that is subject to review by the FDA and may require several years to complete. The sponsor may need to first obtain an investigational device exemption (for significant risk devices), known as an IDE, in order to conduct extensive clinical testing of the device to obtain the necessary clinical data for submission to the FDA. Prior to obtaining approval, the manufacturer typically undergoes a bioresearch monitoring ("BIMO") audit of the supporting clinical trial and a manufacturing audit, which may raise concerns that could lengthen the process and potentially raise unforeseen issues that undermine the approvability of the product. The FDA may also require review by an advisory panel, which can further lengthen the process.

The FDA will approve a PMA only if after evaluating the supporting technical data it finds that the PMA contains sufficient, valid scientific evidence to assure that the device is safe and effective for its intended use(s). This approval may be granted with post-approval requirements including inspection of manufacturing facilities, additional patient follow-up for an indefinite period of time, and/or a post-approval clinical study or studies.

Exempt Devices

If a manufacturer's device falls into a generic category of Class I or Class II devices that FDA has exempted by regulation, a premarket notification is not required before marketing the device in the U.S. (most Class I devices, and some Class II devices, are 510(k)-exempt.) Manufacturers of such devices are required to comply with FDA's general controls, including FDA's establishment registration and device listing requirements. Some 510(k)-exempt devices are also exempt from QSR requirements, except for the QSR's complaint handling and recordkeeping requirements.

Device Modifications post-clearance or approval

Medical devices can be marketed only for the indications for which they are cleared or approved. After a device has received 510(k) clearance for a specific intended use, any change or modification that significantly affects its safety or effectiveness, such as a significant change in the design, materials, method of manufacture or intended use, may require a new 510(k) clearance or, depending on the modification, a de novo classification request or PMA approval. The determination as to whether or not a modification could significantly affect the device's safety or effectiveness is initially left to the manufacturer using available FDA guidance; however, the FDA may review this determination to evaluate the regulatory status of the modified product at any time and may, if it disagrees with the manufacturer's determination, require the manufacturer to cease marketing and recall the modified device until a new 510(k) clearance or PMA approval is obtained. The manufacturer may also be subject to significant regulatory fines or penalties for marketing a modified device without the requisite pre-marketing authorization.

Postmarket Requirements

After a device is cleared or approved for commercial distribution, numerous federal and state regulatory requirements apply. These include product listing and establishment registration requirements, which help facilitate FDA inspections and other regulatory actions. Manufacturing sites are subject to periodic inspection by the FDA for compliance with the FDA's Quality System Regulations, which cover the procedures and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of medical devices; the Medical Device Reporting regulation, which requires that manufacturers report to the FDA if a device they manufactured may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction were to recur; and the Reports of Corrections and Removals regulation, which requires manufacturers to report recalls and field corrective actions to the FDA if initiated to reduce a risk to health posed by the device or to remedy a violation of the FDCA.

In addition, labeling and promotional activities are subject to scrutiny by the FDA and, in certain circumstances, by the Federal Trade Commission. Medical devices that are approved or cleared by the FDA may not be promoted for unapproved or uncleared uses, otherwise known as "off-label" promotion. The FDA and other agencies actively enforce the laws and regulations prohibiting the

promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including substantial monetary penalties and criminal prosecution.

If the FDA believes that a company is not in compliance with applicable regulations, it may issue a non-public untitled letter or a public warning letter, institute proceedings to detain or seize products, issue a recall or market withdrawal order, impose operating restrictions including total or partial suspension of production or distribution, enjoin future violations, assess civil penalties against the company, its officers or its employees and may recommend criminal prosecution to the U.S. Department of Justice. Moreover, after clearance or approval is given, if the product is shown to be hazardous or defective, the FDA has the power to withdraw the clearance or approval, as the case may be, or require us to change the device, its manufacturing process or its labeling, to supply additional proof of the device's safety and effectiveness or to recall, repair, replace the device or refund the cost of the medical device.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare and Medicaid Services ("CMS"), other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice ("DOJ,") and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, sales, marketing and scientific/educational grant programs must comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the privacy provisions of the Health Insurance Portability and Accountability Act and its implementing regulations ("HIPAA"), and similar state laws, each as amended. Clinical laboratory testing also must comply with the federal CLIA regulations and certain state licensure and other regulations, including restrictions related to billing for such tests.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. Liability under the Anti-Kickback Statute may be established without proving actual knowledge of the statute or specific intent to violate it. 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 civil False Claims Act. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution,the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending a product or services may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor.

The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

The federal civil False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, claims for payment of government funds, including Medicare or Medicaid, that are false or fraudulent, or knowingly making, using, or causing to be made or used a false record or statement material to an obligation to pay or transmit money to the federal government, or knowingly concealing or improperly avoiding or decreasing an obligation to pay money to the federal government.. Recently, 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 the product for unapproved, and thus generally non-reimbursable, uses. Clinical laboratories may face enforcement under the federal civil False Claims Act related to the claims submitted for payment of government funds, including Medicare or Medicaid. Actions under the False Claims Act may be brought by the federal government or as a qui tam action by a private individual in the name of the government.

HIPAA created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. We may be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA imposes requirements relating to the privacy, security and transmission of protected health information. In addition, state laws govern the privacy and security of personal information and health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Additionally, the federal Physician Payments Sunshine Act within the Affordable Care Act ("ACA"), and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report information related to certain payments or other transfers of value made or distributed to physicians, certain advanced practice professionals and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians, advanced practice professionals, and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members. The reported data are posted in searchable form on a public website on an annual basis. Failure to submit required information may result in civil monetary penalties.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug, device, and biological products in a state, including, in certain states, manufacturers and distributors who ship or sell 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.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, 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, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval, or any clinical laboratory tests we may offer. In the United States and in other countries, sales of any products for which we receive regulatory approval for commercial sale, or laboratory tests we offer for clinical use, will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such products and services. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product or service may be separate from the process for setting the price of a product or service, or for establishing the reimbursement rate that such a payor will pay for the product or service. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our product candidates, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product or service does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product or service does not assure that other payors will also provide coverage for the product or service. 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 development of the product or service.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only

be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other EU Member States allow companies to fix their own prices for medicines, but monitor and control company profits. Others adopt a system of reference pricing, basing the price or reimbursement level in their territories either on the pricing and reimbursement levels in other countries or on the pricing and reimbursement levels of medicinal products intended for the same therapeutic indication. Further, some EU Member States approve a specific price for the medicinal product or may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal on the market. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

Health Technology Assessment ("HTA") of medicinal products and certain medical devices is becoming an increasingly common part of the pricing and reimbursement procedures in some EU Member States, including those representing the larger markets. The HTA process, which is currently governed by national laws in each EU Member State, assesses the therapeutic, economic, and societal impact of a given medicinal product or medical device in the national healthcare system of the individual country. The outcome of an HTA will often influence the pricing and reimbursement status granted to these medicinal products or medical devices by the competent authorities of individual EU Member States. The extent to which pricing and reimbursement decisions are influenced by the HTA of a specific medicinal product or medical device varies between EU Member States. The EU HTA Regulation (EU) 2021/2282, which was adopted in December 2021 and entered into force in January 2022, aims to harmonize the clinical benefit assessment of HTA across the EU and applies as of January 12, 2025. It provides for common HTA tools, methodologies, and procedures and complements Directive 2011/24/EU on the application of patients' rights in cross-border healthcare, under which a voluntary network of national authorities or bodies responsible for HTA in the individual EU Member States was established.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. 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 or our products or services, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform

The ACA has substantially changed some aspects of healthcare financing and delivery by both governmental and private insurers. The ACA has affected existing government healthcare programs and resulted in the development of new programs.

Among the ACA provisions of importance to the pharmaceutical and biotechnology industries, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs, that began in 2011;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively, which rebate amount is no longer subject to a cap effective January 1, 2024;
- 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 beginning in 2014 and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the 340B drug discount program; 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.

The Tax Cuts and Jobs Act of 2017 eliminated certain requirements of the ACA, including the individual mandate. We cannot predict whether these challenges will continue or whether other proposals will be made or adopted, or what impact these efforts may have on us. It is possible that the ACA, as currently enacted or may be amended in the future, 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, and new payment methodologies and in additional downward pressure on coverage and payment and the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar

reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products. We cannot be sure whether additional legislative changes will be enacted in the United States or outside of the United States, or whether regulatory changes, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be.

Other legislative changes relating to reimbursement have been adopted in the U.S. since the ACA was enacted. For example, the Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals for spending reductions. The Joint Select Committee did not achieve a targeted deficit reduction, which triggered the legislation's automatic reductions. In concert with subsequent legislation, this has resulted in aggregate reductions to Medicare payments to providers. Sequestration is currently set at 2% and will increase to 2.25% for the first half of fiscal year 2030, to 3% for the second half of fiscal year 2030, and to 4% for the remainder of the sequestration period that lasts through the first six months of fiscal year 2031. As long as these cuts remain in effect, they could adversely impact payment for any products we may commercialize in the future. We expect that additional federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, and in turn could significantly reduce the projected value of certain development projects and reduce our profitability.

The Protecting Access to Medicare Act of 2014 ("PAMA") changed the methodology for setting Medicare reimbursement rates for clinical laboratory tests. Rates for new clinical laboratory tests are initially set by CMS, but ultimately the reimbursement rates are based on the weighted median of rates paid for the test by private payers, which labs are required report to CMS at specific intervals. Further federal changes that affect the coverage and reimbursement of clinical lab tests may be implemented in the future and may adversely affect our business.

Further, the Inflation Reduction Act of 2022 ("IRA"), among other things, established a Medicare Part B and Part D inflation rebate scheme, under which, generally, manufacturers will owe rebates if the average sales price of certain Part B drugs or annual average manufacturer price of certain covered Part D drugs increases faster than the pace of inflation. The IRA also created a drug price negotiation program under which the prices for certain Medicare units of certain high Medicare spend drugs and biologics without generic or biosimilar competition will be capped by reference to, among other things, a specified non-federal average manufacturer price, starting in 2026. The IRA further made several changes to the Medicare Part D benefit, including a limit on annual out-of-pocket costs, and replacement of the coverage gap discount program with a new manufacturer discount program beginning in 2025.

Additional legislative changes, regulatory changes, or guidance could be adopted, which may impact the marketing approvals and reimbursement for our product candidates and service offerings. For example, there has been increasing legislative, regulatory, and enforcement interest in the United States with respect to drug pricing practices. There have been several Congressional inquiries and proposed and enacted federal and state legislation and regulatory initiatives designed to, among other things, bring more transparency to product pricing, evaluate the relationship between pricing and manufacturer patient programs, and reform government healthcare program reimbursement methodologies for drug products. If healthcare policies or reforms intended to curb healthcare costs are adopted or if we experience negative publicity with respect to pricing of our products or the pricing of pharmaceutical drugs generally, the prices that we charge for any approved products may be limited, our commercial opportunity may be limited and/or our revenues from sales of our products may be negatively impacted.

Government Price Reporting

Federal law requires manufacturers report the average sales price for certain drugs payable under Medicare Part B. Manufacturers calculate average sales price based on a statutorily defined formula as well as regulations and interpretations of the statute by CMS. CMS may use these submissions to determine payment rates for drugs under Medicare Part B. Moreover, manufacturers must pay refunds to Medicare for single source drugs or biologicals, or biosimilar biological products, reimbursed under Medicare Part B and packaged in single-dose containers or single-use packages, for units of discarded drug reimbursed by Medicare Part B in excess of 10 percent of total allowed charges under Medicare Part B for that drug. Manufacturers that fail to pay refunds could be subject to civil monetary penalties of 125 percent of the refund amount.

Statutory or regulatory changes or CMS guidance could affect the pricing calculations for our product candidates, once approved and commercialized, and could negatively impact our results of operations. We further expect continued scrutiny on government price reporting and pricing more generally from Congress, agencies, and other bodies.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act ("FCPA,") prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of

influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with 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.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

EU / Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, marketing authorizations, regulatory approvals, clinical trials and any commercial sales and distribution of our product candidates. Whether or not we obtain FDA approval of a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. Once the clinical trial application is approved in accordance with a country's requirements, clinical trial development may proceed.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we or our potential collaborators fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Clinical trials in the EU: In the EU a clinical trial application must be submitted for authorization to the competent national authority of each EU Member State in which the clinical trial is to be conducted. Furthermore, the applicant may only start a clinical trial at a specific study site after the competent ethics committee has issued a favorable opinion. The regulation of clinical trials in the EU recently changed. The EU Clinical Trials Regulation entered into force on January 31, 2022, repealing the previous EU Clinical Trials Directive (Directive (EC) 2001/20/EC) and the related national implementing provisions of the individual EU Member States. Under the EU Clinical Trials Directive sponsors had to submit clinical trial applications separately to each national competent authority and ethics committee in the countries where they intended to run a clinical trial. The EU Clinical Trials Regulation significantly simplified this application process, allowing sponsors to submit one single application via the platform 'Clinical Trials Information System' (CTIS) for approval to run a clinical trial in several EU Member States (as well as in Iceland, Liechtenstein and Norway). Applications through the CTIS are mandatory from January 31, 2023. Clinical trials authorized under the EU Clinical Trials Directive before January 31, 2023, could continue to be conducted under the EU Clinical Trials Directive until January 31, 2025 (from January 31, 2025, any trials approved under the EU Clinical Trials Directive that continue running need to comply with the EU Clinical Trials Regulation and their sponsors must have recorded information on them in the CTIS).

Marketing authorization in the EU: To obtain regulatory approval to commercialize a new medicinal product in the EU, we must submit a marketing authorization application (MAA) to the competent regulatory authority. In the EU, marketing authorization for a medicinal product can be obtained through a centralized, mutual recognition, decentralized procedure, or the national procedure of an individual EU Member State. A marketing authorization, irrespective of its route to authorization, may be granted only to an applicant established in the EU.

The centralized procedure provides for the grant of a single marketing authorization by the European Commission that is valid for all 27 EU Member States, Iceland, Liechtenstein and Norway. Under the centralized procedure, the Committee for Medicinal Products for Human Use (the "CHMP") established at the European Medicines Agency (EMA) is responsible for conducting the initial assessment of a product. The maximum timeframe for the evaluation of an MAA is 210 days. This period excludes clock stops during which additional information or written or oral explanation is to be provided by the applicant in response to questions posed by the CHMP. Accelerated evaluation might be granted by the CHMP in exceptional cases, such as when a medicinal product is expected to

be of a major public health interest. A major public health interest defined by three cumulative criteria: (i) the seriousness of the disease (for example, heavy disabling or life-threatening diseases) to be treated; (ii) the absence or insufficiency of an appropriate alternative therapeutic approach; and (iii) the anticipation of high therapeutic benefit. If the CHMP accepts to review a medicinal product as a major public health interest, the time limit of 210 days will be reduced to 150 days. It is, however, possible that the CHMP can revert to the standard time limit for the centralized procedure if it considers that it is no longer appropriate to conduct an accelerated assessment.

Irrespective of the related procedure, at the completion of the review period the CHMP will provide a scientific opinion concerning whether or not a marketing authorization should be granted in relation to a medicinal product. This opinion is based on a review of the quality, safety, and efficacy of the product. Within 15 days of the adoption, the EMA will forward its opinion to the European Commission for its decision. Following the opinion of the EMA, the European Commission makes a final decision to grant a centralized marketing authorization. The centralized procedure is mandatory for certain types of medicinal products, including orphan medicinal products, medicinal products derived from certain biotechnological processes, advanced therapy medicinal products and medicinal products containing a new active substance for the treatment of certain diseases. This route is optional for certain other products, including medicinal products that are of significant therapeutic, scientific or technical innovation, or whose authorization would be in the interest of public or animal health at EU level.

Unlike the centralized authorization procedure, the decentralized marketing authorization procedure requires a separate application to, and leads to separate approval by, the authorities of each EU Member State in which the product is to be marketed. This application process is identical to the application that would be submitted to the EMA for authorization through the centralized procedure and must be completed within 210 days, excluding potential clock-stops, during which the applicant can respond to questions. The relevant EU Member State prepares a draft assessment and drafts of the related materials. The relevant EU Member States must decide whether to approve the assessment report and related materials. If an EU Member State cannot approve the assessment report and related materials due to concerns relating to a potential serious risk to public health, disputed elements may be referred to the European Commission, whose decision is binding on all EU Member States.

The mutual recognition procedure is similarly based on the acceptance by the relevant authorities of the EU Member States of the marketing authorization of a medicinal product by the relevant authorities of other EU Member States. The holder of a national marketing authorization may submit an application to the authority of an EU Member State requesting that this authority recognize the marketing authorization delivered by the authority of another EU Member State.

Innovative products that target an unmet medical need may be eligible for a number of expedited development and review programs in the EU, such as The Priority Medicines scheme, which provides incentives similar to the breakthrough therapy designation in the U.S. Such products are generally eligible for accelerated assessment and may also benefit from different types of fast-track approvals, such as a conditional marketing authorization or a marketing authorization under exceptional circumstances granted on the basis of less comprehensive clinical data than normally required (respectively in the likelihood that the sponsor will provide such data within an agreed timeframe or when comprehensive data cannot be obtained even after authorization).

The EU also provides opportunities for market exclusivity. For example, in the EU, upon receiving marketing authorization, new active substances generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic or biosimilar application. During the additional two-year period of market exclusivity, a generic or biosimilar marketing authorization can be submitted, and the innovator's data may be referenced, but no generic or biosimilar product can be marketed until the expiration of the market exclusivity. The overall ten-year period will be extended to a maximum of 11 years if, during the first eight years of those 10 years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new active substance, and products may not qualify for data exclusivity.

In the EU, medicinal products: (a) that are used to diagnose, treat or prevent life-threatening or chronically debilitating conditions that affect no more than five in 10,000 people in the EU; or (b) that are used to treat or prevent life-threatening or chronically debilitating conditions and that, for economic reasons, would be unlikely to be developed without incentives; and (c) where no satisfactory method of diagnosis, prevention or treatment of the condition concerned exists, or, if such a method exists, the medicinal product would be of significant benefit to those affected by the condition, may be granted an orphan designation in the EU. The application for orphan designation must be submitted to the EMA's Committee for Orphan Medicinal Products and approved by the European Commission before an application is made for marketing authorization for the product. Once authorized, orphan medicinal product designation entitles an applicant to financial incentives such as reduction of fees or fee waivers. In addition, orphan medicinal products are entitled to ten years of market exclusivity following authorization. During this ten-year period, with a limited number of exceptions, neither the competent authorities of the EU Member States, the EMA, or the European Commission are permitted to accept applications or grant marketing authorization for other similar medicinal products with the same therapeutic indication. However,

marketing authorization may be granted to a similar medicinal product with the same orphan indication during the ten-year period with the consent of the marketing authorization holder for the original orphan medicinal product or if the manufacturer of the original orphan medicinal product is unable to supply sufficient quantities. Marketing authorization may also be granted to a similar medicinal product with the same orphan indication if this latter product is safer, more effective or otherwise clinically superior to the original orphan medicinal product. The period of market exclusivity may, in addition, be reduced to six years if it can be demonstrated on the basis of available evidence that the original orphan medicinal product is sufficiently profitable not to justify maintenance of market exclusivity.

Combination products in the EU: For products and product candidates that combine medicinal products and device components ('combination products'), the rules applicable vary depending on the specific combination. If the principal intended action of the product is achieved by the medicinal product, the product is considered a medicinal product that includes a medical device. The entire product is regulated under EU pharmaceutical legislation and must obtain a marketing authorization in the terms explained above. For the device part of the combination, the MAA should include a CE Certificate of Conformity for the device or, if the device is not CE-marked but would need to be certified if marketed separately, an opinion from an EU notified body on the conformity of the device with applicable requirements. If, however, the device is co-packaged or obtained separately from the medicinal product, it must be CE-marked under the EU medical devices legislation (Regulation (EU) 2017/745 on medical devices or the previous Directives 90/385/EEC and 93/42/EEC). Conversely, if the principal intended action in the product is achieved by the medical device (and the action of the medicinal product is only ancillary to that of the device), the entire product is regulated as a medical device and should be CE-marked under the EU medical devices legislation.

Revisions of the EU regulatory framework: The EU pharmaceutical legislation is currently under review. On April 26, 2023, the European Commission published its proposal to revise the EU pharmaceutical legislation, consisting of a new Directive and a new Regulation, which would revise and replace the existing general pharmaceutical legislation (Regulation 726/2004 and Directive 2001/83/EC) and the legislation on medicinal products for pediatric use and on orphan medicinal products (Regulation 1901/2006 and Regulation 141/2000/EC, respectively). Therefore, the provisions governing medicinal products in the EU may change in the future. The legislative process is ongoing and the final texts of the new acts are still unknown. Adoption is currently expected to occur in 2026, with implementation following thereafter.

EU in vitro diagnostic medical device legislation: In the EU, in vitro diagnostic medical devices ("IVD") must currently comply with the General Safety and Performance Requirements laid down in Annex I to the In Vitro Diagnostic Devices Regulation ("IVDR"). Compliance with these requirements is a prerequisite to be able to affix the CE mark on products, without which they cannot be marketed or sold in the EU. To demonstrate compliance with the General Safety and Performance Requirements of the EU IVDR and obtain the right to affix the CE mark, IVD manufacturers must undergo a conformity assessment procedure, which varies according to the IVD's classification. Apart from low risk medical devices (Class A non-sterile), in relation to which the manufacturer may issue an EC Declaration of Conformity based on a self-assessment of the conformity of its products with the General Safety and Performance Requirements, a conformity assessment procedure requires the intervention of a notified body, which is an organization designated by a Competent Authority of an EU Member State to conduct conformity assessments. Depending on the relevant conformity assessment procedure, the notified body would audit and examine the technical documentation and the quality system for the manufacture, design and final inspection of the IVDs. The notified body issues a CE Certificate of Conformity following successful completion of a conformity assessment procedure conducted in relation to the IVD and its manufacturer and their conformity with the General Safety and Performance Requirements. This Certificate and the related conformity assessment process entitles the manufacturer to affix the CE mark to its IVD after having prepared and signed a related EC Declaration of Conformity. Notified bodies must be designated by the authority responsible for notified bodies in the relevant EU Member State to conduct assessment procedures for IVDs in accordance with the EU IVDR. The time required to obtain a CE Certificate of Conformity from a notified body in the EU is lengthy and may be unpredictable. On average, the time-to-certification under the IVDR for all IVD categories ranges between 13 and 18 months.

Besides its involvement in the initial conformity assessment procedure, the Notified Body is required to carry out an annual audit (surveillance audit) and is also required to randomly perform unannounced audits at least once every five years. The quality management system and technical documentation of manufacturers will be required to be recertified periodically, as CE Certificates of Conformity issued by a Notified Body remain valid only for the period indicated in them, in no case exceeding five years. The EU IVDR also provides various requirements relating to post-market surveillance and vigilance, including the obligation for manufacturers to implement a post-market surveillance system. Once an IVD is on the EU market, manufacturers must comply with certain vigilance requirements, such as reporting serious incidents and field safety corrective actions (even those occurring outside the EU) to the relevant competent authorities.

Employees and Human Capital

As of December 31, 2024, we had 21 full-time employees. Of these full-time employees, 11 were engaged in research and development and 10 were engaged in management, finance and administration. From time to time, we also employ independent

contractors to support our operations. Our employees are not represented by any collective bargaining agreements and we have never experienced an organized work stoppage.

We believe that we must offer and maintain market competitive compensation and benefit programs for our employees in order to attract and retain qualified personnel. In addition to cash compensation, we provide equity compensation, a company-matched 401(k) Plan, healthcare and insurance benefits, health savings and flexible spending accounts, paid time off, family leave, and employee assistance programs.

Corporate Information

We were initially formed as a California general partnership in July 1996 and incorporated in the State of Delaware in May 1997. We were formerly known as Cytori Therapeutics, Inc., before that as MacroPore Biosurgery, Inc. and before that as MacroPore, Inc. On July 20, 2019, we changed our name from Cytori Therapeutics, Inc. to Plus Therapeutics, Inc.

Our corporate offices are located at 2710 Reed Road, Suite 160, Houston, TX 77051. Our telephone number is (737) 255-7194. We maintain a website at the following address: www.plustherapeutics.com. The information on the Company's website is not incorporated by reference in this report. We make available on or through our website certain reports and amendments to those reports that we file with or furnish to the SEC in accordance with the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These include our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q ("Form 10-Q"), and our Current Reports on Form 8-K. We make this information available on our website free of charge as soon as reasonably practicable after we electronically file the information with, or furnish it to, the SEC. In addition, we routinely post on the "Press Releases" page of our website news releases, announcements and other statements about our business and results of operations, some of which may contain information that may be deemed material to investors. Therefore, we encourage investors to monitor the "Press Releases" page of our website and review the information we post on that page.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at the following address: http://www.sec.gov.

Item 1A. Risk Factors

The risk factors described below, as well as statements described elsewhere in this Form 10-K, including our audited Financial Statements and the related notes and "Management's Discussion and Analysis of Financial Conditions and Results of Operations," or in other SEC filings, describe risks that could materially and adversely affect our business, financial condition, and results of operations, which could also cause the trading price of our equity securities to decline. These risks are not the only risks that we face. Our business, financial condition and results of operations could also be affected by additional factors that are not presently known to us or that we currently consider to be immaterial to our operations.

Risks Related to our Financial Position and Capital Requirements

We have incurred losses since inception, we expect to incur significant net losses in the foreseeable future and we may never become profitable and our operating results have been and will likely continue to be volatile.

We have generated negative cash flows from operations and have incurred net operating losses each year since we started business. For the year ended December 31, 2024, we incurred net losses of $13.0 million and our net cash used in operating activities was $10.6 million. As of December 31, 2024, our accumulated deficit was $493.5 million. We expect to continue to incur net losses and negative cash flow from operating activities for at least the next twelve months. As our focus on development of nanomedicine and the development of therapeutic applications has increased, losses have resulted primarily from expenses associated with research and development and clinical trial-related activities, as well as general and administrative expenses. We expect to continue operating in a loss position and expect that recurring operating expenses will be at higher levels for the year ending December 31, 2025 as we perform clinical trials and other development activities for our nanomedicine product candidates.

Our ability to generate sufficient revenue from any of our products, product candidates or technologies to achieve profitability will depend on a number of factors including, but not limited to:

- our ability to manufacture, test and validate our product candidates or clinical tests in compliance with applicable laws and as required for submission to applicable regulatory bodies;
- our or our partners' ability to successfully complete clinical trials of our product candidates;
- our ability to obtain necessary regulatory approvals for our product candidates;
- our or our partners' ability to negotiate and receive favorable reimbursement for our product candidates, including for our product candidates that have been granted or may be granted orphan drug status or otherwise command currently anticipated pricing levels;

- our ability to negotiate favorable arrangements with third parties to help finance the development of, and market and distribute, our products and product candidates;
- the degree to which our approved products are accepted in the marketplace; and
- our success at commercializing our CNSide™ Portfolio.

Because of the numerous risks and uncertainties associated with our commercialization and product development efforts, we are unable to predict the extent of our future losses or when or if we will become profitable and it is possible we will never become profitable. If we do not generate significant sales from any of our product candidates that receive regulatory approval, there would be a material adverse effect on our business, results of operations, financial condition and prospects, which in turn could result in our inability to continue operations.

Our prospects must be evaluated in light of the risks and difficulties frequently encountered by emerging companies and particularly by such companies in rapidly evolving and technologically advanced biotech, pharmaceutical and medical device fields. In addition, our budgeted expense levels are based in part on our expectations concerning future research and development activities. We may be unable to reduce our expenditures in a timely manner to compensate for any unexpected events. Accordingly, unexpected events could have an immediate and material impact on our business and financial condition. From time to time, we have tried to update our investors' expectations as to our operating results. If we revise any timelines we may give with respect to our clinical trials, it could materially harm our reputation and the market's perception of us and could cause our stock price to decline.

Uncertainties relating to our ability to fund our operations for at least the next 12 months raises substantial doubt about our ability to continue as a going concern.

As of December 31, 2024, we had an accumulated stockholders' deficit of approximately $493.5 million, a working capital deficit of approximately $10.3 million, and approximately $3.6 million of cash and cash equivalents and short-term investments to fund our operations and capital requirements. We do not currently have sufficient available liquidity to fund our operations for at least the next 12 months. Consequently, absent further actions, these matters raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements in this Form 10-K are issued.

We have a history of generating losses and negative cash flows from operations. Our financial statements have been prepared under the assumption that we will continue as a going concern for the next twelve months. Our ability to continue as a going concern is dependent upon our ability to obtain additional debt, equity or other financing. Furthermore, we also could be required to seek funds through arrangements with collaborative partners or otherwise that may require us to relinquish rights to some of our intellectual property or product candidates or otherwise agree to terms unfavorable to us.

If we are unsuccessful in our efforts to raise any such additional capital, we would be required to take actions that could materially and adversely affect our business, including significant reductions in our research, development and administrative operations (including reduction of our employee base), possible surrender or other disposition of our rights to some technologies or product opportunities, delaying of our clinical trials or curtailing or ceasing operations.

We could be delisted from Nasdaq for failure to comply with the minimum stockholders' equity continued listing requirement or other applicable continued listing requirements and standards of Nasdaq, which would seriously harm the liquidity of our stock and our ability to raise capital.

Our common stock is currently listed on The Nasdaq Capital Market. In order to maintain that listing, we must maintain compliance with Nasdaq's continued listing requirements and standards. There can be no assurances that we will be able to comply with the applicable listing requirements and standards of Nasdaq.

Nasdaq requires listed issuers to comply with certain standards in order to remain listed on its exchange. These requirements include, among other things, maintaining a closing bid price for our common stock of $1.00 per share and meeting one of the following three requirements: maintaining at least $2.5 million in stockholders' equity (the "Minimum Stockholders' Equity Requirement"); maintaining $35 million of market value of listed securities; or having $500,000 in net income over the prior two years or two of the prior three years. In March 2024, we received notice from the Listing Qualifications staff of Nasdaq (the "Staff"), notifying us that we no longer complied with the Minimum Stockholders' Equity Requirement under Nasdaq Listing Rule 5550(b)(1).

On September 5, 2024, Nasdaq notified us that we had not regained compliance with the Minimum Stockholders' Equity Requirement and that, as a result, unless we timely requested an appeal of this determination to a Nasdaq Hearings Panel (the "Panel"), Nasdaq would move to suspend trading of our common stock and to have our shares of common stock delisted from The Nasdaq Capital Market. The Company timely requested a hearing before the Panel, and the hearing was held on October 22, 2024. On October 30, 2024, Nasdaq provided us until March 4, 2025, to notify Nasdaq that we were in compliance with the Minimum Stockholders' Equity

Requirement. We regained compliance with the Minimum Stockholders' Equity Requirement in connection with the private placement we closed on March 4, 2025. For more information regarding the private placement, see "Liquidity and Capital Resources" below.

Pursuant to Nasdaq Listing Rule 5815(d)(4)(B), we will be subject to a Mandatory Panel Monitor until March 7, 2026. If the Staff finds we are again out of compliance with the Minimum Stockholders' Equity Requirement before that date, we will not be permitted to provide the Staff with a plan of compliance with respect to that deficiency and the Staff would not be permitted to grant additional time for us to regain compliance with respect to that deficiency, nor would we be afforded an applicable cure or compliance period. Instead, the Staff would issue a "Delist Determination Letter" and we would have an opportunity to request a Nasdaq hearing panel regarding our continued listing.

In the event that our common stock is delisted from Nasdaq, as a result of our failure to comply with the Minimum Stockholders' Equity Requirement, or as a result of our failure to continue to comply with any other requirement for continued listing on Nasdaq, we may have to pursue trading on a less recognized or accepted market, such as the over the counter markets, our stock may be traded as a "penny stock," which would make transactions in our common stock more difficult and cumbersome, and we may be unable to access capital on favorable terms or at all, as companies trading on alternative markets may be viewed as less attractive investments with higher associated risks, such that existing or prospective institutional investors may be less interested in, or prohibited from, investing in our common stock. This may also cause the market price of our common stock to decline.

We will need substantial additional funding to develop our product candidates and conduct our future operations and to repay our outstanding debt obligations. If we are unable to obtain the funds necessary to do so, we may be required to delay, scale back or eliminate our product development activities or may be unable to continue our business operations.

We have had, and we will continue to have, an ongoing need to raise additional cash from outside sources to continue funding our operations, including our continuing substantial research and development expenses and potential commercialization activities. We do not currently believe that our cash balance will be sufficient to fund the development and marketing efforts required to reach profitability without raising additional capital from accessible sources of financing in the near future. Our future capital requirements will depend on many factors, including:

- our ability to raise capital to fund our operations on terms acceptable to us, or at all;
- our perceived capital needs with respect to our development programs, and any delays in, adverse events and excessive costs of such programs beyond what we currently anticipate;
- our ability to establish and maintain collaborative and other arrangements with third parties to assist in bringing our product candidates to market and the cost of such arrangements at the time;
- costs associated with operating at our Houston, Texas facility;
- the cost of manufacturing our product candidates, including compliance with good manufacturing practices applicable to our product candidates;
- expenses related to the establishment of sales and marketing capabilities for product candidates awaiting approval or products that have been approved;
- competing technological and market developments; and
- our ability to introduce and sell new products.

The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our clinical development efforts.

We have secured capital historically from grant revenue, collaboration proceeds, and debt and equity offerings. To obtain additional capital, we may pursue debt and/or equity offering programs, strategic corporate partnerships, state and federal development programs, licensing arrangements, and sales of assets or debt or equity securities. We cannot be certain that additional capital will be available on terms acceptable to us, or at all. If we are unsuccessful in our efforts to raise any such additional capital, we may be required to take actions that could materially and adversely harm our business, including a possible significant reduction in our research, development and administrative operations (including reduction of our employee base), the surrender of our rights to some technologies or product opportunities, delay of our clinical trials or regulatory and reimbursement efforts, or curtailment or cessation of operations.

Depending on the type and the terms of any financing we pursue, stockholders' rights and the value of their investment in our common stock could be reduced. A financing could involve one or more types of securities including common stock, preferred stock, convertible debt or warrants to acquire common stock. These securities could be issued at or below the then prevailing market price for our common stock or with terms or conditions that provide new investors with rights that are superior to those held by our existing stockholders or that have a negative impact on the value of securities held by our existing stockholders. For example, the terms of our recent offerings resulted in substantial dilution to our existing stockholders and significant protections to new investors that are not available to stockholders who invested prior to the offerings. In addition, if we issue secured debt securities, the holders of the debt would have a claim to our assets that would be prior to the rights of stockholders until the debt is paid. Interest on these debt securities would increase costs and negatively impact operating results. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted.

We will need to complete additional financing transactions in order to continue operations. These arrangements may also not be sufficient in the near-term. Given, among other things, the current status of the capital markets, our recent stock price performance and the terms of our recent capital financings, there can be no assurances that we will be able to secure additional financing, or if available, that it will be sufficient to meet our needs or be on favorable terms. Additionally, our cost of capital will depend upon numerous factors including, but not limited to, the strength of the financial markets, global market conditions, including inflationary pressures, interest rate fluctuations, our recovery and financial performance, the recovery and performance of our industry in general and the size, scope and timing of our financial needs. If we are unable to access current financings or secure future financings, including for any of the foregoing reasons, it will have a negative impact on our cash flows and our ability to meet our financial obligations. Failure to raise capital as and when needed, on favorable terms or at all, would have a significant negative impact on our financial condition and our ability to develop our product candidates.

Borrowings under our line of credit have the effect of limiting our use of cash and marketable securities.

We have an existing margin loan facility under a line of credit (the "Pershing Credit Facility") with Pershing LLC ("Pershing"), an affiliate of The Bank of New York Mellon Corporation. The available credit line limit under this facility fluctuates based on our request for extensions from time to time, subject to the value of the collateralized marketable securities we hold with Pershing, provided that the amount available to draw under the facility cannot exceed 91.5% of the value of the collateralized marketable securities deposited with Pershing. Depending on the value of the marketable securities we hold with Pershing, Pershing may require us from time-to-time to deposit additional funds or marketable securities in order to restore the level of collateral to an acceptable level, and the amounts borrowed under the facility are due on demand. Volatility in the global markets could cause the interest rate to fluctuate from time to time increasing our costs, or could cause Pershing to terminate our ability to borrow funds. In addition, borrowings under the Pershing Credit Facility have the effect of limiting our use of cash and marketable securities.

We maintain our cash at financial institutions, often in balances that exceed federally insured limits.

Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. The majority of our cash is held in accounts at U.S. banking institutions that we believe are of high quality. Cash held in depository accounts may exceed the $250,000 Federal Deposit Insurance Corporation ("FDIC") insurance limits. If such banking institutions were to fail, we could lose all or a portion of those amounts held in excess of such insurance limitations. By way of example, the FDIC took control of Silicon Valley Bank ("SVB") on March 10, 2023. Similarly, on March 12, 2023, Signature Bank and Silvergate Capital Corp. were each swept into receivership. Although depositors at SVB received access to their funds, uncertainty and liquidity concerns in the broader financial services industry remain. Inflation and rapid increases in interest rates have led to a decline in the trading value of previously issued government securities with interest rates below current market interest rates. The U.S. Department of Treasury, FDIC and Federal Reserve Board have announced a program to provide up to $25 billion of loans to financial institutions secured by such government securities held by financial institutions to mitigate the risk of potential losses on the sale of such instruments. However, widespread demands for customer withdrawals or other needs of financial institutions for immediate liquidity may exceed the capacity of such program. There is no guarantee that the U.S. Department of Treasury, FDIC and Federal Reserve Board will provide access to uninsured funds in the future in the event of the closure of other banks or financial institutions in a timely fashion or at all. Additionally, in the future, our access to our cash in amounts adequate to finance our operations could be significantly impaired by the financial institutions with which we have arrangements directly facing liquidity constraints or failures. Any material loss that we may experience in the future could have a material adverse effect on our financial condition and could materially impact our ability to pay our operational expenses or make other payments.

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

We do not expect to make profits in the near future. Under Section 382 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change" (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 taxable income and taxes may be limited. We have undergone "ownership changes" as a result of shifts in stock ownership in the past, which significantly limited our ability to use net operating loss carryforwards and other pre-change tax attributes. Any additional ownership change within the definition of Section 382 would further limit our ability to use net operating loss carryforwards and other tax attributes. This change may require us to pay federal income taxes in future years despite generating a loss for federal income tax purposes in prior years.

Risks Related to Our Business and Industry

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in each Form 10-K, as required by Section 404 of the Sarbanes-Oxley Act.

During the quarter ended June 30, 2023, we recognized immaterial grant revenue related to reimbursable development costs incurred in the fourth quarter of 2022 and the first quarter of 2023 that were eligible for revenue recognition in those respective prior periods. These costs were eligible for reimbursement under our CPRIT Grant, but were not correctly recognized in prior period grant revenue due to management's view that insufficient progress had been made in the ReSPECT-LM clinical trial, despite no performance specific milestones in the grant outside of a reasonableness test for reimbursement of expenses. Management has concluded that the correction to grant revenue in the prior periods did not cause a material misstatement of our financial statements.

We did not have adequate controls to apply appropriate accounting principles to significant and unusual grant revenue transactions. Specifically, controls over identification of significant and/or unusual transactions requiring technical analysis were not operating effectively. Management evaluated the impact of this deficiency on our disclosure controls and procedures and concluded that the control deficiency represents a material weakness. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis.

In the first quarter of fiscal year 2024, the Company completed the testing of the design and operating effectiveness of the controls over application of appropriate accounting principles to significant and unusual grant revenue transaction. Management has determined that the controls are adequately designed and are operating effectively, and concluded that the material weakness identified in the Quarterly Report on Form 10-Q for the quarter ended June 30, 2023 had been remediated.

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

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our common stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

Furthermore, if our remediation of the material weakness is not effective, or if we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

Our future success is in large part dependent upon our ability to successfully develop our nanomedicine platform and commercialize REYOBIQ™ and ^{188}RNL-BAM and any failure to do so could significantly harm our business and prospects.

Our ability to successfully develop and commercialize REYOBIQ™ and ^{188}RNL-BAM is subject to a number of risks, including the following:

- we do not have substantive drug development, manufacturing, and commercialization experience, and thus we may be required to hire and rely on significant numbers of scientific, quality, regulatory and other technical personnel with the experience and expertise necessary to develop, manufacture, and commercialize our nanomedicine product candidates. We may be unable to identify, hire and retain personnel with the requisite experience to conduct the operations necessary to obtain regulatory approval and commercialize our RNL product candidates, in which case our business would be materially harmed;
- we intend to find a commercialization partner to share or assume responsibility for marketing, sales, and distribution activities and related costs and expenses for our RNL product candidates. There can be no assurance that we would obtain sufficient capital to fund the development, manufacturing, and commercialization of our nanomedicine program ourselves,

or if we do obtain such capital, that our development, manufacturing, and commercialization efforts would be successful; and

- to the extent that we incur unanticipated expenses in our business, are unable to timely obtain sufficient additional capital on terms acceptable to us (or at all) to fund this business, our ability to develop our RNL product candidates could be materially and adversely impacted.

^{188}RNL-BAM will be regulated as a medical device, which may result in additional regulatory and other risks.

^{188}RNL-BAM was developed and tested preclinically as a drug product. The FDA has informed us that ^{188}RNL-BAM will, moving forward, be regulated instead as a medical device.

In the United States, before we can market a new medical device, we must first receive either clearance under Section 510(k) of the FDCA or premarket approval ("PMA"), from the FDA, unless an exemption applies. In the process of obtaining either premarket clearance or approval, following these routes respectively, the FDA must determine that a proposed device is either substantially equivalent to a legally marketed predicate device with similar intended uses and the same technological characteristics or technological characteristics that do not raise different questions of safety or effectiveness , or that it is safe and effective for its intended use, based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical, manufacturing and labeling data. The PMA process is typically required for devices that are deemed to pose the greatest risk, such as life sustaining, life supporting or implantable devices.

Modifications to products that are approved through a PMA generally require FDA approval of the modifications through a PMA supplemental application. Both the PMA approval and the 510(k) clearance process can be expensive, lengthy and uncertain. The process of obtaining a PMA is particularly costly and uncertain and generally takes from one to three years, or even longer, from the time the application is submitted to the FDA. In addition, a PMA generally requires the performance of one or more clinical studies. Despite the time, effort and cost, a medical device may not be approved by the FDA. Any delay or failure to obtain necessary regulatory approvals could harm our business. Furthermore, even if we are granted regulatory approvals, they may include significant limitations on the approved and labeled indications for use for the device, which may limit the market for the device.

In addition, comparable foreign regulatory authorities to the FDA have approval policies and regulations related to the safety and performance requirements that apply to ^{188}RNL-BAM, either as medical devices or as drugs, depending on each jurisdiction's regulatory requirements. Accordingly, to the extent that we intend to sell medical devices or drugs in Member States of the EU or other foreign jurisdictions, the regulatory approval pathway for our product candidates, including ^{188}RNL-BAM, may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

Failure to successfully develop or supply the ^{188}RNL-BAM medical device component, delays in or failure of the studies conducted by us, our collaborators, or third-party providers, or failure of our management, our collaborators, or third-party providers to obtain or maintain regulatory clearance or approval of ^{188}RNL-BAM as a medical device or drug, as applicable in each jurisdiction, could result in increased development costs, delays in or failure to obtain regulatory approval, and associated delays in ^{188}RNL-BAM reaching the market. Further, failure to successfully develop or supply the device, or to gain or maintain its approval, could adversely affect our operations.

We recently acquired the CNSide™ Portfolio, and we may not be successful in our efforts to develop, fully utilize and monetize it.

In April 2024, we completed the acquisition of substantially all of the right, title and interest in the CNSide™ Platform, including the CNSide™ Test, which is designed to detect, quantify, and monitor tumor status in LM. We are currently evaluating and developing our business plan for developing the CNSide™ Portfolio alongside our lead radio therapeutic candidate, REYOBIQ™, and seeking partnering and financing opportunities for CNSide™. We are planning for the CNSide™ Test to be re-introduced to the U.S. market starting in the second quarter of 2025. However, there can be no assurances that we will be able to develop the technology to allow for commercial applications, or successfully utilize and fully integrate the CNSide™ Portfolio into our operations. We may not generate revenues from or realize the anticipated benefits of the CNSide™ Platform within our expected timeline or at all. Contingent on our launch are a number of steps related to certifications, state licensures, payor coverages and reimbursement codes are completed.

In addition, the FDA historically exercised enforcement discretion with respect to LDTs and did not require these tests to be cleared or approved by FDA as long as they complied with CLIA standards. However, on May 6, 2024, the FDA issued a final rule in which it announced it was phasing out its general enforcement discretion approach so that LDTs manufactured by a laboratory will generally fall under the same enforcement approach as other medical devices. According to the final rule this phase out will take place over a period of several years. As a result, CNSide Diagnostics may also be required to comply with these FDA regulations if FDA implements and enforces the final LDT rule, including, among other things, registration and listing, quality system regulations, and premarket authorization. Failure to comply with applicable FDA regulatory requirements may trigger a range of enforcement actions by the FDA, and may disqualify or delay a company from launching an LDT product, or prevent a company with an LDT on the marketing from continuing to sell their test.

If we are unable to successfully partner with other companies to commercialize our product candidates, our business could materially suffer.

A key part of our business strategy is to leverage strategic partnerships and collaborations to commercialize our product candidates. We do not have the financial, human or other resources necessary to develop, commercialize, launch or sell our therapeutic offerings in all of the geographies that we are targeting, and thus it is important that we identify and partner with third parties who possess the necessary resources to bring our product candidates to market. We expect that any such partners will provide regulatory and reimbursement/pricing expertise, sales and marketing resources, and other expertise and resources vital to the success of our product offerings in their territories. We further expect, but cannot guarantee, that any such partnering arrangements will include upfront cash payments to us in return for the rights to develop, manufacture, and/or sell our product candidates in specified territories, as well as downstream revenue in the form of milestone payments and royalties. If we are unable to successfully partner with other companies to commercialize our product candidates, our business could materially suffer.

Our success depends in substantial part on our ability to obtain regulatory approvals for our RNL product candidates. However, we cannot be certain that we will receive regulatory approval for these product candidates or our other product candidates.

We have a limited number of product candidates in development, and our business depends substantially on their successful development and commercialization. Our product candidates will require development, regulatory review and approval in multiple jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from sales of our product candidates. The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, whose regulations differ from country to country.

We are not permitted to market our product candidates in the United States until we receive approval from the FDA, or in any foreign countries until we receive the requisite approval from the regulatory authorities of such countries (including centralized marketing authorization from the European Commission), and we may never receive such regulatory approvals. Obtaining regulatory approval for a product candidate is a lengthy, expensive and uncertain process, and may not be obtained. Any failure to obtain regulatory approval of any of our product candidates would limit our ability to generate future revenue (and any failure to obtain such approval for all of the indications and labeling claims we deem desirable could reduce our potential revenue), would potentially harm the development prospects of our product candidates and would have a material and adverse impact on our business.

Even if we successfully obtain regulatory approvals to market our product candidates, our revenue will be dependent, in part, on our ability to commercialize such products as well as the size of the markets in the territories for which we gain regulatory approval. If the markets for our product candidates are not as significant as we estimate, our business and prospects will be harmed.

If a product candidate is not approved in a timely fashion on commercially viable terms, or if development of any product candidate is terminated due to difficulties or delays encountered in the regulatory approval process, it could have a material adverse effect on our business, and we may become more dependent on the development of other proprietary products and/or our ability to successfully acquire other products and technologies. There can be no assurance that any product candidate will receive regulatory approval in a timely manner, or at all.

If we or any party to a key collaboration, licensing, development, acquisition or similar arrangement fail to perform material obligations, or commit a breach, under such arrangement, or any arrangement is terminated for any reason, there could be an adverse effect on our business.

We are currently party to certain licensing, collaboration and acquisition agreements under which we may make or receive future payments in the form of milestone payments, maintenance fees, royalties and/or minimum product purchases. Our collaborators may not devote the attention and resources to such efforts to be successful. The termination of a key collaboration agreement by one of our collaborators could materially impact our ability to enter into additional collaboration agreements with new collaborators on favorable terms.

On March 29, 2020, we entered into an exclusive license agreement with NanoTx for the global rights to develop and commercialize NanoTx's glioblastoma treatment, REYOBIQ™. Under the license agreement with NanoTx, we are required to use commercial reasonable efforts to develop the REYOBIQ™ product candidate acquired under the license agreement. Further, we are subject to future milestone, earn-out and other payments to NanoTx all of which are tied to our commercialization and sale activities for product candidates. If we are unsuccessful in our efforts to develop these assets, or if NanoTx and we were to enter into a dispute over the terms of our agreement, then our business could be seriously harmed.

On December 31, 2021, we entered into an exclusive license agreement with UTHSCSA for the global rights to develop and commercialize Rhenium-188 NanoLiposome biodegradable alginate microspheres (^{188}RNL-BAM). Under the license agreement with UTHSCSA, we are required to use commercial reasonable efforts to develop the ^{188}RNL-BAM product candidate acquired under the license agreement. Further, we are subject to future milestone, earn-out and other payments to UTHSCSA all of which are tied to our commercialization and sale activities for product candidates. If we are unsuccessful in our efforts to develop these assets, or if UTHSCSA and we were to enter into a dispute over the terms of our agreement, then our business could be seriously harmed.

If we breach any of the agreements under which we license the use, development and commercialization rights to our product candidates or technology from third parties, we could lose license rights that are important to our business. Licensing of intellectual property is of critical importance to our business and involves complex legal, business and scientific issues. Disputes may arise between us and our licensors regarding intellectual property subject to a license agreement, including:

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

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms or at all, we may be unable to successfully develop and commercialize the affected product candidates. In addition, if disputes arise as to ownership of licensed intellectual property, our ability to pursue or enforce the licensed patent rights may be jeopardized. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize our products could suffer.

Our current business strategy is high-risk and may not be successful.

Our current business strategy is to aggressively develop our nanomedicine platforms and CNSide™ Platform, while simultaneously controlling expenses, which is a high-risk strategy for a number of reasons including the following:

- we do not have prior experience with obtaining regulatory, reimbursement, or other approvals for product candidates such as REYOBIQ™ and ^{188}RNL-BAM or the CNSide™ Test;
- our nanomedicine product candidates, if commercialized, will compete against established competitive drugs that are marketed and sold by large companies with significant human, technical and financial resources;
- we are not experienced in acquiring and integrating new assets;
- there is an intense and rapidly evolving competitive landscape for our nanomedicine product candidates, including chemotherapies, targeted therapies and immuno-oncology therapies, and as such key assumptions regarding market entry, pricing, and revenue/unit share may not be realized;
- our product candidates and clinical laboratory tests may never become commercially viable; and
- we may not be able to prevent other companies from depriving us of market share and profit margins by selling products based on our intellectual property and developments.

Reliance on government funding for our programs may impose requirements that limit our ability to take certain actions, and subject it to potential financial penalties, which could materially and adversely affect our business, financial condition and results of operations.

A significant portion of our funding will come from grants received from CPRIT. The CPRIT Grant includes provisions that reflect the government's substantial rights and remedies, many of which are not typically found in commercial contracts, including powers of the government to potentially require repayment of all or a portion of the grant award proceeds, in certain cases with interest,

in the event we violate certain covenants pertaining to various matters that include any potential relocation outside of the State of Texas. After the CPRIT Grant ends, we are not permitted to retain any unused grant award proceeds without CPRIT's approval, but our obligation to pay CPRIT sales-based royalty, if and when commercialization is achieved, and other obligations, including our obligation to repay the disbursed grant proceeds under certain circumstances, to maintain certain records and documentation, to notify CPRIT of certain unexpected adverse events and our obligation to use reasonable efforts to ensure that any new or expanded preclinical testing, clinical trials, commercialization or manufacturing related to any aspect to our CPRIT project take place in Texas, survive the termination of the agreement.

Our award from CPRIT requires us to pay CPRIT a portion of our revenues from sales of certain products by us, or received from our licensees or sublicensees, at tiered percentages of revenue in the low- to mid-single digits until the aggregate amount of such payments equals 400% of the grant award proceeds, and thereafter at a rate of 0.5% for as long as we maintain government exclusivity, subject to our right, under certain circumstances, to make a one-time payment in a specified amount to CPRIT to terminate such payment obligations. In addition, the grant contract also contains a provision that provides for repayment to CPRIT of some amount not to exceed the full amount of the grant proceeds under certain specified circumstances involving relocation of our principal place of business outside Texas.

The CPRIT Grant requires us, as a Texas-based company, to meet certain criteria, including among other things, that we maintain our headquarters in Texas and use certain vendors, consultants and employees that are located in Texas. If we fail to maintain compliance with any such requirements that may apply to us now or in the future, we may be subject to potential liability and to termination of our contracts, and potentially full repayment of the CPRIT Grant.

The DoD Award is dependent on continued U.S. government funding and government appropriations, which may not be forthcoming on a timely basis or at all.

The DoD Award, which entitles us to receive a $3.0 million fund for research and development purposes over a three-year period, and any future U.S. federal government grants we may receive, are dependent on government funding, which is generally subject to Congressional appropriations or continued government operations. Such grants are dependent upon sufficient funding for, and timely payment by, the entities providing any such grants. If the granting governmental agency does not receive sufficient appropriations for any reason, including due to a government shutdown or changes in the prevailing policies and budgetary priorities of the incumbent administration, it may terminate our grant (in whole or in part) or reduce the scope of our grant, or delay or reduce payment to us. Any inability to award us any part of the DoD Award, any delay in payment, or the termination of the DoD Award, in whole or in part, due to a lapse in funding or otherwise, could adversely affect our business, financial condition or results of operations, or cash flows. The nature and timing of any related developments remain uncertain.

If our competitors market or develop products that are marketed more effectively, approved more quickly than our product candidates, or demonstrated to be safer or more effective than our product candidates, our commercial opportunities could be reduced or eliminated.

The life science industry is characterized by rapidly advancing technologies, intense competition, and a strong emphasis on proprietary therapeutics. We face competition from a number of sources, some of which may target the same indications as our products or product candidates, including small and large, domestic and multinational, medical device, biotechnology and pharmaceutical companies, academic institutions, government agencies, and private and public research institutions.

Competitors may have greater experience in developing drugs and clinical laboratory tests, conducting clinical trials, obtaining regulatory clearances or approvals, manufacturing and commercialization. It is possible that competitors may obtain patent protection, approval, or clearance from the FDA or achieve commercialization earlier than we can, any of which could have a substantial negative effect on our business. Many of our potential competitors have substantially greater:

- capital resources;
- research and development resources and experience, including personnel and experience;
- product development, clinical trial and regulatory resources and experience;
- sales and marketing resources and experience;
- manufacturing and distribution resources and experience;
- name, brand and product recognition; and
- resources, experience and expertise in prosecution and enforcement of intellectual property rights.

We expect the product candidates in our pipeline, if approved, to compete on the basis of, among other things, product efficacy and safety, time to market, price, coverage, and reimbursement by third-party payers, extent of adverse side effects, and convenience of treatment procedures. One or more of our competitors may develop other products that compete with ours, obtain necessary approvals for such products from the FDA, the European Commission, Ministry of Health, Labour and Welfare or other agencies, if required, more

rapidly than we do or develop alternative products or therapies that are safer, more effective and/or more cost effective than any products developed by us. The competition that we encounter with respect to any of our product candidates that receive the requisite regulatory approval and classification and are marketed may have an effect on our product prices, market share, and results of operations. We may not be able to differentiate any products that we are able to market from those of our competitors, successfully develop or introduce new products that are less costly or offer better results than those of our competitors, or offer purchasers of our products payment and other commercial terms as favorable as those offered by our competitors.

As a result of these factors, our competitors may obtain regulatory approval of their products more quickly than we are able to or may obtain patent protection or other intellectual property rights that limit or block us from developing or commercializing our product candidates. Our competitors may also develop products that are more effective, more useful, better tolerated, subject to fewer or less severe side effects, more widely prescribed or accepted, or less costly than ours and may also be more successful than we are in manufacturing and marketing their products. If we are unable to compete effectively with the marketed therapeutics of our competitors or if such competitors are successful in developing products that compete with any of our product candidates that are approved, our business, results of operations, financial condition, and prospects may be materially adversely affected.

Product development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Clinical testing of our product candidates is a long, expensive and uncertain process, and the failure or delay of a clinical trial can occur at any stage. Many factors, currently known and unknown, can adversely affect clinical trials and the ability to evaluate a product candidate's efficacy. During the course of treatment, patients can die or suffer other adverse events for reasons that may or may not be related to the proposed product being tested. Even if initial results of preclinical and nonclinical studies or clinical trial results are promising, we may obtain different results in subsequent trials or studies that fail to show the desired levels of safety and efficacy, or we may not obtain applicable regulatory approval for a variety of other reasons.

Further, with respect to the conduct and results of clinical trials generally, in the United States, Europe, Japan, and other jurisdictions, the conduct and results of clinical trials can be delayed, limited, suspended, or otherwise adversely affected for many reasons, including, among others:

- delay or failure in reaching agreement with the FDA or other regulatory authorities outside of the United States on acceptable clinical trial design, or in obtaining authorization to commence a trial;
- delay or failure in reaching agreement on acceptable terms with prospective clinical research organizations ("CROs"), and clinical trial sites;
- delay or failure in obtaining approval of an IRB or ethics committees before a clinical trial can be initiated at a prospective trial site;
- withdrawal of clinical trial sites from our clinical trials, including as a result of changing standards of care or the ineligibility of a site to participate;
- clinical results may not meet prescribed endpoints for the studies, produce negative or inconclusive results, or otherwise not provide sufficient data to support the efficacy of our product candidates;
- clinical and nonclinical test results may reveal side effects, adverse events or unexpected safety issues associated with the use of our product candidates;
- emerging of dosing issues;
- lack of adequate funding to continue the clinical trials, including the incurrence of unforeseen costs due to enrollment delays, requirements to conduct additional trials and studies, and increased expenses associated with the services of our CROs and other third parties;
- inability to design appropriate clinical trial protocols;
- slower than expected rates of subject recruitment and enrollment rates in clinical trials;
- clinical sites or investigators may deviate from trial protocol or fail to conduct the trial in accordance with applicable regulatory requirements, or drop out of a trial;
- regulatory review may not find a product safe or effective enough to merit either continued testing or final approval;
- regulatory authorities may require that we change our studies or conduct additional studies which may significantly delay or make continued pursuit of approval commercially unattractive;
- a regulatory agency may reject our trial data or disagree with our interpretations of either clinical trial data or applicable regulations;
- the cost of clinical trials required for product approval may be greater than what we originally anticipate, and we may decide to not pursue regulatory approval for such a product;
- changes in the standard of care of the indication being studied;

- a regulatory agency may identify problems or other deficiencies in our existing manufacturing processes or facilities or the existing processes or facilities of our collaborators, our contract manufacturers, or our raw material suppliers;
- a regulatory agency may change its formal or informal approval requirements and policies, act contrary to previous guidance, adopt new regulations, or raise new issues or concerns late in the approval process; and
- a regulatory agency may put a clinical study on hold pending additional safety data (and there can be no assurance that we will be able to satisfy the regulator agencies' requests in a timely manner, which can lead to significant uncertainty in the completion of a clinical study).

We also face clinical trial-related risks with regard to our reliance on other third parties in the performance of many of the clinical trial functions, including CROs that help execute our clinical trials, the hospitals and clinics at which our trials are conducted, the clinical investigators at the trial sites, and other third-party service providers. Failure of any third-party service provider to adhere to applicable trial protocols, laws and regulations in the conduct of one of our clinical trials could adversely affect the conduct and results of such trial (including possible data integrity issues), which could seriously harm our business.

We, the FDA, other regulatory authorities outside the United States, or an IRB may suspend a clinical trial at any time for various reasons, including if it appears that the clinical trial is exposing participants to unacceptable health risks or if the FDA or one or more other regulatory authorities outside the United States find deficiencies in our IND or similar application outside the United States or the conduct of the trial. If we experience delays in the completion of, or the termination of, any clinical trial of any of our product candidates, the commercial prospects of such product candidate will be harmed, and our ability to generate product revenues from such product candidate will be delayed or inhibited. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process, and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition, results of operations, cash flows and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. Further, regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials.

The development of our product candidates also may be delayed by other events beyond our control. For example, actions to limit federal agency budgets or personnel, may result in reductions to the FDA's budget, employees, and operations, as well as changes to FDA regulatory programs, all of which may lead to slower response times and longer review periods, potentially affecting our ability to progress development of our product candidates, undergo regulatory inspections or obtain regulatory approval for our product candidates.

Pre-clinical studies and preliminary and interim data from clinical trials of our product candidates are not necessarily predictive of the results or success of ongoing or future clinical trials of our product candidates.

Pre-clinical studies and any positive preliminary and interim data from our clinical trials of our product candidates may not necessarily be predictive of the results of ongoing or later clinical trials. A number of companies in the pharmaceutical and biotechnology industries, including us and many other companies with greater resources and experience than us, have suffered significant setbacks in clinical trials, even after seeing promising results in prior pre-clinical studies and clinical trials. Preclinical studies and Phase 1 clinical trials are primarily designed and operate to test safety, to study pharmacokinetics and pharmacodynamics and to understand the side effects of product candidates at various doses and schedules. Even if we are able to complete our planned clinical trials of our product candidates according to our current development timeline, initial positive results from pre-clinical studies and early clinical trials of our product candidates may not be replicated in subsequent clinical trials. The design of our later stage clinical trials could differ in significant ways (e.g., inclusion and exclusion criteria, endpoints, statistical analysis plan) from our earlier stage clinical trials, which could cause the outcomes of the later stage trials to differ from those of our earlier stage clinical trials. If we fail to produce positive results in our planned clinical trials of any of our product candidates, the development timeline and regulatory approval and commercialization prospects for our product candidates, and, correspondingly, our business and financial prospects, could be materially adversely affected. If we fail to produce positive results in our planned clinical trials of any of our product candidates, the development timeline and regulatory approval and commercialization prospects for such product candidates, and, correspondingly, our business and financial prospects, could be materially adversely affected.

Because we have limited resources, we may decide to pursue a particular product candidate and fail to advance product candidates that later demonstrate a greater chance of clinical and commercial success.

We are an early-stage company with limited resources and revenues. The product candidates we currently have under development will require significant development, pre-clinical and clinical testing and investment of significant funds before their commercialization. Because of this, we must make strategic decisions regarding resource allocations and which product candidates to pursue. There can be no assurance that we will be able to develop all potentially promising product candidates that we may identify. Based on preliminary results, we may choose to advance a particular product candidate that later fails to be successful, and simultaneously forgo or defer further investment in other product candidates that later are discovered to demonstrate greater promise in

terms of clinical and commercial success. If we make resource allocation decisions that later are shown to be inaccurate, our business and prospects could be harmed.

Clinical trial results may fail to support approval of our product candidates.

Even if our clinical trials are successfully completed as planned, the results may not support approval of our product candidates under the laws and regulations of the FDA or other regulatory authorities outside the United States. The clinical trial process may fail to demonstrate that our product candidates are both safe and/or effective for their intended uses. Pre-clinical and clinical data and analyses are often able to be interpreted in different ways. Even if we view our results favorably, if a regulatory authority has a different view, we may still fail to obtain regulatory approval of our product candidates. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or post-approval, or it may object to elements of our clinical development program, requiring their alteration. This, in turn, would significantly adversely affect our business prospects.

If third parties we engage are not able to successfully perform, we may not be able to successfully complete clinical development, obtain regulatory approval or commercialize our product candidates and our business could be substantially harmed.

We rely on third parties in the performance of many of the clinical trial functions, including CROs, which help execute our clinical trials, the hospitals and clinics at which our trials are conducted, the clinical investigators at the trial sites, and other third-party service providers. Failure of any third-party service provider to adhere to applicable trial protocols, laws and regulations in the conduct of one of our clinical trials could adversely affect the conduct and results of such trial (including possible data integrity issues), which could seriously harm our business. As a result, results from our clinical trials may be delayed, which in turn would have a material adverse impact on our clinical trial plans and timelines and impair our ability to successfully complete clinical development, obtain regulatory approval, or commercialize our product candidates. This in turn would substantially harm our business and operations.

We also rely on third-party contract manufacturing organizations ("CMOs") for all our requirements for raw materials, drug substance, and drug product. We have entered into contracts with third-party manufacturers to manufacture, supply, store and distribute supplies of our product candidates for our clinical trials. If any of our product candidates receives FDA approval, we expect to rely on third-party contractors to manufacture our drugs. We have no current plans to build internal manufacturing capacity for any product candidate, and we have no long-term supply arrangements with our current CMOs.

Our reliance on third-party manufacturers exposes us to potential risks, such as the following:

- we may be unable to contract with third-party manufacturers on acceptable terms, or at all, because the number of potential manufacturers is limited. Potential manufacturers of any product candidate that is approved will be subject to FDA compliance inspections and any new manufacturer would have to be qualified to produce our products;
- our third-party manufacturers might be unable to formulate and manufacture our drugs in the volume and of the quality required to meet our clinical and commercial needs, if any;
- our third-party manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials through completion or to successfully produce, store and distribute our commercial products, if approved;
- changes to our CMOs during clinical trials or after approval may require us to conduct additional studies to demonstrate comparability between the products;
- drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA and other government agencies to ensure compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards, but we may ultimately be responsible for any of their failures;
- if any third-party manufacturer makes improvements in the manufacturing process for our products, we may not own, or may have to share, the intellectual property rights to such improvements; and
- a third-party manufacturer may gain knowledge from working with us that could be used to supply one of our competitors with a product that competes with ours.

Each of these risks could delay or have other adverse impacts on our clinical trials and the approval and commercialization of our product candidates, potentially resulting in higher costs, reduced revenues or both.

We may have difficulty enrolling, or fail to enroll patients, in our clinical trials, which could delay or prevent clinical trials of our drug candidates.

Identifying and enrolling patients to participate in clinical trials of our product candidates is essential to our success. The timing of our clinical trials depends in part on the rate at which we can recruit patients to participate in clinical trials of our product candidates, and we may experience delays in our clinical trials if we encounter difficulties in enrollment. The eligibility criteria of our planned clinical trials may further limit the available eligible trial participants as we require that patients have specific characteristics that we can measure or meet the criteria to assure their conditions are appropriate for inclusion in our clinical trials. We may not be able to identify, recruit and enroll a sufficient number of patients to complete our clinical trials in a timely manner because of the perceived

risks and benefits of the drug candidate under study, the availability and efficacy of competing therapies and clinical trials, and the willingness of physicians to participate in our planned clinical trials. If patients are unwilling to participate in our clinical trials for any reason, the timeline for conducting trials and obtaining regulatory approval of our drug candidates may be delayed.

If we experience delays in the completion of, or termination of, any clinical trials of our drug candidates, the commercial prospects of our product candidates could be harmed, and our ability to generate product revenue from any of these product candidates could be delayed or prevented. In addition, any delays in completing our clinical trials would likely increase our overall costs, impair product candidate development and jeopardize our ability to obtain regulatory approval relative to our current plans. Any of these occurrences may materially and adversely harm our business, financial condition, and prospects.

If a particular product candidate causes significant adverse events, then we may be unable to receive regulatory approval or market acceptance for such product candidate.

We may experience numerous unforeseen events during, or as a result of, the testing process that could delay or prevent commercialization of any of our product candidates, including the occurrence of significant adverse events in clinical trials. Such significant adverse events could lead to clinical trial challenges, such as difficulties in patient recruitment, retention, and adherence, potential product liability claims, and possible trial termination by us, regulatory authorities, and/or an IRB or ethics committees. These types of clinical trial challenges could delay or prevent regulatory approval of our product candidate. Significant adverse events may also lead regulatory authorities to require additional warnings on the label for such product, require us to conduct additional costly post-marketing studies, require us to develop a REMS, among other possible requirements. If the product candidate has already been approved, such approval may be withdrawn. Any delay in, denial, or withdrawal of marketing approval for one of our product candidates will adversely affect our financial position. Even if our product candidates receive marketing approval, undesirable side effects may limit the product's commercial viability. Patients may not wish to use our product, physicians may not prescribe our product, and our reputation may suffer. Any of these events may significantly harm our business and financial prospects.

If our product candidates and technologies receive regulatory approval but do not achieve broad market acceptance, especially by physicians, the revenue that we generate will be limited.

The commercial success of any of our approved products or technologies will depend upon the acceptance of these products and technologies by physicians, patients and the medical community. The degree of market acceptance of these products and technologies will depend on a number of factors, including, among others:

- acceptance by physicians and patients of the product as a safe and effective treatment;
- any negative publicity or political action related to our or our competitors' products or technologies;
- the relative convenience and ease of administration;
- the prevalence and severity of adverse side effects;
- demonstration to authorities of the pharmacoeconomic benefits;
- demonstration to authorities of the improvement in burden of illness;
- limitations or warnings contained in a product's approved labeling;
- payers' level of restrictions and/or barriers to coverage;
- the clinical indications for which a product is approved;
- availability and perceived advantages of alternative treatments;
- the effectiveness of our or future collaborators' sales, marketing and distribution strategies; and
- pricing and cost effectiveness.

We expect physicians' inertia and skepticism to also be a significant barrier as we attempt to gain market penetration with our future products. We believe we will continue to need to finance lengthy and time-consuming clinical studies to provide evidence of the medical benefit of our products and resulting therapies in order to overcome this inertia and skepticism.

Overall, our efforts to educate the medical community on the benefits of any of our products or technologies for which we obtain marketing approval from the FDA or other regulatory authorities, including foreign regulatory authorities, and gain broad market acceptance may require significant resources and may never be successful. If our products and technologies do not achieve an adequate level of acceptance by physicians, pharmacists and patients, we may not generate sufficient revenue from these products to become or remain profitable.

All potential applications of our product candidates are investigational, which subjects us to development and marketing risks.

Our product candidates are at various stages of development. Successful development and market acceptance of our products is subject to developmental risks, including risk of negative clinical data from current and anticipated trials, failure of inventive imagination, ineffectiveness, lack of safety, unreliability, manufacturing hurdles, failure to receive necessary regulatory clearances or approvals, high commercial cost, preclusion or obsolescence resulting from third parties' proprietary rights or superior or equivalent products, competition from copycat products and general economic conditions affecting purchasing patterns. There can be no assurance that we or our partners will successfully develop and commercialize our product candidates, or that our competitors will not develop

competing technologies that are superior or less expensive. Failure to successfully develop and market our product candidates would have a substantial negative effect on our results of operations and financial condition. If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved.

We and our product candidates are subject to extensive regulation, and the requirements to obtain regulatory approvals in the United States and other jurisdictions can be costly, time-consuming and unpredictable. If we or our partners are unable to obtain timely regulatory approval for our product candidates, our business may be substantially harmed.

The worldwide regulatory process for our nanomedicine drug candidates can be lengthy and expensive, with no guarantee of approval.

Before any new drugs may be introduced to the U.S. market, the manufacturer generally must obtain FDA approval through either an ANDA process for generic drugs off patent that allow for bioequivalence to an existing RLD or the lengthier NDA process, which typically requires multiple successful and successive clinical trials to generate clinical data supportive of safety and efficacy along with extensive pharmacodynamic and pharmacokinetic preclinical testing to demonstrate safety. Our RNL product candidates are subject to the FDA's 505(b)(1) NDA process. NDA drugs can take significant time due to the preclinical and clinical trial requirements.

There are numerous risks arising out of the regulation of our nanomedicine product candidates include the following:

- we can provide no assurances that our current and future oncology drugs will meet all of the stringent government regulation in the United States under the FDCA, and/or in international markets such as the EU, by the EMA under its Medicinal Products Directive;
- our nanomedicine product candidates, if approved, will still be subject to post-market reporting requirements for instances where the drug may have caused or contributed to the death or serious injury, or serious adverse events;
- there are no assurances that our product candidates will not have safety or effectiveness problems occurring after the drugs reach the market;
- there are no assurances that regulatory authorities will not take steps to prevent or limit further marketing of the drug due to safety concerns; and
- it is possible that the new legislation in our priority markets will yield additional regulatory requirements for therapeutic drugs for our nanomedicine product candidates.

We will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant expense, and if we or our collaborators fail to comply with such requirements, regulatory agencies may take action against us or them, which could significantly harm our business.

Approved drug products are subject to ongoing regulatory requirements and oversight, including requirements related to manufacturing, quality control, conduct of post-marketing studies, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting. Regulatory authorities subject a marketed product, its manufacturer, and the manufacturing facilities to continual review and periodic inspections. We, our collaborators, and our and their respective contractors, suppliers and vendors, will be subject to ongoing regulatory requirements, including complying with regulations and laws regarding advertising, promotion and sales of products (including applicable anti-kickback, fraud and abuse and other health care laws and regulations), required submissions of safety and other post-market information and reports, registration requirements, cGMP regulations (including requirements relating to quality control and quality assurance, as well as the corresponding maintenance of records and documentation), and the requirements regarding the distribution of samples to physicians and recordkeeping requirements. Regulatory agencies may change existing requirements or adopt new requirements or policies that may be costly to comply with. We, our collaborators, and our and their respective contractors, suppliers, and vendors, may be slow to adapt or may not be able to adapt to these changes or new requirements.

Failure to comply with regulatory requirements may result in any of the following:

- restrictions on the marketing of our product candidates or manufacturing processes;
- warning letters or untitled letters;
- withdrawal of the products from the market;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of regulatory approvals;
- suspension or termination of any of our ongoing clinical trials;
- refusal to permit the import or export of our product candidates;
- refusal to approve pending applications or supplements to approved applications that we submit;
- product seizure;
- injunctions; or
- imposition of civil or criminal penalties.

The future regulatory processes that will be applicable to Laboratory Developed Tests (LDTs) are uncertain and may prevent us from obtaining required authorizations for the commercialization of our products and/or introduce additional costs associated with those products.

Within the laboratory, most tests can be divided into two categories: in vitro diagnostics (IVDs) and laboratory developed tests (LDTs). IVDs are commercially manufactured assays and make up the majority of clinical laboratory tests, such as those in a comprehensive metabolic panel (CMP) and a complete blood count (CBC). LDTs, on the other hand, are developed by individual laboratories and overseen by highly trained and qualified laboratory directors. We plan to offer an LDT in the U.S. beginning in 2025.

In 1976, Congress passed the Medical Device Amendments to the FDCA. These amendments gave the FDA explicit authority to regulate medical devices. These included tests developed by manufacturers sold for commercial purposes to laboratories around the country. However, the amendments did not specifically include tests developed by laboratories for their own use. Then, in 1988, Congress passed the Clinical Laboratory Improvement Amendments (CLIA). These gave clinical laboratories the ability to develop and perform their own tests to fill gaps in available testing and provided the framework for LDT regulation. Today, all laboratories must have appropriate CLIA accreditation, overseen by the Centers for Medicare and Medicaid Services (CMS), to perform LDTs.

Historically, the FDA has exercised enforcement discretion for LDTs, allowing labs to offer tests with little input from the agency. However, on May 6, 2024, the FDA issued a final rule in which it announced it was phasing out its general enforcement discretion approach so that LDTs manufactured by a laboratory will generally fall under the same enforcement approach as medical devices. If implemented, this phase out of enforcement discretion will take place over several years.

Congress is also working on legislative language that would clarify the FDA's authority with respect to LDTs – and if enacted, would potentially supersede the final rule. In this regard, the "Verifying Accurate Leading-edge IVCT Development Act," or VALID Act, was most recently introduced in March 2023. The bill proposes a risk-based approach that would subject many LDTs to FDA regulation by creating a new in vitro clinical test, or IVCT, category of regulated products. As proposed, the bill would grandfather many existing LDTs from the proposed premarket approval, quality systems, and labeling requirements, respectively, but would require such tests to comply with other regulatory requirements (e.g., registration/listing, adverse event reporting). To market a high-risk IVCT, reasonable assurance of analytical and clinical validity for the intended use would be needed to be established. Under VALID, a precertification process would be established that would allow a laboratory to establish that the facilities, methods, and controls used in the development of its IVCTs meet quality system requirements. If pre-certified, low-risk IVCTs developed by the laboratory and falling within the scope of the FDA's precertification order would not be subject to test-specific pre-market review. The new regulatory framework would include quality control and post-market reporting requirements. The FDA would have the authority to withdraw approvals for IVCTs for various reasons, including (for example) if there were a reasonable likelihood that the test would cause death or serious adverse health consequences. However, we cannot predict if this (or any other bill) will be enacted in its current (or any other) form and cannot quantify the effect of such proposals on our business.

To the extent that the FDA ultimately regulates certain LDTs, whether via final rule, final guidance, or as instructed by Congress, our LDTs may be subject to certain additional regulatory requirements. Complying with the FDA's requirements may be expensive, time-consuming, and subject us to significant or unanticipated delays. Insofar as we may be required to obtain premarket clearance or approval to perform an LDT, we cannot assure you that we will be able to obtain such authorization. Even if we obtain regulatory clearance or approval where required, such authorization may not be for the intended uses that we believe are commercially attractive or are critical to the commercial success of our tests. As a result, the application of the FDA's requirements to our tests could materially and adversely affect our business, financial condition, and results of operations.

Compliance with the FDCA for a medical device includes, among other things, registration and listing, quality system regulations, and premarket authorization. Failure to comply with applicable FDA regulatory requirements may trigger a range of enforcement actions by the FDA, including warning letters, civil monetary penalties, injunctions, criminal prosecution, recall or seizure, operating restrictions, partial suspension or total shutdown of operations, and denial of or challenges to applications for clearance or approval, as well as significant adverse publicity.

Risks associated with the new landscape of LDTs include but are not limited to:

- Our inability to implement quality standards included in the new guidelines
- Our inability to implement all FDA requirements for medical device LDTs
- Backlog at the FDA for review of submission
- Additional regulations being adopted by the FDA
- Increased timeline to product launch, delaying revenue for the company
- Increased regulatory oversight resulting in delays for product launch
- Increased costs of product development and regulatory compliance, including:
    - More expansive validation study design
    - Hiring additional regulatory compliance talent

- o Hiring additional statistical experts
- o Other unanticipated costs

Changing, new and/or emerging government regulations, including healthcare legislative reform measures, may adversely affect us.

Our nanoparticle and microparticle technologies and pipeline oncology products and laboratory test are being developed under existing government criteria, which are subject to change in the future. Clinical and/or pre-clinical criteria and cGMP manufacturing requirements may change and additional regulatory burdens may be imposed. Any regulatory review committees and advisory groups and any contemplated new guidelines may lengthen the regulatory review process, require us to perform additional studies, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. As we advance our product candidates, we may be required to consult with these regulatory and advisory groups and comply with applicable guidelines. If we fail to do so, we may be required to delay or discontinue development of our product candidates. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a product candidate to market could decrease our ability to generate sufficient revenue to maintain our business. Divergence in regulatory criteria for different regulatory agencies in international jurisdictions could result in the repeat of clinical studies and/or preclinical studies to satisfy local territory requirements, resulting in the repeating of studies and/or delays in the regulatory process. Some territories may require clinical data in their indigenous population, resulting in the repeat of clinical studies in whole or in part. Some territories may object to the formulation ingredients in the final finished product and may require reformulation to modify or remove objectionable components; resulting in delays in regulatory approvals. Such objectionable reformulations include, but are not limited to, human or animal components, Bovine Spongiform Encephalopathy and/or Transmissible Spongiform Encephalopathy risks, banned packaging components, prohibited chemicals, and banned substances. There can be no assurances that the FDA or foreign regulatory authorities will accept our pre-clinical and/or clinical data.

Anticipated or unanticipated changes in the way or manner in which the FDA or other regulators regulate products or classes and groups of products, including LDTs, can delay, further burden, or alleviate regulatory pathways that were once available to other products. There are no guarantees that such changes in the FDA's or other regulators' approach to the regulatory process will not deleteriously affect some or all of our product candidates or product applications.

In the United States and in some other jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the health care system that could prevent or delay marketing approval of our drug candidates, restrict or regulate post-approval activities, or affect our ability to profitably sell any drug candidates for which we obtain marketing approval, if any. Further, any increased scrutiny of the FDA's approval process for drugs and biological products may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements. There also are a number of state and local legislative and regulatory efforts related to drug pricing, including drug price transparency laws that apply to pharmaceutical manufacturers, which may have an impact on our business.

On May 6, 2024, the FDA issued a final rule in which it announced it was phasing out its general enforcement discretion approach so that LDTs manufactured by a laboratory will generally fall under the same enforcement approach as medical devices. At this time it is unclear whether the current Administration will rescind, revise, or continue with this regulatory scheme or if it will be superseded by Congressional action. Complying with these FDA requirements, or adapting to revised requirements applicable to LDTs, may be costly and may cause delays in our plans to commercialize the CNSide™ Test.

In addition, the Drug Supply Chain Security Act enacted in 2013 imposes obligations on manufacturers of pharmaceutical products related to product tracking and tracing. In December 2019, the Further Consolidated Appropriations Act for 2020 was signed into law (P.L. 116-94) that includes a piece of bipartisan legislation called the Creating and Restoring Equal Access to Equivalent Samples Act of 2019 (the "CREATES Act"). The CREATES Act aims to address the concern articulated by both the FDA and others in the industry that some brand manufacturers have improperly restricted the distribution of their products, including by invoking the existence of a REMS for certain products, to deny generic and biosimilar product developers access to samples of brand products. The CREATES Act establishes a private cause of action that permits a generic or biosimilar product developer to sue the brand manufacturer to compel it to furnish the necessary samples on "commercially reasonable, market-based terms." Whether and how generic and biosimilar product developments will use this new pathway, as well as the likely outcome of any legal challenges to provisions of the CREATES Act, remain highly uncertain and its potential effects on our future commercial products are unknown. Other legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals, if any, of our drug candidates, may be or whether such changes will have any other impacts on our business. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing conditions and other requirements.

In the EU, similar political, economic and regulatory developments may affect our ability to profitably commercialize our product candidates. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or EU Member State level may result in significant additional requirements or obstacles that may increase our operating costs.

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

Adequate coverage and reimbursement from third party payors may not be available for our product candidates, which could diminish our sales or adversely affect our ability to sell our products profitably.

In both U.S. and non-U.S. markets, our ability to successfully commercialize and achieve market acceptance of our product candidates, if approved, depends in significant part on adequate financial coverage and reimbursement from third party payors, including governmental payors (such as the Medicare and Medicaid programs in the U.S.), managed care organizations and private health insurers. Without third party payor reimbursement, patients may not be able to obtain or afford prescribed medications. In addition, coverage and reimbursement guidelines and restrictions set by third party payors may have a significant impact on the prescribing physicians' willingness and ability to prescribe our products. The demand for, and the profitability of, our products could be materially harmed if the state Medicaid programs, Medicare program, other healthcare programs in the U.S. or elsewhere, or third party commercial payors in the U.S. or elsewhere deny reimbursement for our products, limit the indications for which our products will be reimbursed, or provide reimbursement only on unfavorable terms.

As part of the overall trend toward cost containment, third party payors often require prior authorization for, and require reauthorization for continuation of, prescription products or impose step edits, which require prior use of another medication, usually a generic or preferred brand, prior to approving coverage for a new or more expensive product. Such restrictive conditions for reimbursement and an increase in reimbursement-related activities can extend the time required to fill prescriptions and may discourage patients from seeking treatment. We cannot predict actions that third party payors may take, or whether they will limit the access and level of reimbursement for our product candidates, if commercialized or refuse to provide any approvals or coverage.

Third party payors increasingly examine the cost-effectiveness of pharmaceutical products, in addition to their safety and efficacy, when making coverage and reimbursement decisions. We may need to conduct expensive pharmacoeconomic and/or clinical studies in order to demonstrate the cost-effectiveness of our products. If our competitors offer their products at prices that provide purportedly lower treatment costs than our products, or otherwise suggest that their products are safer, more effective or more cost-effective than our products, this may result in a greater level of access for their products relative to our products, which would reduce our sales and harm our results of operations. In some cases, for example, third party payors try to encourage the use of less expensive generic products through their prescription benefit coverage and reimbursement and co-pay policies. Because some of our product candidates, once commercialized, may compete in a market with both branded and generic products, obtaining and maintaining access and reimbursement coverage for our products may be more challenging than for products that are new chemical entities for which no therapeutic alternatives exist. If our competitors offer a clinical lab test that competes with our CNSide™ Test but is viewed by clinicians or payers as being more cost effective or having greater clinical utility, we may not be able to realize the expected benefits of our test.

Some intellectual property that we have in-licensed has been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers.

Some of the intellectual property rights we have licensed are generated through the use of U.S. government funding and are therefore subject to certain federal regulations. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future product candidates pursuant to the Bayh-Dole Act of 1980 (the "Bayh-Dole Act"), and implementing regulations. These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right to require us or our licensors to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in" rights). The U.S. government also has the right to take title to these inventions if we, or the applicable licensor, fail to disclose the invention to the government and fail to file an application to register the intellectual property within specified time limits. These time limits have recently been changed by regulation and may change in the future. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us or the applicable licensor to expend substantial resources. In addition, the U.S. government requires that any products embodying the subject invention or produced through the use of the subject invention be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. manufacturers may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. To the extent any of our

current or future intellectual property is generated through the use of U.S. government funding, the provisions of the Bayh-Dole Act may similarly apply.

Orphan drug designation may not ensure that we will enjoy market exclusivity in a particular market, and if we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.

In September 2020, the FDA granted both orphan drug designation and Fast Track designation to REYOBIQ™ for the treatment of patients with GBM. In November 2021, the FDA granted Fast Track designation to REYOBIQ™ for the treatment of patients with LM. In March 2025, the FDA granted orphan drug designation to REYOBIQ™ for the treatment of LM in patients with lung cancer. A product candidate that receives orphan drug designation can benefit from potential commercial benefits following approval. Under the U.S. Orphan Drug Act, the FDA may designate a product candidate as an orphan drug if it is intended to treat a rare disease or condition, defined as affecting a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the EU, the EMA's Committee for Orphan Medicinal Products grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition affecting not more than 10,000 persons in the EU. Currently, this designation makes the product eligible for market exclusivity in the U.S. and the EU for seven years and ten years, respectively, if a product is the first such product approved for such orphan indication. This market exclusivity does not, however, pertain to indications other than those for which the drug is indicated for, which can be narrower than the orphan drug designation, nor does it prevent drug products containing a different active moiety from receiving orphan designations or approvals in these same indications. Further, even after an orphan drug is approved, the FDA can subsequently approve a drug with similar chemical structure for the same indication if the FDA concludes that the new drug is clinically superior to the orphan product or a market shortage occurs. In the EU, orphan exclusivity may be reduced to six years if the drug no longer satisfies the original designation criteria or can be lost altogether if the marketing authorization holder consents to a second orphan drug application or cannot supply enough drug, or when a second applicant demonstrates its drug is "clinically superior" to the original orphan drug. Notwithstanding orphan drug designation for some of our product candidates, we may not enjoy market exclusivity in a particular market, and if we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.

If we experience an interruption in supply from a material sole source supplier, our business may be harmed.

We acquire some of our components and other raw materials from sole source suppliers. If there is an interruption in supply of our raw materials from a sole source supplier, for any reason, there can be no assurance that we will be able to obtain adequate quantities of the raw materials within a reasonable time or at commercially reasonable prices. Interruptions in supplies due to pricing, timing, availability, or other issues with our sole source suppliers could have a negative impact on our ability to manufacture products and product candidates, which in turn could adversely affect the development and commercialization of our nanomedicine product candidates and cause us to potentially breach our supply or other obligations under our agreements with certain other counterparties.

We are dependent on sole source suppliers to manufacture the active pharmaceutical ingredients ("API") and certain other components of our nanomedicine product candidates. There is no assurance that these sole source suppliers will enter into supply agreements with us to provide contractual assurance to us around supply and pricing. Regardless of whether a sole source supplier enters into a written supply arrangement with us, such supplier could still delay, suspend, or terminate supply of raw materials to us for a number of reasons, including manufacturing or quality issues, payment disputes with us, bankruptcy or insolvency, or other occurrences.

Manufacturing or quality assurance difficulties at our contractors and suppliers, the failure or refusal of a supplier or contract manufacturer to supply contracted quantities, or increases in demand on a supplier with constrained capacity could result in delays and disruptions in the manufacturing, distribution, and sale of our products and /or product candidates, leading to lost revenue or reduced market opportunities. Supply constraints may also lead to pauses, discontinuations, or other product availability issues in one or more markets, which could have a material adverse effect on our consolidated results of operations and cash flows. Further, cost inflation and global transportation and logistics challenges, as well as tight labor markets, have caused, and in the future may cause, delays in, and increase costs related to, distribution of our products, the construction or other acquisition of additional manufacturing capacity, procurement activity, and supplier or contract manufacturer arrangements. These disruptions and challenges could result from actual or perceived quality, oversight, or regulatory compliance problems; natural disasters (including increased instances or severity of natural disasters or other events that may be due to climate change), public health outbreaks, epidemics, or pandemics; periods of uneven economic growth or downturns; emergence or escalation of, and responses to international tension and conflicts; equipment, mechanical, data, or information technology system ("IT system") vulnerabilities, such as system inadequacies, inadequate controls or procedures, operating failures, unauthorized access, service interruptions or failures, security breaches, malicious intrusions, theft, exfiltration, ransomware or other cyber-attacks from a variety of sources; labor shortages; challenges and complexities in manufacturing new drug modalities; contractual disputes with our suppliers and contract manufacturers; vertical integration by competitors within our supply chain; or inability to obtain single-source or other raw or intermediate materials.

If a sole source supplier ceases supply of raw materials necessary, there is no guarantee that we will find an alternative supplier for the necessary raw materials on terms acceptable to us, or at all. Finding alternative suppliers if and as necessary due to geopolitical developments or otherwise may not be feasible or could take a significant amount of time and involve significant expense due to the

nature of our products and product candidates. Further the qualification process for a new vendor could take months or years, and any such day in qualification could significantly harm our business.

We may engage in strategic transactions that could impact our liquidity, increase our expenses, and present significant distractions to our management.

From time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of products, product candidates or technologies. Growth of the nanomedicine business will require significant management time and attention. Further, the future growth of our business will depend in part on our ability to in-license or otherwise acquire the rights to additional product candidates or technologies. We cannot assure you that we will be able to in-license or acquire the rights to any product candidates or technologies from third parties on acceptable terms or at all.

Additional potential transactions that we may consider include a variety of different business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any such transaction may require us to incur non-recurring or other charges, may increase our near and long-term expenditures and may pose significant integration challenges or disrupt our management or business, which could adversely affect our operations and financial results. For example, these transactions 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 in order to develop acquired products, product candidates or technologies;
- incurrence of substantial debt or dilutive issuances of equity securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- write-downs of assets or goodwill or impairment charges;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;
- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

The in-licensing and acquisition of these technologies is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire product candidates or technologies that we may consider attractive. In addition, companies that perceive us to be a competitor may be unwilling to license rights to us. Furthermore, we may be unable to identify suitable product candidates or technologies within our area of focus. If we are unable to successfully obtain rights to suitable product candidates or technologies or to successfully complete any additional transactions of the nature described above, our business, financial condition and prospects could suffer. In addition, even if we are able to successfully complete any additional transactions of the nature described above, any additional transactions that we do complete could have a material adverse effect on our business, results of operations, financial condition, and prospects.

We must maintain quality controls and compliance with manufacturing standards.

The manufacture of our product candidates is, and the manufacture of any future drug, device, and/or cell-related therapeutic products would be, subject to periodic inspection by regulatory authorities and distribution partners. The manufacture of drug and device products for human use is subject to extensive regulation and inspection from time to time by the FDA for compliance with the FDA's cGMP, the Quality System Regulation ("QSR"), as well as equivalent requirements and inspections by state and foreign. regulatory authorities. There can be no assurance that the FDA or other authorities will not, during the course of an inspection of existing or new facilities, identify what they consider to be deficiencies in our compliance with QSRs or other requirements and request, or seek remedial action.

Failure to comply with such regulations or a potential delay in attaining compliance may adversely affect our manufacturing activities and could result in, among other things, injunctions, civil penalties, FDA refusal to grant pre- market approvals or clearances of future or pending product submissions, fines, recalls, import or seizures of products, total or partial suspensions of production and criminal prosecution. There can be no assurance that after such occurrences that we will be able to obtain additional necessary regulatory approvals or clearances on a timely basis, if at all. Delays in receipt of or failure to receive such approvals or clearances, or the loss of previously received approvals or clearances could have a substantial negative effect on our results of operations and financial condition.

If we are unable to identify, hire and/or retain key personnel, we may not be able to sustain or grow our business.

We maintain a small executive team. Our ability to operate successfully and manage our potential future growth depends significantly upon our ability to attract, retain, and motivate highly skilled and qualified research, technical, clinical, regulatory, sales, marketing, managerial and financial personnel. We compete for talent with numerous companies, as well as universities and non-profit research organizations. In the future, we may hire a significant number of scientists, quality and regulatory personnel, and other technical staff with the requisite expertise to support and expand our nanomedicine business. The manufacturing of our oncology drug assets is a

highly complex process that requires significant experience and know-how. If we are unable to attract personnel with the necessary skills and experience to reestablish and expand our nanomedicine business, which is currently conducted out of our Houston, Texas facility, our business could suffer.

Our future success also depends on the personal efforts and abilities of the principal members of our senior management and scientific staff to provide strategic direction, manage our operations, and maintain a cohesive and stable environment. In particular, we are highly dependent on our executive officers, especially Marc Hedrick, M.D., our Chief Executive Officer. Given his leadership, extensive technical, scientific, and financial expertise and management and operational experience, if we were unable to retain the services of Dr. Hedrick for any reason, it would materially and adversely impact our business and operations. Further, the loss of services of Dr. Hedrick or any other executive officer could result in product development delays or the failure of our collaborations with current and future collaborators, which, in turn, may hurt our ability to develop and commercialize products and generate revenue. We do not maintain key man life insurance on the lives of any of the members of our senior management. The loss of key personnel for any reason or our inability to hire, retain, and motivate additional qualified personnel in the future could prevent us from sustaining or growing our business. The loss of services of any of our personnel, including Dr. Hedrick, particularly for an extended period, would likely result in product development delays or the failure of our collaborations with current and future collaborators, which, in turn, may impede or delay our ability to develop and commercialize products and generate revenue. In addition, it could also result in difficulty to obtain additional funding for our development of products and our future operations.

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability if our insurance coverage for those claims is inadequate.

The clinical use of our product candidates exposes us to the risk of product liability claims. This risk exists even if a product or product candidate is approved for commercial sale by applicable regulatory authorities and manufactured in facilities regulated by such authorities. Our product candidates are designed to affect important bodily functions and processes. Any side effects, manufacturing defects, misuse, or abuse associated with our product candidates could result in injury to a patient or even death. For example, REYOBIQ™ and ^{188}RNL-BAM are cytotoxic, or toxic to living cells, and, if incorrectly or defectively manufactured or labeled, or incorrectly dosed or otherwise used in a manner not contemplated by its label, could result in patient harm and even death. In addition, a liability claim may be brought against us even if our product candidates merely appear to have caused an injury.

Product liability claims may be brought against us by consumers, health care providers, pharmaceutical companies or others selling or otherwise coming into contact with our products or product candidates, if approved, among others. If we cannot successfully defend ourselves against product liability claims, we will incur substantial liabilities. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- the inability to commercialize our product candidates;
- decreased demand for our product candidates, if approved;
- impairment of our business reputation;
- product recall or withdrawal from the market;
- withdrawal of clinical trial participants;
- costs of related litigation;
- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants; or
- loss of revenue.

We have obtained product liability insurance coverage for clinical trials with a $10 million per occurrence and annual aggregate coverage limit. Our insurance coverage may not be sufficient to cover all of our product liability related expenses or losses and may not cover us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost, in sufficient amounts or upon adequate terms to protect us against losses due to product liability. If we determine that it is prudent to increase our product liability coverage, we may be unable to obtain this increased product liability insurance on commercially reasonable terms or at all. Large judgments have been awarded in class action or individual lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could decrease our cash and have a material adverse effect on our business, results of operations, financial condition and prospects.

A failure to adequately protect health information could result in severe harm to our reputation and subject us to significant liabilities, each of which could have a material adverse effect on our business.

Throughout the clinical trial process, we may obtain the health information of our trial subjects. There are a number of state, federal and international laws protecting the privacy and security of health information and personal data. For example, HIPAA imposes privacy, security, breach reporting obligations, and mandatory contractual terms on covered entity health care providers, health plans, and health care clearinghouses, as well as their "business associates" – certain persons or covered entities that create, receive, maintain,

or transmit protected health information in connection with providing a specified service or performing a function on behalf of a covered entity. We could potentially be subject to criminal penalties if we, our affiliates, or our agents knowingly receive individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA. The Federal Trade Commission ("FTC") also sets expectations for taking appropriate steps to safeguard consumers' personal information, and providing a level of privacy or security commensurate to promises made to individuals. The FTC expects a company's data privacy and security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Failure to meet these standards may constitute unfair or deceptive acts or practices in violation of Section 5 of the FTC Act. The FTC also has the power to enforce the Health Breach Notification Rule, which imposes notification obligations on companies for breaches of certain health information contained in personal health records. Enforcement by the FTC under the FTC Act and Health Breach Notification Rule can result in civil penalties or enforcement actions.

Most states have laws requiring notification of affected individuals and state regulators (breach notification laws) in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Many state laws impose significant data security requirements, such as encryption or mandatory contractual terms to ensure ongoing protection of personal information. For example, in California, the California Consumer Privacy Act, as amended by the California Privacy Rights Act ("CCPA") establishes certain requirements for data use and sharing transparency and creates new data privacy rights for California consumers, as that term is defined by law. Failure to comply with the CCPA may result in, among other things, significant civil penalties and injunctive relief, or statutory or actual damages. In addition, California consumers have the right to bring a private right of action in connection with certain types of incidents. These claims may result in significant liability and damages. Other jurisdictions have enacted or proposed similar legislation and/or regulations, such as consumer privacy laws that went into effect in 2023 in Virginia, Colorado, Utah, and Connecticut. Health-specific Consumer privacy laws were also passed in multiple other states, including consumer health privacy laws in Washington and Nevada, which govern consumer health data.

Activities outside of the U.S. implicate local and national data protection standards, impose additional compliance requirements and generate additional risks of enforcement for non-compliance. For example, the EU's General Data Protection Regulation, including as implemented in the UK (collectively "GDPR") imposes fines of up to EUR 20 million or 4% of the annual global revenue of a noncompliant company, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with data protection authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR. Canada's Personal Information Protection and Electronic Documents Act and other data protection, privacy and similar national, state/provincial and local laws may also restrict the access, use and disclosure of patient health information abroad. Moreover, as a result of the broad scale release and availability of Artificial Intelligence (AI) technologies such as generative AI, there is a global trend towards more regulation (e.g., the EU AI Act and AI laws passed in U.S. states) to ensure the ethical use, privacy, and security of AI and the data that it processes. Compliance with such laws will likely be an increasing and substantial cost in the future. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws, to protect against security breaches and hackers, or to alleviate problems caused by such breaches. Compliance with these laws is difficult, constantly evolving, time consuming, and requires a flexible privacy framework and substantial resources. Compliance efforts will likely be an increasing and substantial cost in the future.

We and our collaborators must comply with environmental laws and regulations, including those pertaining to use of hazardous and biological materials in our business, and failure to comply with these laws and regulations could expose us to significant liabilities.

We and our collaborators are subject to various federal, state, and local environmental laws, rules and regulations, including those relating to discharge of materials into the air, water and ground, those relating to manufacturing, storage, use, transportation and disposal of hazardous and biological materials, and those relating to the health and safety of employees with respect to laboratory activities required for the development of our products and activities. In particular, our nanomedicine products and processes involve the controlled storage, use and disposal of certain cytotoxic, or toxic to living cells, materials. Even if we and these suppliers and collaborators comply with the standards prescribed by law and regulation, the risk of accidental contamination or injury from hazardous materials, or other violations of applicable environmental laws, rules or regulations cannot be completely eliminated. In the event of any violation of such laws, rules or regulations, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of any insurance we may obtain and could exceed our financial resources. We may not be able to maintain insurance on acceptable terms, or at all. We may incur significant costs in complying with environmental laws, rules and regulations.

We recently acquired the CNSide™ diagnostic portfolio, and we may not be successful in our efforts to develop, fully utilize and monetize it.

In April 2024, we completed the acquisition of substantially all of the right, title and interest in CNSide™, including the CNSide Test, which is designed to detect, quantify, and monitor tumor status in LM. We are currently evaluating and developing our business plan for developing the CNSide™ diagnostic portfolio alongside our lead radio therapeutic candidate, rhenium (^{186}Re) obisbemeda, and seeking partnering opportunities for CNSide™ but there can be no assurances that we will be able to develop the technology to allow

for commercial applications, or successfully utilize and fully integrate CNSide™ into our operations. We may not generate revenues from or realize the anticipated benefits of CNSide™ within our expected timeline or at all.

Clinical laboratories are highly regulated and if we are unable to maintain compliance with these regulations, or if the regulations change in ways that make it more difficult or costly to comply, our financial condition and our business may be harmed.

Clinical laboratories in the U.S. must maintain compliance with the federal CLIA standards and with applicable state law licensure requirements, and if we are unable to do so we may be unable to offer the CNSide™ Test to patients. In order to be commercially viable, clinical lab tests must be covered and reimbursed by third party payers. If payers fail to cover the test, impose restrictions on the scope of coverage, or do not provide sufficient reimbursement for the CNSide™ Test we may be unable to realize the expected benefits of the test and may not be able to offer it within the expected timeline, or at all.

Our relationships with customers, healthcare providers, including physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Healthcare providers, including physicians, and third-party payors in the U.S. and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval and the ordering of the CNSide™ Test. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject us to various federal and state fraud and abuse laws and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute, the federal civil and criminal false claims laws, the Physician Payments Sunshine Act and regulations promulgated under such laws. These laws will impact, among other things, our clinical research, proposed sales, marketing and educational programs, and other interactions with healthcare professionals and patients. In addition, we may be subject to patient privacy laws by both the federal government and the states in which we conduct or may conduct our business. The laws are described in greater detail in Item 1: Business: Other U.S. Healthcare Laws and Compliance Requirements.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant penalties, including, without limitation, civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in federal and state funded healthcare programs, such as Medicare and Medicaid, 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, any of which could harm our business.

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 the 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 will comply with applicable healthcare laws and regulations will involve substantial costs. 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.

Risks Relating to Our Intellectual Property

Our success depends in part on our ability to protect our intellectual property.

Our success depends in part on our ability to obtain and maintain patent, trademark, and trade secret protection of our platform technology and current product candidates, including but not limited to our nanomedicine product candidates, including REYOBIQ™ and ^{188}RNL-BAM, and our CNSide™ Platform, as well as successfully defending our intellectual property against third-party challenges. Our ability to stop unauthorized third parties from making, using, selling, offering to sell, or importing our platform technology and/or our product candidates is dependent upon the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities.

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, NanoTx, or UTHSCSA, as the case may be, might not have been the first to file patent applications for REYOBIQ™ or ^{188}RNL-BAM;
- we, or Biocept, as the case may be, might not have been the first to file patent applications for the CNSide™ Platform;
- it is possible that our pending patent applications will not result in issued patents;
- it is possible that there are dominating patents to our product candidates of which we are not aware;
- it is possible that there are prior public disclosures that could invalidate our patents, of which we are not aware;
- it is possible that others may circumvent our patents;
- it is possible that there are unpublished applications or patent applications maintained in secrecy that may later issue with claims covering our product candidates or technology similar to ours;
- the claims of our patents or patent applications, if and when issued, may not cover our system or products, or our system or product candidates;
- our owned or in-licensed issued patents may not provide us with any competitive advantages, or may be narrowed in scope, be held invalid or unenforceable as a result of legal administrative challenges by third parties;
- others may be able to make or use compounds that are the same or similar to the REYOBIQ™ or ^{188}RNL-BAM product candidates but that are not covered by the claims of our patents;
- we may not be able to detect infringement against our patents, which may be especially difficult for manufacturing processes or formulation patents, such as the patents/applications related to REYOBIQ™ or ^{188}RNL-BAM;
- the API used in REYOBIQ™, 186-Re, is routinely produced in nuclear reactors or at a particle accelerator and is commercially available as 186-Re Sulfide for isotropic radiation synovectomy of medium sized joints and in developing countries as 186-Re-HEDP for bone pain palliation;
- we may not develop additional proprietary technologies for which we can obtain patent protection; or
- the patents of others may have an adverse effect on our business.

The patent positions of pharmaceutical, biopharmaceutical and medical device companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in patents in these fields has emerged to date in the United States. There have been recent changes regarding how patent laws are interpreted, and both the USPTO and Congress have recently made significant changes to the patent system. There have been three U.S. Supreme Court decisions that now show a trend of the Supreme Court which is distinctly negative on patents. The trend of these decisions along with resulting changes in patentability requirements being implemented by the USPTO could make it increasingly difficult for us to obtain and maintain patents on our product candidates. We cannot accurately predict future changes in the interpretation of patent laws or changes to patent laws which might be enacted into law. Those changes may materially affect our patents, our ability to obtain patents and/or the patents and applications of our collaborators and licensors. The patent situation in these fields outside the United States is even more uncertain. 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 or narrow the scope of our patent protection. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in the patents we own or to which we have a license or third-party patents.

Intellectual property law outside the United States is uncertain and in many countries is currently undergoing review and revisions. The laws of some countries do not protect our patent and other intellectual property rights to the same extent as United States laws. Third parties may attempt to oppose the issuance of patents to us in foreign countries by initiating opposition proceedings. Opposition proceedings against any of our patent filings in a foreign country could have an adverse effect on our corresponding patents that are issued or pending in the United States. It may be necessary or useful for us to participate in proceedings to determine the validity of our patents or our competitors' patents that have been issued in countries other than the United States. This could result in substantial costs, divert our efforts and attention from other aspects of our business, and could have a material adverse effect on our results of operations and financial condition.

Failure to obtain or maintain patent protection or protect trade secrets, for any reason (or third-party claims against our patents, trade secrets, or proprietary rights, or our involvement in disputes over our patents, trade secrets, or proprietary rights, including involvement in litigation), could have a substantial negative effect on our results of operations and financial condition.

We may not be able to protect our trade secrets.

We may rely on trade secrets to protect our technology, especially with respect to the nanomedicine products, as well as in areas where we do not believe patent protection is appropriate or obtainable. Trade secrets are difficult to protect, and we have limited control over the protection of trade secrets used by our collaborators and suppliers. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators, and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, state laws in the Unites States vary, and their courts as well as 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. If our confidential or proprietary information is divulged to or acquired by third parties, including our competitors, our competitive position in the marketplace will be harmed and our ability to successfully penetrate our target markets could be severely compromised.

We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the device, biotechnology and pharmaceutical industries, we employ individuals who were previously employed at other device, biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management, which would adversely affect our financial condition.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, and we may be unable to protect our rights to our product candidates and technology.

Litigation may be necessary to enforce or confirm the ownership of any patents issued or licensed to us, or to determine the scope and validity of third-party proprietary rights, which would result in substantial costs to us and diversion of effort on our part. If our competitors claim technology also claimed by us and prepare and file patent applications in the United States, we may have to participate in interference proceedings declared by the USPTO or a foreign patent office to determine priority of invention, which could result in substantial costs to and diversion of effort, even if the eventual outcome is favorable to us. Any such litigation or interference proceeding, regardless of outcome, could be expensive and time-consuming.

Successful challenges to our patents through oppositions, reexamination proceedings or interference proceedings could result in a loss of patent rights in the relevant jurisdiction. If we are unsuccessful in actions we bring against the patents of other parties, and it is determined that we infringe the patents of third-parties, we may be subject to litigation, prevented from commercializing potential products in the relevant jurisdiction and/or may be required to obtain licenses to those patents or develop or obtain alternative technologies, any of which could harm our business. Furthermore, if such challenges to our patent rights are not resolved in our favor, we could be delayed or prevented from entering into new collaborations or from commercializing certain products, which could adversely affect our business and results of operations.

Competitors or third parties may infringe on or upon our patents. We may be required to file patent infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable or that the third party's technology does not in fact infringe upon our patents. An adverse determination of any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our related pending patent applications at risk of not issuing.

Litigation may fail and, even if successful, may result in substantial costs and be a distraction to our management. We may not be able to prevent misappropriation of our proprietary rights, particularly in countries outside the United States where patent rights may be more difficult to enforce. Further, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential or sensitive information could be compromised by disclosure in the event of litigation. In addition, during the course of litigation there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or otherwise have a material adverse effect on our business, results of operations, financial condition, and prospects.

If we are sued for infringing intellectual property rights of third parties, it will be costly and time consuming, and an unfavorable outcome in that litigation would have a material adverse effect on our business.

Our commercial success will also depend, in part, on our ability to avoid infringing on patents issued by others. There may be issued patents of third parties of which we are currently unaware, that are infringed or are alleged to be infringed by our product candidate or proprietary technologies. Because some patent applications in the United States may be maintained in secrecy until the patents are issued, patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our owned and in-licensed issued patents or our pending applications, or that we or, if applicable, a licensor were the first to invent the technology. Our competitors may have filed, and may in the future file, patent applications covering our product candidates or technology similar to ours. Any such patent application may have priority over our patent applications or patents, which could further require us to obtain rights to issued patents covering such technologies.

We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our product candidates and/or proprietary technologies infringe their intellectual property rights. These lawsuits are costly and could adversely affect our results of operations and divert the attention of managerial and technical personnel. There is a risk that a court would decide that we or our commercialization partners are infringing the third party's patents and would order us or our partners to stop the activities covered by the patents. In addition, there is a risk that a court will order us or our partners to pay the other party damages for having violated the other party's patents.

If a third-party's patent were found to cover our product candidates, proprietary technologies or their uses, we could be enjoined by a court and required to pay damages and could be unable to commercialize our product candidates or use our proprietary technologies unless we or they obtained a license to the patent. A license may not be available to us on acceptable terms, if at all. In addition, during litigation, the patent holder could obtain a preliminary injunction or other equitable relief which could prohibit us from making, using or selling our product candidates, technologies or methods pending a trial on the merits, which could be years away.

Risks Relating to the Issuances of Capital Stock, the Securities Markets and an Investment in our Common Stock

Our stockholders may experience substantial dilution in the value of their investment if we issue additional shares of our capital stock.

Our certificate of incorporation allows us to issue up to 100,000,000 shares of our common stock and to issue and designate the rights of, without stockholder approval, up to 5,000,000 shares of preferred stock.

Significant additional capital will be needed in the future to continue our planned operations, including further development of our product candidates, preparing IND or equivalent filings, conducting preclinical studies and clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our shares of common stock.

We may also issue additional shares of common stock or other equity securities of equal or senior rank in the future in connection with, among other things, future acquisitions or repayment of outstanding indebtedness, including without stockholder approval, in a number of circumstances. The issuance of additional shares or other equity securities of equal or senior rank would result in a decrease in existing stockholders' proportionate ownership interest in us and the relative voting strength of each previously outstanding share of common stock, and may adversely affect the market price of our common stock.

Stockholders will suffer substantial additional dilution if certain provisions in the outstanding March 2025 Warrants are utilized.

On March 4, 2025, we entered into a securities purchase agreement (the "March 2025 Purchase Agreement") with accredited investors, including certain of our existing stockholders, identified on the signature page thereto (collectively, the "March 2025 Private Placement Purchasers") for a private placement of securities (the "March 2025 Private Placement") for gross proceeds of approximately $15.0 million. Pursuant to the March 2025 Purchase Agreement, we issued an aggregate of 4,069,738 shares (the "March 2025 Private Placement Shares") of our common stock and 23,972,400 Prefunded Warrants, with each March 2025 Private Placement Share or Prefunded Warrant accompanied by (i) a Series A common warrant (the "March 2025 Series A Warrants") to purchase one share of common stock and (ii) one Series B common warrant (the "March 2025 Series B Warrants" and together with the March 2025 Series A Warrants, the "March 2025 Warrants") to purchase one share of common stock.

Certain provisions in our outstanding March 2025 Warrants may result in significant dilution. The exercise price of the March 2025 Warrants will reset to a price equal to the greater of (i) the floor price of $0.132 (the "Floor Price"), and (ii) the lowest volume

weighted average price ("VWAP") during a period commencing on the first trading day immediately following the later of (x) the earlier of (A) the first trading day after the initial registration statement that we are required to file to register the resale of the securities in the March 2025 Private Placement, or (B) the first trading day after the date on which the holder of those securities can sell them pursuant to Rule 144 under the Securities Act of 1933, as amended, without restriction or limitation, or (y) the first trading day after stockholder approval of certain provisions of the March 2025 Warrants is obtained, and the number of shares issuable upon exercise will be proportionately adjusted such that the aggregate exercise price will remain unchanged.

Subject to certain exceptions, if we sell any common stock (or securities convertible into or exercisable into common stock) at a price per share (or conversion or exercise price, as applicable) less than the exercise price of the March 2025 Series A Warrants then in effect, then the exercise price of the March 2025 Series A Warrants will be reduced to such lower price, but no lower than the Floor Price, and the number of shares issuable upon exercise will be proportionately adjusted such that the aggregate exercise price will remain unchanged.

Under the alternative cashless exercise option of the March 2025 Series B Warrant, a holder has the right to receive an aggregate number of shares equal to three times the aggregate number of shares of common stock that would be issuable upon a cash exercise of the March 2025 Series B Warrant, without any further payment to us.

Finally, if at any time there occurs any share split, share dividend, share combination recapitalization or other similar transaction involving our common stock and the lowest daily VWAP during the period commencing on the trading day immediately following the applicable date of share combination event and ending on the fifth trading day immediately following such date is less than the exercise price of the March 2025 Warrants then in effect, then the exercise price of the March 2025 Warrants will be reduced to the lowest daily VWAP during such period (subject to a minimum exercise price of the Floor Price), and the number of shares issuable upon exercise will be proportionately adjusted such that the aggregate exercise price will remain unchanged.

If any of the provisions described above are utilized, our stockholders would suffer substantial additional dilution.

There are a large number of shares of common stock underlying our outstanding Warrants and Prefunded Warrants and the sale of these shares may depress the market price of our common stock and cause immediate and substantial dilution to our existing stockholders.

As of March 21, 2025, we had 16,999,626 shares of common stock issued and outstanding. In addition, we had the March 2025 Warrants outstanding, as well as the Prefunded Warrants, Series A Warrants and Series B Warrants under the May 2024 Purchase Agreement, and 84,767 shares available for grant under our stock incentive plans. The issuance of shares upon exercise of our March 2025 Warrants, Prefunded Warrants, Series A Warrants and Series B Warrants under the May 2024 Purchase Agreement and options will cause immediate and substantial dilution to our stockholders and any sale thereof may depress the market price of our common stock.

The market price of our common stock may be volatile and fluctuate significantly, which could result in substantial losses for stockholders.

The market price of our common stock has been, and may continue to be, subject to significant fluctuations. Among the factors that may cause the market price of our common stock to fluctuate are the risks described in this "Risk Factors" section and other factors, including:

- fluctuations in our operating results or the operating results of our competitors;
- the outcome of clinical trials involving the use of our product candidates, including our sponsored trials;
- changes in estimates of our financial results or recommendations by securities analysts;
- variance in our financial performance from the expectations of securities analysts;
- changes in the estimates of the future size and growth rate of our markets;
- changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;
- conditions and trends in the markets we currently serve or which we intend to target with our product candidates;
- changes in general economic, industry and market conditions;
- success of competitive products and services;
- changes in market valuations or earnings of our competitors;
- announcements of significant new products, contracts, acquisitions or strategic alliances by us or our competitors;

- our continuing ability to list our securities on an established market or exchange;
- the timing and outcome of regulatory reviews and approvals of our product candidates;
- the commencement or outcome of litigation involving our company, our general industry or both;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- actual or expected sales of our common stock by the holders of our common stock; and
- the trading volume of our common stock.

In addition, the financial markets may experience a loss of investor confidence or otherwise experience continued volatility and deterioration. A loss of investor confidence may result in extreme price and volume fluctuations in our common stock that are unrelated or disproportionate to the operating performance of our business, our financial condition or results of operations, which may materially harm the market price of our common stock and result in substantial losses for stockholders. Further, although our common stock is traded on the Nasdaq, there is currently a limited market for our common stock and an active market may never develop. An active trading market in our common stock may not develop.

We may be or become the target of securities litigation, which is costly and time-consuming to defend.

In the past, following periods of market volatility in the price of a company's securities, the reporting of unfavorable news or continued decline in a company's stock price, security holders have often instituted class action litigation. The market value of our securities has steadily declined over the past several years for a variety of reasons discussed elsewhere in this "Risk Factors" section, which heightens our litigation risk. If we face such litigation, we could incur substantial legal costs and our management's attention could be diverted from the operation of our business, causing our business to suffer. Any adverse determination in any such litigation or any amounts paid to settle any such actual or threatened litigation could require that we make significant payments.

We may issue debt and equity securities or securities convertible into equity securities, any of which may be senior to our common stock as to distributions and in liquidation, which could negatively affect the value of our common stock.

In the future, we may attempt to increase our capital resources by entering into debt or debt-like financing that is unsecured or secured by up to all of our assets, or by issuing additional debt or equity securities, which could include issuances of secured or unsecured commercial paper, medium-term notes, senior notes, subordinated notes, guarantees, preferred stock, hybrid securities, or securities convertible into or exchangeable for equity securities. In the event of our liquidation, our lenders and holders of our debt and preferred securities would receive distributions of our available assets before distributions to the holders of our common stock. Because our decision to incur debt and issue securities in future offerings may be influenced by market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings or debt financings. Further, market conditions could require us to accept less favorable terms for the issuance of our securities in the future.

Our charter documents contain anti-takeover provisions.

Certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws could discourage, delay or prevent a merger, acquisition or other change of control that stockholders may consider favorable. These provisions could also prevent or frustrate attempts by our stockholders to replace or remove members of our Board of Directors (the "Board"). Stockholders who wish to participate in these transactions may not have the opportunity to do so. These provisions:

- authorize our Board to issue without stockholder approval up to 5,000,000 shares of preferred stock, the rights of which will be determined at the discretion of the Board;
- require that stockholder actions must be effected at a duly called stockholder meeting and cannot be taken by written consent;
- establish advance notice requirements for stockholder nominations to our Board or for stockholder proposals that can be acted on at stockholder meetings; and
- limit who may call stockholder meetings.

We are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of the voting rights on our common stock, from merging or combining with us for a prescribed period of time.

We presently do not intend to pay cash dividends on our common stock.

We have never paid cash dividends in the past, and we currently anticipate that no cash dividends will be paid on the common stock in the foreseeable future. This could make an investment in our common stock inappropriate for some investors, and may serve to narrow our potential sources of additional capital. While our dividend policy will be based on the operating results and capital needs of the business, it is anticipated that all earnings, if any, will be retained to finance the future expansion of our business.

If securities and/or industry analysts fail to continue publishing research about our business, if they change their recommendations adversely, or if our results of operations do not meet their expectations, our stock price and trading volume could decline.

The trading market for our common stock may be influenced by the research and reports that industry or securities analysts publish about us or our business. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. In addition, it is likely that in some future period our operating results will be below the expectations of securities analysts or investors. If one or more of the analysts who cover us downgrade our stock, or if our results of operations do not meet their expectations, our stock price could decline.

General Risk Factors

Increased information technology security threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks, and products.

Increased global information technology security threats and more sophisticated and targeted computer crime pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data and communications. While we attempt to mitigate these risks by employing a number of measures, including employee refreshers, monitoring of our networks and systems, and maintenance of backup and protective systems, our systems, networks and products remain potentially vulnerable to advanced persistent threats. Depending on their nature and scope, such threats could potentially lead to the compromising of confidential information and communications, improper use of our systems and networks, manipulation and destruction of data, defective products, production downtimes and operational disruptions, which in turn could adversely affect our reputation, competitiveness and results of operations.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cybersecurity Program

We have implemented a cybersecurity program to support both the effectiveness of our systems and our preparedness for information security risks. This program includes a number of safeguards, such as: password protection; multi-factor authentication; monitoring and alerting systems for internal and external threats; and regular evaluations of our cybersecurity program.

We use a risk-based approach with respect to our use and oversight of third-party service providers, tailoring processes according to the nature and sensitivity of the data accessed, processed, or stored by such third-party service provider. We use a number of means to assess cyber risks related to our third-party service providers, including conducting due diligence in connection with onboarding new vendors. We also seek to include appropriate security terms in our contracts, where applicable as part of our oversight of third-party providers.

Process for Assessing, Identifying and Managing Material Risks from Cybersecurity Threats

We maintain an incident response program. In the event of a cybersecurity incident, designated personnel are responsible for assessing the severity of an incident and associated threat, containing the threat, remediating the threat, including recovery of data and access to systems, analyzing any reporting obligations associated with the incident, and performing post-incident analysis and program enhancements. We maintain a Data Breach Response Policy, which includes an Incident Response Plan (“IRP”) in the event of a significant cybersecurity incident. In the event of a significant cybersecurity incident, our Chief Financial Officer (“CFO”) will chair an incident response team to handle the incident. Such incident response team will include members of IT, finance (if applicable), legal, communications, human resources and any affected unit or department. IT, along with a designated forensic team, will use the IRP to guide the response.

Governance

Management Oversight

The controls and processes employed to assess, identify and manage material risks from cybersecurity threats are implemented and overseen by our Information Technology and Facilities Director (the "ITFD"). Our ITFD is a third-party consultant, from whom we have a dedicated resource who specializes in the industry and has over 25 years of experience addressing cybersecurity risks. Our ITFD is responsible for the day-to-day management of the cybersecurity program, including the prevention, detection, investigation, response to, and recovery from cybersecurity threats and incidents, and is regularly engaged to help ensure the cybersecurity program functions effectively in the face of evolving cybersecurity threats. Our CFO oversees the ITFD and briefs our Board on cybersecurity matters, including the nature and design of our cybersecurity program, and threats, events, and program enhancements.

Board Oversight

While the Board has overall responsibility for risk oversight, the Board delegated to the audit committee of the Board the responsibility for assisting the Board with cybersecurity disclosure matters. In its oversight role, the Board is expected to specifically consider risks that relate to the reputation of the Company and the general industry in which we operate, including with respect to privacy, information technology and cybersecurity and threats to technology infrastructure.

On a regular basis, the CFO reports to the Board on cybersecurity matters, including key risks, the potential impact of those exposures on the Company's business, financial results, operations and reputation and the programs and steps implemented by management to monitor and mitigate risks.

Cybersecurity Risks

Our cybersecurity risk management processes are integrated into our overall approach to risk management. Given the nature and size of our Company, we do not have a dedicated enterprise risk function, but our executives regularly consider and evaluate risks to our Company. As part of that risk management process, members of our executive team identify, assess and evaluate risks impacting our operations across the Company, including those risks related to cybersecurity, and raise them for discussion with other executives, and where it is determined to be appropriate, issues are also raised to the Board for consideration.

As of the date of this report, we are not aware of any risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, that have materially affected our business strategy, results of operations or financial condition or are reasonably likely to have such a material effect. While we have implemented a cybersecurity program, the techniques used to infiltrate information technology systems continue to evolve. Accordingly, we may not be able to timely detect threats or anticipate and implement adequate security measures. For additional information regarding risks relating to privacy and cybersecurity, see "Item 1A—Risk Factors."

Item 2. Properties

Our corporate offices are in Houston, Texas. As of December 31, 2024, we had lease agreements for office space in Charlottesville, Virginia and San Antonio, Texas, which we vacated in February 2025, and paid an aggregate of approximately $16,000 in rent per month for these properties.

Item 3. Legal Proceedings

None.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Prices

Market Information

The Company's common stock is listed on the Nasdaq Capital Market under the symbol "PSTV."

As of March 21, 2025, the Company had approximately seventeen record holders of common stock. Because many of the Company's outstanding shares are held by brokers and other institutions on behalf of stockholders, the Company is unable to estimate the total number of individual stockholders represented by these record holders.

The Company has never paid cash dividends to its stockholders. The Company intends to retain future earnings for use in its business and does not anticipate paying cash dividends on its common stock in the foreseeable future. Any future dividend policy will be determined by the Board and will be based upon various factors, including the Company's results of operations, financial condition, current and anticipated cash needs, future prospects, contractual restrictions and other factors as the Board may deem relevant.

Equity Compensation Plan Information

The following table gives information as of December 31, 2024 about shares of our common stock that may be issued upon the exercise of outstanding options, and shares remaining available for issuance under all of our equity compensation plans:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders (1)	23,897	$43.42	62,908
Equity compensation plans not approved by security holders (2)	574,643	$5.57	692,596
Total	598,540	$7.08	755,504

1. Represents (i) options outstanding that were issued under the 2004 Stock Option and Stock Purchase Plan which expired in August 2004 and (ii) the 2015 New Employee Incentive Plan.
2. See Notes to the Financial Statements included elsewhere herein for a description of our 2020 Stock Incentive Plan.

Item 6. [Reserved]

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

Our Management's Discussion and Analysis of Financial Condition and Results of Operations includes the following sections:

- Overview that discusses our business.
- Results of Operations that includes a discussion of our revenue and expenses.
- Liquidity and Capital Resources that discusses key aspects of our statements of cash flows, changes in our financial position and our financial commitments.

Overview

Plus Therapeutics is a U.S. pharmaceutical company developing targeted radiotherapeutics with advanced platform technologies for central nervous system ("CNS") cancers. Our novel radioactive drug formulations and medical devices and therapeutic candidates are designed to deliver safe and effective doses of radiation to tumors. To achieve this, we have developed innovative approaches to drug formulation, including encapsulating radionuclides such as rhenium isotopes with nanoliposomes and microspheres. Our formulations are intended to achieve elevated patient-absorbed radiation doses and extend retention times such that the clearance of the isotope occurs after significant and essentially complete radiation decay, which will contribute and provide less normal tissue/organ exposure and improved safety margins.

Traditional approaches to radiation therapy for cancer, such as external beam radiation, have many disadvantages including continuous treatment for four to six weeks (which is onerous for patients), that the radiation damages healthy cells and tissue, and that the amount of radiation delivered is very limited and, therefore, is frequently inadequate to fully destroy the cancer.

Our targeted radiotherapeutic platform and unique investigational drugs have the potential to overcome these disadvantages by directing higher, more powerful radiation doses at the tumor—and only the tumor—potentially in a single treatment. By minimizing radiation exposure to healthy tissues while simultaneously maximizing locoregional delivery and, thereby, efficacy, we hope to reduce the radiation toxicity for patients, improving their quality of life and life expectancy. Our radiotherapeutic platform, combined with advances in surgery, nuclear medicine, interventional radiology, and radiation oncology, affords us the opportunity to target a broad variety of cancer types.

Our lead radiotherapeutic candidate, REYOBIQ™ (rhenium (^{186}Re) obisbemeda), is designed specifically for CNS cancers including recurrent glioblastoma ("GBM"), leptomeningeal metastases ("LM"), and pediatric brain cancers ("PBC") by direct localized delivery utilizing approved standard-of-care tissue access such as with convection-enhanced delivery ("CED") and intraventricular brain (Ommaya reservoir) catheters. Our acquired radiotherapeutic candidate, Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere ("^{188}RNL-BAM"), is designed to treat many solid organ cancers including primary and secondary liver cancers by intra-arterial injection.

On April 26, 2024, we acquired all of the right, title and interest in a cerebrospinal fluid cancer diagnostic portfolio known as the CNSide® Platform from Biocept, Inc. ("Biocept"), which is currently being utilized in the ReSPECT-LM clinical trial funded by the Cancer Prevention and Research Institute of Texas ("CPRIT"). In connection with our business plan for developing the CNSide™ Platform, we formed CNSide Diagnostics, LLC ("CNSide Diagnostics"), a wholly owned subsidiary of the Company, and our board of directors appointed a board of managers for CNSide Diagnostics. We are planning for the CNSide Cerebrospinal Fluid Tumor Cell Enumeration test (the "CNSide™ Test"), which is a laboratory developed test ("LDT"), to be re-introduced to the U.S. market starting in the second quarter of 2025 after we complete a number of steps related to certifications, state licensure, payor coverages, reimbursement codes and financing.

In March 2025, we moved our headquarters to Houston, Texas, in proximity to world-class cancer institutions and researchers.

Pipeline

Our most advanced investigational drug, REYOBIQ™, is a patented radiotherapy potentially useful for patients with CNS and other cancers. We announced in March 2025 that the U.S. Food and Drug Administration ("FDA") conditionally accepted the proprietary name REYOBIQ™ to be used by us for rhenium (^{186}Re) obisbemeda. Preclinical study data describing the use of REYOBIQ™ for several cancer targets have been published in peer-reviewed journals and reported at a variety of medical society peer-reviewed meetings. Besides GBM, LM and PBC, REYOBIQ™ has been reported to have potential applications for head and neck cancer, ovarian cancer, breast cancer and peritoneal metastases.

The REYOBIQ™ technology was part of a licensed radiotherapeutic portfolio that we acquired from NanoTx, Corp. ("NanoTx") on May 7, 2020. The licensed radiotherapeutic has been evaluated in preclinical studies for several cancer targets and we have an active $3.0 million award from U.S. National Institutes of Health/National Cancer Institute which is expected to provide financial support for

the continued clinical development of REYOBIQ™ for recurrent GBM through the completion of a Phase 2 clinical trial, including enrollment of up to 55 patients.

On August 29, 2022, we announced feedback from a Type C meeting with the FDA regarding Chemistry, Manufacturing and Controls practices.

The FDA indicated agreement with our proposed application of cGMP guidance for radiotherapeutics, small molecule drug products and liposome drug products for REYOBIQ™ in support of ongoing and future GBM clinical trials, manufacturing scale up, and commercialization. Alignment with the FDA includes support of our proposed controls and release strategy for new drug substance and new drug product. Because this product is identical for recurrent GBM, LM, and PBC, we believe alignment will be consistent for REYOBIQ™ used in other clinical development programs, including LM and PBC.

REYOBIQ™ versus External Beam Radiation Therapy for Recurrent GBM

REYOBIQ™ is a novel injectable radiotherapy designed to deliver targeted, high dose radiation directly into GBM tumors in a safe, effective, and convenient manner that may ultimately prolong patient survival. REYOBIQ™ is composed of the radionuclide Rhenium-186 and a nanoliposomal carrier, and is infused in a highly targeted, controlled fashion, directly into the tumor via precision brain mapping and CED catheters. Potential benefits of REYOBIQ™ compared to standard external beam radiotherapy or external beam radiation therapy ("EBRT") include:

- The REYOBIQ™ radiation dose delivered to patients may be up to 20 times greater than what is possible with commonly used EBRT, which, unlike EBRT and proton beam devices, spares normal tissue and the brain from radiation exposure.
- REYOBIQ™ can be visualized in real-time during administration, possibly giving clinicians better control of radiation dosing, distribution and retention.
- REYOBIQ™ potentially more effectively treats a bulk tumor and microscopic disease that has already invaded healthy tissue.
- REYOBIQ™ is infused directly into the targeted tumor by CED catheter insertion using MRI guided software to avoid critical patient neurological structures and neural pathways and also bypasses the blood brain barrier, which delivers the therapeutic product where it is needed. Importantly, it reduces radiation exposure to healthy cells, in contrast to EBRT, which passes through normal tissue to reach the tumor, continuing its path through the tumor, hence being less targeted and selective.
- REYOBIQ™ is given during a single, short, in-patient hospital visit, and is available in all hospitals with nuclear medicine and neurosurgery, while EBRT requires out-patient visits five days a week for approximately four to six weeks.

ReSPECT-GBM Trial for Recurrent GBM

GBM affects approximately 15,000 patients annually in the U.S. and is the most common and lethal form of brain cancer. The average life expectancy with GBM is less than 24 months, with a one-year survival rate of 40% and a five-year survival rate of around 5%. There is no clear standard of care for recurrent GBM and the few currently approved treatments provide only marginal survival benefit and are associated with significant side effects, which limit dosing and prolonged use. Approximately 90% of patients experience GBM tumor recurrence at or near the original tumor location, yet there are no FDA-approved treatments in the recurrent or progressive setting that can significantly extend a patient's life. GBM routinely presents with headaches, seizures, vision changes and other significant neurological complications, with a significant compromise in quality of life. Despite the best available medical treatments, the disease remains incurable. Even after efforts to manage the presenting signs and symptoms and completely resect the initial brain tumor, some microscopic disease almost always remains and tumor regrowth occurs within months. Complete surgical removal of GBM is usually not possible and GBM is often resistant or quickly develops resistance to most available current and investigational therapies. Today, the treatment of GBM remains a significant challenge and it has been nearly a decade since the FDA approved a new therapy for this disease, and these more recent approvals have not improved the overall survival ("OS") for GBM patients over past decades, and a significant unmet medical need persists.

While EBRT has been shown to be safe and has temporary efficacy in many malignancies including GBM, typically at absorbed, fractionated radiation dose of ~30 Gray in GBM, this maximum possible administered dose is always limited by toxicity to the normal tissues surrounding the malignancy and because EBRT requires fractionation to manage toxicity and maximum EBRT limits are typically reached before long-term efficacy reached. Because of this limitation, EBRT cannot provide a cure or long-term control of GBM and GBM always recurs within months after EBRT. In contrast, locally delivered and targeted radiopharmaceuticals that precisely deliver radiation in the form of beta particles such as Iodine-131 for thyroid cancer, are known to be safe and effective and minimize exposure to normal cells and tissues especially with optimal administered dose and minimizing exposure to normal tissue. The locally delivered REYOBIQ™ is designed for and provides patient tolerability and safety. Though no REYOBIQ™ head-to-head trial with

chemo, immune, EBRT or systemic radiopharmaceutical products have been conducted, patient tolerability and safety considerations have been reported as expected.

In September 2020, the FDA granted both orphan drug designation and Fast Track designations to REYOBIQ™ for the treatment of patients with GBM.

REYOBIQ™ is under clinical investigation in a Phase 1/2 multicenter, sequential cohort, open-label, volume and dose escalation study ("ReSPECT-GBM") of the safety, tolerability, and distribution of REYOBIQ™ given by CED catheters to patients with recurrent or progressive malignant glioma after standard surgical, radiation, and/or chemotherapy treatment. The trial is funded through Phase 2 in large part by a National Institute of Health/National Cancer Institute grant.

On January 18, 2023, we announced that the first patient was dosed in Phase 2 of the ReSPECT-GBM Phase 1/2 trial evaluating REYOBIQ™ for the treatment of recurrent GBM. Phase 2 of the trial is expected to enroll up to 34 total patients with small- to medium-sized tumors and is targeted for full enrollment by the end of 2025. We currently have four clinical sites, and expect a data read-out by the end of 2025.

On September 30, 2024, we showcased new interim ReSPECT-GBM Phase 2 Trial Data at the 2024 Congress of Neurological Surgeons Annual Meeting that included the following findings as of that date:

- 42 total patients enrolled in ReSPECT-GBM trial at 3 sites, with 19 out of 42 patients having been treated at the recommended Phase 2 dose (22.3 mCi in 8.8 mL) in tumors of approximately 20 cm^3 or less.
- All Phase 2 patients have recurrent, histologically confirmed glioblastoma; 1 recurrence, bevacizumab naïve, single tumor of approximately 20 cm^3 or less (small-to-medium sized tumors).
- Average tumor size in Phase 2 was 7.5 mL (range 0.9-22.8 mL).
- Increases in absorbed dose correlated with specific drug delivery parameters such as infused dose and volume, maximal convection flow rate, and number of catheters.
- REYOBIQ™ continues to show a favorable safety profile in the 42 enrolled patients; one dose-limiting toxicity (hemiplegia) has been reported, which was observed in Cohort 8 (41.5 mCi and 16.3 mL).
- In Phase 2, most adverse events were mild (73.5%) or moderate (18.8%), and largely unrelated (37.7%), or unlikely related (27.1%) to the drug. Of the 9 severe adverse events, only 2 were related to the study drug.
- Average absorbed radiation dose to the tumor in Phase 2 was 300 Gy (n=18, 1 patient still under analysis).
- 88.9% of Phase 2 patients met key CED drug delivery parameters shown to correlate with overall survival, achieving a tumor absorbed dose >100 Gy and radiation coverage of >70%.
- 29 out of 42 patients treated thus far participated in the Phase 1 dose escalation phase of the trial (as per protocol, 6 out of 42 patients were included in both the Phase 1 and Phase 2 trial arms and related analyses).
- Phase 1 dose-escalation increased administered doses from 1.0 mCi to 41.5 mCi and volumes from 0.66 mL to 16.3 mL.
- In terms of objective tumor response based on quantitative image analysis, a statistically significant reduction in tumor volume rate change was seen in tumors receiving > 100 Gy absorbed dose (n=11 patients analyzed to date, $p<0.005$). Sufficient tumor coverage correlated with tumor control, while regrowth occurred outside treated areas.

We completed Phase 1 of our ReSPECT-GBM Trial and are targeting full enrollment into Phase 2 by the end of 2025.

ReSPECT-LM Clinical Trials for LM

LM is a rare complication of cancer in which the disease spreads to the membranes (meninges) surrounding the brain and spinal cord. The incidence of LM is growing and occurs in approximately 5%, or more, of people with late-stage cancer, or 110,000 people in the U.S. each year. It is highly lethal with an average one-year survival of just 7%. All solid cancers, particularly breast, lung, GI, and melanoma, have the potential to spread to the leptomeninges.

The ReSPECT-LM Phase 1 clinical trial (ClinicalTrials.gov NCT05034497) was preceded with preclinical studies in which tolerance to doses of REYOBIQ™ as high as 1,075 Gy were shown in animal models with LM without significant observed toxicity. Furthermore, treatment led to a marked reduction in tumor burden in both C6 and MDA-231 LM models.

Upon receiving acceptance of our Investigational New Drug application and Fast Track designation by the FDA for REYOBIQ™ for the treatment of LM in November 2021, we initiated the trial and began screening patients for the ReSPECT-LM Phase 1 clinical trial in the fourth quarter of 2021.

ReSPECT-LM is a multi-center, sequential cohort, open-label, dose escalation study evaluating the safety, tolerability, and efficacy of a single-dose application of REYOBIQ™ administered through intrathecal infusion to the ventricle of patients with LM after standard surgical, radiation, and/or chemotherapy treatment. The primary endpoint of the study is the incidence and severity of adverse events and dose limiting toxicities, together with determining the maximum tolerated and recommended Phase 2 dose. Full enrollment in the Phase 1 trial was achieved at the end of 2024, and we announced the trial completion on February 26, 2025. Trial closeout procedures are now taking place including final data review and monitoring, and a clinical study report and manuscript will be prepared.

On September 19, 2022, we entered into a Cancer Research Grant Contract (the "CPRIT Contract"), effective as of August 31, 2022, with CPRIT, pursuant to which CPRIT provides us a grant of up to $17.6 million (the "CPRIT Grant") over a three-year period to fund the continued development of REYOBIQ™ for the treatment of patients with LM through Phase 2 of the ReSPECT-LM clinical trial. The CPRIT Grant is subject to customary CPRIT funding conditions, including, but not limited to, a matching fund requirement (one dollar from us for every two dollars awarded by CPRIT), revenue sharing obligations upon commercialization of REYOBIQ™ based on specific dollar thresholds until CPRIT receives the aggregate amount of 400% of the proceeds awarded under the CPRIT Grant, and certain reporting requirements. As of December 31, 2024, we had received approximately $10.4 million in milestone payments under the CPRIT Contract.

Interim results showed that a single treatment with REYOBIQ™ resulted in a consistent decreased cerebrospinal fluid ("CSF") tumor cell count/ml and was tolerated by all LM patients. REYOBIQ™ is an outpatient administration and treatment and is easily and safely administered through a standard intraventricular catheter (Ommaya Reservoir), distributed promptly throughout the CSF, and with durable retention in the leptomeninges at least through day seven. All patients have shown well tolerated prompt and durable REYOBIQ™ distribution throughout the subarachnoid space.

In November 2023, the FDA granted orphan drug designation to REYOBIQ™ for the treatment of patients with breast cancer with LM.

On December 12, 2023, we announced our partnership with K2bio to implement novel analysis for CSF tumor and molecular biomarkers for CNS cancers.

On February 26, 2025, we announced the completion of the ReSPECT-LM Phase 1 single-dose escalation trial, having determined a recommended Phase 2 dose. Enrollment in Cohort 6 was completed (75.0 mCi). The Cohort 4 dose (44.1 mCi) was determined to be the recommended Phase 2 dose with no dose-limiting toxicities observed at that dose level. One patient at the Cohort 4 dose was observed to have achieved a complete response, as evidenced by the eradication of tumor cells in the cerebrospinal fluid—a key therapeutic endpoint.

We anticipate beginning enrollment for a ReSPECT-LM Multi-Dose trial in the first half of 2025. In March 2025, the FDA granted orphan drug designation to REYOBIQ™ for the treatment of LM in patients with lung cancer.

ReSPECT-PBC Clinical Trial for Pediatric Brain Cancer

The average annual age adjusted mortality rate for children aged 0-14 for malignant brain (and other CNS) tumors is 0.71/100,000, making it the most common cause of death and cancer death in this age group. The 2021 World Health Organization Classification of CNS Tumors classifies gliomas, glioneuronal tumors, and neuronal tumors into six different families: (1) adult-type diffuse gliomas; (2) pediatric-type diffuse low-grade gliomas; (3) pediatric-type diffuse high-grade gliomas ("HGG"); (4) circumscribed astrocytic gliomas; (5) glioneuronal and neuronal tumors; and (6) ependymomas.

In August 2021, we announced plans for treating pediatric brain cancer at the 2021 American Association of Neurological Surgeons Annual Scientific Meeting. In July 2021, we reported that we had received FDA feedback pertaining to a pre-Investigational New Drug Application ("IND") meeting briefing package in which the FDA stated that we are not required to perform any additional preclinical or toxicology studies.

Given the initial FDA feedback, receipt of adult GBM data and experience with REYOBIQ™ and follow-up communications with the FDA, we submitted a pediatric brain tumor IND for our ReSPECT-PBC clinical trial to investigate the use of REYOBIQ™ in two pediatric brain cancers, high-grade glioma and ependymoma, in the fourth quarter of 2024.

Pediatric high-grade gliomas can be found almost anywhere within the CNS; however, they are most commonly found within the supratentorium. The highest incidence of supratentorial, high-grade gliomas in pediatrics appears to occur in children aged 15 to 19

years, with a median age of approximately nine years. Overall, pediatric high-grade glioma confers a three-year progression free survival ("PFS") of 11 ± 3% and three-year OS of 22 ±5%. One-year PFS is as low as 40% in recent trials. Ependymomas are slow-growing central nervous system tumors that involve the ventricular system. Diagnosis is based on MRI and biopsy and survival rate depends on tumor grade and how much of the tumor can be removed. Grade II pathology was associated with significantly improved OS compared to Grade III (anaplastic) pathology (five-year OS = 71 ± 5% vs. 57 ± 10%; p = 0.026). Gross total resection compared to subtotal resection was associated with significantly improved OS (five-year OS = 75 ± 5% vs. 54 ± 8%; p = 0.002).

Overall, pediatric HGG and ependymoma are extremely difficult-to-treat pediatric brain tumors, frequently aggressive, and in recurrent settings, carry an extremely poor prognosis.

Effective September 1, 2024, we entered into an agreement with the Department of Defense office of the Congressionally Directed Medical Research Programs to receive a $3.0 million fund for research and development purposes ("DoD Award") over a three-year period. The DoD Award will be used to support the planned expansion of our clinical trial for pediatric brain cancer. We anticipate beginning enrollment for our Phase 1 ReSPECT-PBC clinical trial in 2025.

Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere Technology

In January 2022, we announced that we licensed Biodegradable Alginate Microsphere ("BAM") patents and technology from The University of Texas Health Science Center at San Antonio ("UTHSCSA") to expand our tumor targeting capabilities and precision radiotherapeutics pipeline. We intend to combine our Rhenium NanoLiposome technology with the BAM technology to create a novel radioembolization technology. Initially, we intend to utilize the Rhenium-188 isotope, ^{188}RNL-BAM for the intra-arterial embolization and local delivery of a high dose of targeted radiation for a variety of solid organ cancers such as hepatocellular cancer, hepatic metastases, pancreatic cancer and many others.

Preclinical data from an ex vivo embolization experiment in which Technetium99m-BAM was intra-arterially delivered to a bovine kidney perfusion model was presented at the Society of Interventional Radiology Annual Scientific Meeting. The study concluded that the technology required for radiolabeling BAM could successfully deliver, embolize and retain radiation in the target organ. ^{188}RNL-BAM is a preclinical investigational device we intend to further develop and move into clinical trials. Specifically, in 2022 we transferred the ^{188}RNL-BAM technology from UTHSCSA, and began planning to develop the product and complete early preclinical studies to support a future FDA IND submission. Our intended initial clinical target is liver cancer which is the sixth most common and third deadliest cancer worldwide. It is a rare disease with increasing U.S. annual incidence (42,000) and deaths (30,000).

The FDA has informed us that ^{188}RNL-BAM will be regulated as a medical device under the FDCA.

The CNSide™ FORESEE Trial

The CNSide™ Platform consists of four LDTs used for treatment selection and treatment monitoring of patients with LM. The CNSide™ Platform facilitates tumor cell detection/enumeration and biomarker identification using cellular assays (immunocytochemistry (ICC) and fluorescence in situ hybridization (FISH)) and molecular assays (next-generation sequencing (NGS)). The CNSide™ Test is currently being used in the ReSPECT-LM trial as an exploratory endpoint and we are planning to re-introduce it to the US market starting in the second quarter of 2025.

In August 2024, data from the CNSide™ FORESEE clinical trial in patients with LM was presented at the Society for Neuro-Oncology ("SNO") / American Society for Clinical Oncology ("ASCO") CNS Metastases Conference. The trial met its key primary and secondary endpoints and the data showed that the CNSide™ Test more than doubled the diagnostic sensitivity versus gold standard cerebrospinal fluid cytology and influenced clinical management decisions in over 90% of LM cases.

On November 24, 2024, CNSide Diagnostics presented data at the 2024 SNO Annual Meeting from the FORESEE trial showcasing the CNSide™ Platform's utility in diagnosing and guiding clinical decision making for breast cancer and non-small cell lung cancer patients with LM.

Key highlights included:

- The FORESEE trial achieved its primary endpoint, demonstrating that the CNSide™ Test influenced treatment decisions in over 90% of cases evaluated, surpassing the predetermined 20% primary endpoint target.
- The CNSide™ Test demonstrated enhanced sensitivity in detecting tumor cells (80%) vs. CSF cytology (29%) in patients with LM.
- The CNSide™ Test identified actionable mutations in the CSF, such as HER2 amplification, influencing 24% of therapeutic selection decisions.

- The CNSide™ Test exhibited high specificity, with no tumor cells detected in patients without LM.
- The CNSide™ Test demonstrated improved Negative Predictive Value in ruling out LM (25%) vs. CSF cytology (10%).
- The CNSide™ Test revealed HER2 positivity in LM tumors in 60% of breast cancer patients with HER2-negative primary tumors, informing physician treatment strategies.

Recent Developments

Recent Financings

Refer to the "Liquidity and Capital Resources" section below for information on our recent financings.

Manufacturing agreement with SpectronRX

On November 5, 2024, we entered into a manufacturing services agreement for drug product development and manufacturing (the "SpectronRx Services Agreement") with NukeMed, Inc. d/b/a SpectronRx ("SpectronRx"), pursuant to which SpectronRx will process development and manufacturing clinical investigational pharmaceutical products to support our clinical programs. Pursuant to the SpectronRx Services Agreement, an initial proposal for drug product development and manufacturing under the SpectronRx Services Agreement is expected to become effective in the third quarter of 2025.

Under the SpectronRx Services Agreement, we will own all rights and interest in all intellectual property, including rights (i) related to copyright, patent, trademark, or other right to ideas, inventions, products, programs, procedures, process, formats, and other materials, (ii) developed solely by us in connection with developing, formulating, manufacturing, filing, processing, packaging, analyzing or testing of a (a) pharmaceutical ingredient or any intermediate thereof ("API/Drug Substance"), (b) drug product comprised of API/Drug Substance ("Drug Candidate"), or (c) intermediate(s) of (a) or (b) (together with API/Drug Substance and Drug Candidate, the "Product"), or (iii) directly related to the services rendered by SpectronRx or its subcontractors. SpectronRx will own all rights and interest in the intellectual property owned by or licensed to SpectronRx other than in connection with Products or services covered under the SpectronRx Services Agreement (the "SpectronRx Technology"). To the extent that any portion of SpectronRx Technology is required for the purpose of using or applying the Products, SpectronRx is required to provide to us a non-exclusive, royalty-free, perpetual license for that portion of SpectronRx Technology that is required by us to use and apply the Products.

Under the SpectronRx Services Agreement, upon written notice by us to SpectronRx, at least six months in advance of our first commercial manufacturing needs for a Product, SpectronRx will be required to enter into good faith negotiations with us for a commercial supply agreement governing the manufacture of such Product for commercial sale or use.

Unless earlier terminated, the SpectronRx Services Agreement will remain in place for a period of five years. Thereafter, the SpectronRx Services Agreement will automatically renew for successive one-year terms unless either party notifies the other, not later than six months in advance of the original term or any additional renewed term, of the intention to terminate it. We may terminate the SpectronRx Services Agreement (i) for any reason on prior written notice to SpectronRx, provided that we will be required to compensate SpectronRx for certain fees and costs if such cancellation is made prior to the completion of a work order, or (ii) immediately if SpectronRx files for bankruptcy, becomes insolvent, or is suspended or debarred by the FDA or the United States government. In addition, either party may terminate the SpectronRx Services Agreement within thirty days upon any material breach that is left uncured by the other party.

Department of Defense Award

Effective September 1, 2024, we entered into an agreement with the DoD office of the Congressionally Directed Medical Research Programs to receive a $3.0 million DoD Award fund for research and development purposes over a three-year period. The DoD Award will be used to support the planned expansion of our clinical trial for pediatric brain cancer. On October 4, 2024, we received the first payment under the DoD Award in the amount of $0.9 million.

Results of Operations

Grant Revenue

On September 19, 2022, we entered into the CPRIT Contract, effective as of August 31, 2022, with CPRIT, pursuant to which CPRIT will provide us a grant of up to $17.6 million (the "CPRIT Grant") over a three-year period to fund the continued development of REYOBIQ™ for the treatment of patients with LM through Phase 2 of the ReSPECT-LM clinical trial. The CPRIT Grant is subject to customary CPRIT funding conditions, including, but not limited to, a matching fund requirement (one dollar from us for every two dollars awarded by CPRIT), revenue sharing obligations upon commercialization of REYOBIQ™ based on specific dollar thresholds until CPRIT receives the aggregate amount of 400% of the proceeds awarded under the CPRIT Grant, and certain reporting requirements. Since the inception of the CPRIT Contract, we recognized $5.8 million, $4.9 million and $0.2 million of grant revenue during the years ended December 31, 2024, 2023 and 2022, respectively, of which $10.4 million has been received and $0.6 million was recorded as

grant revenue receivable as of December 31, 2024. The amounts recognized represent CPRIT's share of the costs incurred for our REYOBIQ™ development for the treatment of patients with LM.

We expect grant revenue will increase during the remaining term of the CPRIT Grant through August 2025, as we continue to expand the LM clinical trial to add clinical sites and enroll patients. In February 2025, we received $2.0 million under the CPRIT Contract. The ability to continue to access the grant remains subject to additional FDA approval of the LM clinical trial, ability to deliver expanded drug supply and continued enrollment of patients. In addition, grant revenue amounts will vary quarter to quarter based on enrollment, mandated safety periods between cohorts and required interactions with FDA.

Research and development expenses

Research and development expenses include costs associated with the design, development, testing, and enhancement of our product candidates, payment of regulatory fees, laboratory supplies, pre-clinical studies, and clinical studies.

The following table summarizes the components of our research and development expenses for the years ended December 31, 2024 and 2023 (in thousands):

	Years ended December 31,	
	2024	2023
Research and development	$ 10,529	$ 9,624
Share-based compensation	51	66
Total research and development expenses	$ 10,580	$ 9,690

Research and development expenses for the year ended December 31, 2024 increased by $0.9 million as compared to the same period in 2023, primarily due to increases of approximately $0.7 million in development expenses, $0.1 million in compensation expenses, $1.1 million in professional research and development service fees, and $0.1 million in depreciation and other expenses, offset by a reduction of $1.1 million in research and development licensing expense and $0.1 million in clinical expenses.

We expect aggregate research and development expenditures to increase significantly during 2025 as compared to the corresponding comparable period ended December 31, 2024, due to increased costs for the *ReSPECT-LM* clinical trial (for which CPRIT grant funding is expected to be available), increases in licensing payments, offset by reduced research and development spend on the cGMP development.

General and administrative expenses

General and administrative expenses include costs for administrative personnel, legal and other professional expenses, and general corporate expenses. The following table summarizes the general and administrative expenses for the years ended December 31, 2024 and 2023 (in thousands):

	Years ended December 31,	
	2024	2023
General and administrative	$ 9,440	$ 8,041
Share-based compensation	499	503
Total general and administrative expenses	$ 9,939	$ 8,544

General and administrative expenses increased by approximately $1.4 million during the year ended December 31, 2024, as compared to the same period in 2023. The increase was due primarily to an increase in legal and professional expenses of $1.0 million, and an increase of $0.4 million in compensation expenses.

We expect general and administrative expenditures to remain generally consistent during 2025 as compared with the corresponding comparable period ended December 31, 2024.

Share-based compensation expenses

Share-based compensation expenses include charges related to options and restricted stock awards issued to employees, directors and non-employees. We measure share-based compensation expenses based on the grant-date fair value of any awards granted to our employees. Such expense is recognized over the requisite service period.

The following table summarizes the components of our share-based compensation expenses for the years ended December 31, 2024 and 2023 (in thousands):

	Years ended December 31,	
	2024	2023
Research and development	$ 51	$ 66
General and administrative	499	503
Total share-based compensation	$ 550	$ 569

Our stock-based compensation expenses, which are impacted by grants of stock-based options, vesting schedule of such grants, as well as grant-date fair value of stock-based awards, remained consistent for the year ended December 31, 2024 and 2023.

Other Income (Expense)

The following table summarizes interest income, interest expense, and other income and expense for the years ended December 31, 2024 and 2023 (in thousands):

	Years ended December 31,	
	2024	2023
Interest income	$ 273	$ 400
Interest expense	(179)	(395)
Financing expense	(3,545)	—
Change in fair value of warrants	5,654	—
Warrant issuance costs	(486)	—
Total	$ 1,717	$ 5

The decrease in interest expense for the year ended December 31, 2024 as compared to the same period in 2023 was primarily due to the repayment of debt principal of $1.6 million during the year ended December 31, 2023 and $4.0 million during the year ended December 31, 2024, offset by interest expenses on our line of credit facility. Interest income decreased for the year ended December 31, 2024 compared with the same period in 2023 primarily due to lower average cash and investment balances in year-to-date 2024 offset by a higher interest rate environment and accreted income on our available-for-sale securities.

We recognized approximately $3.5 million in financing expense in the consolidated statement of operations during the year ended December 31, 2024, which represents the excess of the fair value of the warrants issued in the May 2024 Private Placement (as defined below) at issuance over the proceeds. During the year ended December 31, 2024, we recognized a net fair value gain on warrant liability of $5.7 million. The warrants were amended in August 2024, as a result of which the warrants were reclassified from liability to equity on the balance sheet and are no longer required to be recorded at fair value at each period end with change in the fair value recorded in the statement of operations.

In addition, total offering expenses related to the May 2024 Private Placement of $0.4 million were recorded as a component of other expenses as the entire proceeds were allocated to the warrant liability, which could have been be settled with either our common stock or Prefunded Warrants (as defined below), which are exercisable into shares of common stock at any time at the holders' option, but will not result in cash payment to the holders.

Liquidity and Capital Resources

The Company has funded its research and development activities through raising capital by issuing securities and receipt of research grants. As of December 31, 2024, the Company had approximately $3.6 million in combined cash and cash equivalents and short-term investments.

Short-term and long-term liquidity

The following is a summary of our key liquidity measures at December 31, 2024 and 2023 (in thousands):

	As of December 31,	
	2024	2023
Cash and cash equivalents	$ 76	$ 8,554
Current assets	$ 5,259	$ 9,834
Current liabilities	15,551	10,727
Working capital deficit	$ (10,292)	$ (893)

We incurred net losses of $13.0 million for the year ended December 31, 2024. We have an accumulated deficit of $493.5 million as of December 31, 2024. Additionally, we used net cash of $10.6 million to fund our operating activities for the year ended December 31, 2024. These factors raise substantial doubt about our ability to continue as a going concern.

To date, our operating losses have been funded primarily from outside sources of invested capital from issuance of our common and preferred stocks, proceeds from our now-repaid in full term loan with Oxford Finance, LLC ("Oxford"), our line of credit facility with Pershing and grant funding. We have had, and will continue to have, an ongoing need to raise additional cash from outside sources to fund our future clinical development programs and other operations. There can be no assurance that we will be able to continue to raise additional capital in the future. Our inability to raise additional cash would have a material and adverse impact on our operations and ability to satisfy our obligations.

May 2024 Private Placement

In May 2024, we entered into a securities purchase agreement (the "May 2024 Purchase Agreement"), which was subsequently amended, with certain investors, including certain of the Company's directors and executive officers (the "May 2024 Private Placement Purchasers"), whereby we issued and sold in a private placement (the "May 2024 Private Placement"): (i) 3,591,532 shares of common stock or, at the election of each investor, pre-funded warrants ("Prefunded Warrants") to purchase shares of common stock exercisable immediately at an exercise price of $0.001 per share. Each share or Prefunded Warrant was accompanied by (i) a Series A common warrant ("May 2024 Series A Warrants") to purchase one share of common stock, for an aggregate of 3,591,532 Series A Warrants, and (ii) one Series B common warrant ("May 2024 Series B Warrants") to purchase one share of common stock, for an aggregate of 3,591,532 May 2024 Series B Warrants. At the closing of the May 2024 Private Placement, we received net proceeds of approximately $7.3 million.

February 2025 SPEA

On February 13, 2025 (the "SPEA Closing Date"), we entered into a securities purchase and exchange agreement (the "SPEA") with certain existing accredited investors. Pursuant to the SPEA, on the SPEA Closing Date we issued secured convertible promissory notes (the "Funding Notes") in the aggregate principal amount of $3,362,251 together with common stock purchase warrants (the "Warrants") to purchase 3,002,009 shares of our common stock at an exercise price of $1.12 per share. The aggregate purchase price for the Funding Note and Warrants was approximately $3.7 million and included payment of $0.125 per Warrant in accordance with the listing rules of The Nasdaq Stock Market LLC ("Nasdaq").

Exchange Notes

The May 2024 Purchase Agreement included certain limitations and restrictions on our ability to issue securities and provided the May 2024 Private Placement Purchasers other than our directors and executive officers (the "Outside Investors") participation rights in future equity and equity-linked offerings of securities, subject to certain limited exceptions (the "Financing Restrictions"). On the SPEA Closing Date, pursuant to the SPEA, the Company issued to the Outside Investors secured convertible promissory notes in the aggregate amount of $3,188,922 (the "Exchange Notes") in exchange for cancellation of the 3,543,247 May 2024 Series A Warrants held by them, and the Outside Investors entered into a second amendment to the May 2024 Purchase Agreement to eliminate the Financing Restrictions.

As described below, we repurchased the Funding Notes and exchanged the Exchange Notes in connection with the March 2025 Private Placement.

March 2025 Private Placement

On March 4, 2025, we entered into a securities purchase agreement (the "March 2025 Purchase Agreement") with accredited investors, including certain of our existing stockholders, identified on the signature page thereto (collectively, the "March 2025 Private Placement Purchasers") for a private placement of securities (the "March 2025 Private Placement") for gross proceeds of approximately $15.0 million. Pursuant to the March 2025 Purchase Agreement, we issued an aggregate of 4,069,738 shares (the "March 2025 Private Placement Shares") of our common stock and 23,972,400 Prefunded Warrants, with each March 2025 Private Placement Share or Prefunded Warrant accompanied by (i) a Series A common warrant (the "March 2025 Series A Warrants") to purchase one share of common stock and (ii) one Series B common warrant (the "March 2025 Series B Warrants") to purchase one share of common stock.

The combined purchase price of $0.66 for each March 2025 Private Placement Share or $0.659 for each Prefunded Warrant in the March 2025 Private Placement, together with one accompanying March 2025 Series A Warrant and one accompanying March 2025 Series B Warrant, represented the applicable "Minimum Price" in accordance with Listing Rule 5635(d) of Nasdaq.

The initial exercise price of each March 2025 Series A Warrant is $1.32 per share of common stock. The March 2025 Series A Warrants are exercisable only following stockholder approval and expire five (5) years thereafter. The number of securities issuable under the March 2025 Series A Warrant is subject to adjustment as described in more detail in the March 2025 Series A Warrant. The March 2025 Series A Warrant exercise price and the related number of shares of common stock issuable upon exercise are subject to a "reset" provision upon certain events and are subject to anti-dilution protection upon any subsequent transaction at a fixed price lower than the warrant exercise price then in effect, as more fully described in the March 2025 Series A Warrant.

The initial exercise price of each March 2025 Series B Warrant is $1.98 per share of common stock or pursuant to an alternative cashless exercise option. The March 2025 Series B Warrants are exercisable only following stockholder approval and expire two and one-half (2.5) years thereafter. The March 2025 Series B Warrant exercise price and the related number of shares of common stock issuable upon exercise are subject to a "reset" provision upon certain events, as more fully described in the March 2025 Series B Warrant, and the March 2025 Series B Warrant alternative cashless exercise provision provides that the March 2025 Series B Warrant can be exercised without further payment to the Company and for three times the number of shares of common stock then subject to the March 2025 Series B Warrant.

Of the securities issued in the March 2025 Private Placement, 22,727,270 of the shares of common stock, or Prefunded Warrants in lieu thereof, and the accompanying 22,727,270 March 2025 Series A Warrants and 22,727,270 March 2025 Series B Warrants, were issued in consideration of new capital subscriptions, and 5,314,870 of the shares of common stock, or Prefunded Warrants in lieu thereof, and the accompanying 5,314,870 March 2025 Series A Warrants and 5,314,870 March 2025 Series B Warrants, were issued in exchange for the cancelation of the Exchange Notes.

The March 2025 Private Placement closed on March 7, 2025. The aggregate gross proceeds at the closing were approximately $15.0 million, before deducting certain expenses payable by us.

In addition to the stockholder approval of the March 2025 Series A Warrants and March 2025 Series B Warrants, we also covenanted to seek if necessary stockholder approval to, among other things, amend our Certificate of Incorporation, as amended, to increase the authorized share capital to an amount sufficient to cover the shares of common stock issuable upon the exercise of the March 2025 Series A Warrants and March 2025 Series B Warrants.

First Amendment to the February 2025 SPEA

In connection with the March 2025 Purchase Agreement, we entered into that certain First Amendment to the SPEA (the "First Amendment"). The SPEA included certain limitations and restrictions on the Company's ability to issue securities and provided the Investors participation rights in future equity and equity-linked offerings of securities, subject to certain limited exceptions (the "New Financing Restrictions"). Pursuant to the First Amendment, subject to consummation of the March 2025 Private Placement, we agreed to repurchase from the Investors the Funding Notes and 3,002,009 warrants (the "SPEA Warrants") issued pursuant to the SPEA for an

aggregate purchase price of $4.25 million. In exchange for the repurchase by the Company of the Funding Notes and SPEA Warrants, the Purchasers agreed to consent to the March 2025 Private Placement and eliminate the New Financing Restrictions.

CPRIT Grant

On September 19, 2022, we entered into the CPRIT Contract, pursuant to which CPRIT will provide us with the CPRIT Grant of $17.6 million subject to the terms of the CPRIT Contract, to fund approximately two-thirds of the continued development of REYOBIQ™ for the treatment of patients with LM. We recognized $5.8 million, $4.9 million and $0.2 million of grant revenue during the years ended December 31, 2024, 2023 and 2022, respectively, of which $10.4 million has been received and $0.6 million was recorded as grant revenue receivable as of December 31, 2024. The amounts recognized represents CPRIT's share of the costs incurred for our REYOBIQ™ development for the treatment of patients with LM. As of December 31, 2024, we had $0.6 million of grant revenue receivable related to the CPRIT Grant. In February 2025, we received $2.0 million under the CPRIT Contract.

DoD Award

Effective September 1, 2024, we entered into an agreement with the DoD office of the Congressionally Directed Medical Research Programs to receive the DoD Award, which will be used to support the planned expansion of our clinical trial for pediatric brain cancer. On October 4, 2024, we received the first payment under the DoD Award in the amount of $0.9 million. No work under the DoD Award was commenced by December 31, 2024.

Private Equity Lines

On August 2, 2022, we entered into a purchase agreement (the "2022 Purchase Agreement") and registration rights agreement pursuant to which Lincoln Park Capital Fund ("Lincoln Park") committed to purchase up to $50.0 million of shares of our common stock. Under the terms and subject to the conditions of the 2022 Purchase Agreement, we have the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to $50.0 million of shares of our common stock, provided that we cannot sell more than 57.5 million shares pursuant to the 2022 Purchase Agreement. Sales of common stock by us are subject to certain limitations, and can occur from time to time, at our sole discretion, over the 36-month period commencing on August 17, 2022, subject to the satisfaction of certain conditions. Actual sales of shares of common stock to Lincoln Park under the 2022 Purchase Agreement depend on a variety of factors to be determined by us from time to time, including, among others, market conditions, the trading price of the common stock and our determinations as to the appropriate sources of funding for the Company and its operations. As consideration for Lincoln Park's irrevocable commitment to purchase shares of our common stock upon the terms of and subject to satisfaction of the conditions set forth in the 2022 Purchase Agreement, we paid $0.1 million in cash as an Initial Commitment Fee and issued 32,846 as the initial commitment shares to Lincoln Park in consideration for its commitment to purchase shares of our common stock at our direction under the 2022 Purchase Agreement.

On August 17, 2022, a registration statement (the "First Registration Statement") was declared effective covering the resale of up to 633,333 shares of our common stock comprised of (i) the 32,846 initial commitment shares, and (ii) up to 600,486 shares that we have reserved for issuance and sale to Lincoln Park under the 2022 Purchase Agreement. We issued and sold 527,166 shares of common stock to Lincoln Park in connection with the First Registration Statement. An additional commitment fee equal to 2.5% of the remainder of the $50 million will be paid if and when we sell over $25.0 million of our common stock under the 2022 Purchase Agreement. The additional commitment fee may be paid in cash, common stock, or a combination thereof. We sold approximately 527,166 shares under the First Registration Statement.

On August 18, 2023, a second registration statement (the "Second Registration Statement") was declared effective covering the resale of up to an additional 1,500,000 shares of our common stock that we reserved for issuance and sale to Lincoln Park under the 2022 Purchase Agreement from time to time. We issued and sold 150,000 shares of common stock to Lincoln Park in connection with the Second Registration Statement. We cannot sell more shares than registered under the Second Registration Statement under the 2022 Purchase Agreement without registering additional shares.

As a result of the March 2025 Private Placement, until March 4, 2026, we are unable to utilize the 2022 Purchase Agreement without the consent of investors in that offering.

During the period from August 17, 2022 to December 31, 2022, we issued 266,666 shares under the 2022 Purchase Agreement for net proceeds of approximately $3.2 million. We issued 410,500 shares under the 2022 Purchase Agreement for net proceeds of approximately $1.0 million from January 1, 2023 to December 31, 2023. No shares of common stock were purchased under the 2022 Purchase Agreement during the year ended December 31, 2024.

Nasdaq Listing Compliance

On March 8, 2024, we received notice from the Listing Qualifications staff of Nasdaq (the "Staff"), notifying us that we no longer complied with the requirement under Nasdaq Listing Rule 5550(b)(1) to maintain a minimum of $2.5 million in stockholders' equity (the "Minimum Stockholders' Equity Requirement") for continued listing on The Nasdaq Capital Market or the alternative requirements of having a market value of listed securities of $35 million or net income from continuing operations of $500,000 in the most recently completed fiscal year or two of the last three most recently completed fiscal years.

On September 5, 2024, Nasdaq notified us that we had not regained compliance with Nasdaq Listing Rule 5550(b)(1). We requested a hearing before the Nasdaq Hearings Panel (the "Panel") and on October 30, 2024, the Company received a decision from the Panel, notifying us that we had until March 4, 2025 to demonstrate compliance with the Minimum Stockholders' Equity Requirement.

We regained compliance with the Minimum Stockholders' Equity Requirement in connection with the March 2025 Private Placement described above.

Pursuant to Nasdaq Listing Rule 5815(d)(4)(B), we will be subject to a Mandatory Panel Monitor until March 7, 2026. If the Staff finds us again out of compliance with the Minimum Stockholders' Equity Requirement before that date, we would not be permitted to provide the Staff with a plan of compliance with respect to that deficiency and the Staff would not be permitted to grant additional time for us to regain compliance with respect to that deficiency, nor would we be afforded an applicable cure or compliance period. Instead, the Staff would issue a "Delist Determination Letter" and we would have an opportunity to request a hearing before the Panel regarding our continued listing.

Funding and Material Cash Requirements

To date, our operating losses have been funded primarily from outside sources of invested capital from issuance of shares of our common and preferred stocks, proceeds from the now-repaid in full term loan with Oxford, the Pershing Credit Facility and grant funding. However, the Company has had, and will continue to have, an ongoing need to raise additional cash from outside sources through a combination of equity offerings, debt financings and potential collaboration, license or development agreements to fund our future clinical development programs, commercialization of CNSide, and other operations in the next twelve months from the filing of this Form 10-K. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. There can be no assurance that we will be able to continue to raise additional capital in the future. Our inability to raise additional cash would have a material adverse impact on our operations, implementation of our strategy and ability to maintain compliance with applicable requirements, including Nasdaq listing rules.

Our present and future funding and cash requirements will depend on many factors, including, among other things:

- the progress, timing and completion of our ongoing and planned clinical trials and nonclinical studies;
- our ability to receive, and the timing of receipt of, future regulatory approvals for our product candidates and the costs related thereto;
- the development and utility of the CNSide™ Test;
- the scope, progress, results and costs of our ongoing and planned operations;
- the costs associated with expanding our operations and building our sales and marketing capabilities;
- our ability to establish strategic collaborations;
- the cost and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the revenue, if any, received from commercial sales of our product candidates, if approved; and
- potential new product candidates that the Company identifies and attempts to develop.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue to operate as a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business, and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from uncertainty related to our ability to continue as a going concern.

Cash (used in) provided by operating, investing, and financing activities for the year ended December 31, 2024 and 2023 is summarized as follows (in thousands):

	Years Ended December 31,	
	2024	2023
Net cash used in operating activities	$ (10,554)	$ (12,851)
Net cash used in investing activities	(4,111)	(160)
Net cash provided by financing activities	6,187	3,445
Net decrease in cash and cash equivalents	$ (8,478)	$ (9,566)

Material Cash Obligations

Under the CPRIT Contract, we receive matching funds for approximately two-thirds of the development costs for the development of REYOBIQ™ for the treatment of patients with LM, subject to various funding conditions. The CPRIT Contract is effective for three years, unless otherwise terminated pursuant to the terms of the contract. CPRIT may require us to repay some or all of the disbursed CPRIT grant proceeds (with interest not to exceed 5% annually) in the event of the early termination of the CPRIT Contract.

Other than as described above, we have no purchase commitments or long-term contractual obligations, except for lease obligations as of December 31, 2024. In addition, we have no off-balance sheet arrangements (as defined in the rules and regulations of the SEC) that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Operating activities

Net cash used in operating activities for the year ended December 31, 2024 was $10.6 million compared to $12.9 million in the same period of 2023. Our operational cash use decreased by $2.3 million during the year ended December 31, 2024 as compared to the same period in 2023, due primarily to increased reimbursement under the CPRIT Contract for research and development costs related to the ReSPECT-LM program.

Investing activities

Net cash used in investing activities for the year ended December 31, 2024 was related to purchase of Biocept assets of $0.5 million, purchase of short-term investments of $15.6 million, redemption of short-term investments of $12.2 million, and purchases of fixed assets of $0.1 million. Net cash used in investing activities for the year ended December 31, 2023 was related to purchases of fixed assets of $0.1 million.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2024 was related to net proceeds of $7.3 million raised by the May 2024 Private Placement, and drawdown of $3.3 million from the Pershing Credit Facility, offset by repurchase of common stock for approximately $0.4 million and repayment of principle balance under the Oxford term loan of $4.0 million.

Net cash provided by financing activities for the year ended December 31, 2023 was primarily related to the net proceeds from sales of common stock of $5.2 million pursuant to the September 2022 Distribution Agreement with Canaccord and the 2022 Purchase Agreement with Lincoln Park, offset by $1.6 million of principal repayment under our Term Loan, and $0.1 million payment to purchase our common stock.

Critical Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") requires us to make estimates and assumptions that affect the reported amounts of our assets, liabilities, revenue, and expenses, and that affect our recognition and disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates and judgments, including those related to impairment assessment of our grants and awards, indefinite lived intangible assets, and share-based compensation. We base our estimates on historical experience, known trends and events, and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The following listing is not intended to be a comprehensive list of all of our accounting policies. Our significant accounting policies are described in Note 2 to our financial statements contained elsewhere in this Form 10-K. In many cases, the accounting treatment of a particular transaction is dictated by U.S. GAAP, with no need for our judgment in its application. There are also areas in which our

judgment in selecting an available alternative would not produce a materially different result. We have identified the following as our critical accounting policies.

Warrant Liability

Accounting for liability classified warrants requires management to exercise judgment and make estimates and assumptions regarding their fair value. (For more information about the material inputs and assumptions used to value the liability classified warrants, refer to Note 3 to the consolidated financial statements.) The warrant liabilities are initially recorded at fair value upon the date of issuance and subsequently remeasured to fair value at each reporting date, with changes recognized in the consolidated statements of operations. Changes in the fair value of the liability classified warrants will continue to be recognized until the warrants are exercised, expire or qualify for equity classification.

In May 2024, the Company issued the May 2024 Series A Warrants and May 2024 Series B Warrants and classified them as liabilities because in certain circumstances they could have been exercised into either shares of common stock or Pre-Funded Warrants at the holder's option and thus failed the indexation guidance under Accounting Standards Codification ("ASC") Topic 815, Derivatives and Hedging ("ASC 815"). On August 9 , 2024, the Company amended and restated the May 2024 Series A Warrants and May 2024 Series B Warrants (the "Amendment and Restatements") to eliminate the ability of the holder to elect to receive Pre-Funded Warrants in this situation.

As a result of the Amendment and Restatements, the May 2024 Series A Warrants and May 2024 Series B Warrants, as amended, no longer fail the indexation guidance under ASC 815, and the balance of the warrant liability at the amendment date, in the amount of $5.2 million, was reclassified to equity. As a result, as of the amendment date, there was a corresponding increase in the Company's statements of stockholders' equity.

Grants and Awards

In applying the provisions of ASC Topic 606, Revenue from Contracts with Customers ("ASC 606"), we have determined that government grants are out of the scope of ASC 606 because the funding entities do not meet the definition of a "customer," as defined by ASC 606, as we do not consider there to be a transfer of control of goods or services. With respect to the grant, we evaluate if it has a collaboration in accordance with ASC Topic 808, Collaborative Arrangements ("ASC 808"). For grants outside the scope of ASC 808, we apply International Accounting Standards No. 20 ("IAS 20"), Accounting for Government Grants and Disclosure of Government Assistance, by analogy, and revenue is recognized when we incur expenses related to the grant for the amount we are entitled to under the provisions of the contract.

We also consider the guidance in ASC Topic 730, Research and Development, which requires an assessment, at the inception of the grant, of whether the agreement is a liability. If we are obligated to repay funds received regardless of the outcome of the related research and development activities, then we are required to estimate and recognize that liability. Alternatively, if we are not required to repay the funds, then payments received are recorded as revenue or contra-expense as the expenses are incurred. Deferred grant liability represents grant funds received or receivable for which the allowable expenses have not yet been incurred as of the balance sheet date. Grant Receivable represents grant funds not yet received for which the allowable expenses have been incurred as of the balance sheet date.

Impairment of Goodwill

We perform our goodwill impairment analysis at the reporting unit level. For the years ended December 31, 2024 and 2023, our company has one reporting unit. We perform our annual impairment analysis by either doing a qualitative assessment of a reporting unit's fair value from the last quantitative assessment to determine if there is potential impairment, or comparing a reporting unit's estimated fair value to its carrying amount. If a quantitative assessment is performed the evaluation includes management estimates of cash flow projections based on internal future projections and/or use of a market approach by looking at market values of comparable companies. Our market capitalization is also considered as a part of this analysis.

In accordance with our accounting policy, we completed the annual evaluation for impairment of goodwill as of December 31, 2024 using the qualitative method and determined that no impairment existed.

Share-based Compensation

Compensation expense related to stock options granted is measured at the grant date based on the estimated fair value of the award and is recognized on an accelerated attribution method over the requisite service period. We determine the estimated fair value of each stock option on the date of grant using the Black-Scholes valuation model which uses assumptions regarding a number of complex and subjective variables. The risk-free interest rate is based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. Expected volatility is based on an analysis of the historical volatility of our common stock. The expected term represents the period that we expect our stock options to be outstanding. The expected term assumption is estimated using the simplified method set forth in the SEC's Staff Accounting Bulletin 110, which is the mid-point between the option vesting date and the expiration date. We have never declared or paid dividends on our common stock and have no plans to do so in the foreseeable future.

Changes in these assumptions may lead to variability with respect to the amount of stock compensation expense we recognize related to stock options.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
Plus Therapeutics, Inc.
Houston, Texas

Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Plus Therapeutics, Inc. (the "Company") as of December 31, 2024 and 2023, the related consolidated statements of operations, stockholders' equity (deficit), and cash flows for each of the years then ended and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty
The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses and negative cash flows from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Determination of Research and Development Cost Associated With Recording of Grant Revenue

As described in Note 11 to the consolidated financial statements, in September 2022, the Company entered into a contract with the Cancer Prevention and Research Institute of Texas ("CPRIT") pursuant to which CPRIT will provide the Company a grant of up to $17.6 million (the "CPRIT Grant") over a three-year period. The CPRIT Grant is subject to customary CPRIT funding conditions, including, but not limited to, fund the continued development of rhenium (^{186}Re) obisbemeda for the treatment of patients with leptomeningeal metastases ("LM")." The Company recognized $5.8 million in grant revenue from the CPRIT Grant during the year ended December 31, 2024.

We identified the determination of research and development costs incurred associated with the CPRIT Grant as a critical audit matter because of the subjectivity required to appropriately determine whether such costs satisfied the funding conditions. Auditing this element involved especially challenging and subjective auditor judgment due to the nature and extent of auditor effort required to address the matter.

The primary procedures we performed to address this critical audit matter included:

- Reviewing the CPRIT Grant agreement to understand the conditions for which research and development costs satisfy the funding conditions.
- Reviewing evidence of CPRIT's approval of costs submitted by the Company that were applied to the CPRIT Grant funding conditions.
- Inspecting a sample of vendor agreements and invoice detail to determine whether certain charges satisfy the CPRIT Grant funding conditions.

We have served as the Company's auditor since 2016.

/s/ BDO USA P.C.

Austin, Texas
March 31, 2025

PLUS THERAPEUTICS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and par value data)

	As of December 31,	
	2024	2023
Assets		
Current assets:		
Cash and cash equivalents	$ 76	$ 8,554
Investments	3,530	—
Grant receivable	571	—
Other current assets	1,082	1,280
Total current assets	5,259	9,834
Property and equipment, net	448	906
Operating lease right-of-use assets	73	202
Goodwill	372	372
Intangible assets, net	469	42
Other assets	12	32
Total assets	$ 6,633	$ 11,388
Liabilities and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable and accrued expenses	$ 11,288	$ 6,631
Operating lease liability	44	120
Deferred grant liability	927	—
Line of credit	3,292	—
Term loan obligation, current	—	3,976
Total current liabilities	15,551	10,727
Noncurrent operating lease liability	31	85
Deferred grant liability	—	1,924
Total liabilities	15,582	12,736
Commitments and contingencies (Note 7)		
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; 1,952 shares issued and outstanding as of December 31, 2024 and 2023	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 6,154,758 shares issued and 5,896,333 outstanding as of December 31, 2024, 4,522,656 shares issued and 4,444,097 outstanding as of December 31, 2023, respectively	6	5
Treasury stock (at cost, 258,425 and 78,559 shares as of December 31, 2024 and 2023, respectively)	(500)	(126)
Additional paid-in capital	485,024	479,274
Accumulated deficit	(493,479)	(480,501)
Total stockholders' equity (deficit)	(8,949)	(1,348)
Total liabilities and stockholders' equity (deficit)	$ 6,633	$ 11,388

See Accompanying Notes to these Consolidated Financial Statements

PLUS THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)

	For the Years Ended December 31,	
	2024	2023
Grant revenue	$ 5,824	$ 4,913
Operating expenses:		
Research and development	10,580	9,690
General and administrative	9,939	8,544
Total operating expenses	20,519	18,234
Operating loss	(14,695)	(13,321)
Other income (expense):		
Financing expense	(3,545)	—
Change in fair value of warrants	5,654	—
Warrant issuance costs	(486)	—
Interest income	273	400
Interest expense	(179)	(395)
Total other income	1,717	5
Net loss	$ (12,978)	$ (13,316)
Per share information:		
Net loss per share of common stock - basic	$ (1.95)	$ (4.24)
Weighted average number of shares of common stock outstanding - basic	6,640,251	3,140,925
Net loss per share of common stock - diluted	$ (2.34)	$ (4.24)
Weighted average number of shares of common stock outstanding - diluted	7,700,774	3,140,925

See Accompanying Notes to these Consolidated Financial Statements

PLUS THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

(in thousands, except share data)

	Preferred Stock		Convertible preferred stock		Common stock				Additional paid-in	Accumulated	Total stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Treasury Stock		capital	deficit	equity (deficit)
Balance at December 31, 2022	—	$ —	1,952	$ —	2,240,092	$ 2	—	$ —	$ 473,628	$ (467,185)	$ 6,445
Issuance of Series F preferred stock	1	—	—	—	—	—	—	—	—	—	—
Redemption of Series F preferred stock	(1)	—	—	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	—	—	—	569	—	569
Sale of common stock, net	—	—	—	—	2,230,493	3	—	—	5,002	—	5,005
Issuance of common stock for in process research and development	—	—	—	—	53,381	—	—	—	75	—	75
Fractional adjustment	—	—	—	—	(1,310)	—	—	—	—	—	—
Purchase of treasury stock	—	—	—	—	—	—	(78,559)	(126)	—	—	(126)
Net loss	—	—	—	—	—	—	—	—	—	(13,316)	(13,316)
Balance at December 31, 2023	—	$ —	1,952	$ —	4,522,656	$ 5	(78,559)	$ (126)	$ 479,274	$ (480,501)	$ (1,348)
Issuance of common stock	—	—	—	—	1,439,988	1	—	—	—	—	1
Exercise of pre-funded warrants	—	—	—	—	192,114	—	—	—	—	—	—
Purchase of treasury stock	—	—	—	—	—	—	(179,866)	(374)	—	—	(374)
Share-based compensation	—	—	—	—	—	—	—	—	550	—	550
Reclass of warrants to equity	—	—	—	—	—	—	—	—	5,200	—	5,200
Net loss	—	—	—	—	—	—	—	—	—	(12,978)	(12,978)
Balance at December 31, 2024	—	$ —	1,952	$ —	6,154,758	$ 6	(258,425)	$ (500)	$ 485,024	$ (493,479)	$ (8,949)

See Accompanying Notes to these Consolidated Financial Statements

PLUS THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	For the Years Ended December 31,	
	2024	2023
Cash flows used in operating activities:		
Net loss	$ (12,978)	$ (13,316)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	723	628
Amortization of deferred financing costs and debt discount	20	190
Common stock issued for research and development	—	75
Accretion of discount on short-term investments	(111)	—
Non-cash financing expenses	3,545	—
Change in fair value of warrants	(5,654)	—
Loss on disposal of property and equipment	—	2
Share-based compensation expense	550	569
Reduction in the carrying amount of operating lease right-of-use assets	129	117
Increases (decreases) in cash caused by changes in operating assets and liabilities:		
Grant receivable	(571)	—
Other assets	218	2,397
Accounts payable and accrued expenses	4,702	(3,677)
Change in operating lease liabilities	(130)	(117)
Deferred grant liability	(997)	281
Net cash used in operating activities	(10,554)	(12,851)
Cash flows used in investing activities:		
Purchases of property and equipment	(146)	(160)
Purchases of intangible assets	(545)	—
Purchases of short-term investments	(15,590)	—
Redemption of short-term investments	12,170	—
Net cash used in investing activities	(4,111)	(160)
Cash flows from financing activities:		
Principal payments of long-term obligations	(3,996)	(1,608)
Proceeds from credit facility	3,292	—
Proceeds from sale of common stock, warrants and pre-funded warrants, net	7,265	—
Proceeds from sale of common stock, net of offering costs of $0.2 million	—	5,527
Payment of offering costs related to sale of common stock	—	(348)
Purchase of treasury stock	(374)	(126)
Net cash provided by financing activities	6,187	3,445
Net decrease in cash and cash equivalents	(8,478)	(9,566)
Cash and cash equivalents at beginning of period	8,554	18,120
Cash and cash equivalents at end of period	$ 76	$ 8,554
Supplemental disclosure of cash flows information:		
Cash paid during period for:		
Interest	$ 32	$ 222
Supplemental schedule of non-cash investing and financing activities:		
Unpaid offering cost	$ —	$ 174
Common stock issued in payment for in process research and development	$ —	$ 75
Right-of-use assets acquired by assuming operating lease liabilities	$ —	$ 71

See Accompanying Notes to these Consolidated Financial Statements

1. Organization and Operations

The Company

Plus Therapeutics, Inc. is a clinical-stage pharmaceutical company focused on the development, manufacture and commercialization of complex and innovative treatments for patients battling cancer and other life-threatening diseases. CNSide Diagnostics, LLC is a wholly owned subsidiary of Plus Therapeutics, Inc. that develops and commercializes proprietary laboratory-developed tests, such as the CNSide™ Test, designed to identify tumor cells that have metastasized to the central nervous system in patients with carcinomas and melanomas.

Certain Risks and Uncertainties

The Company's prospects are subject to the risks and uncertainties frequently encountered by companies in the early stages of development and commercialization, especially those companies in rapidly evolving and technologically advanced industries such as the biotech/medical device field. The Company's future viability largely depends on its ability to complete development of new products and receive regulatory approvals for those products. No assurance can be given that the Company's new products will be successfully developed, regulatory approvals will be granted, or acceptance of these products will be achieved.

Going Concern

The Company incurred net losses of $13.0 million for the year ended December 31, 2024, and as of December 31, 2024, the Company had an accumulated deficit of $493.5 million and cash and cash equivalents of $76,000 and short term investments of $3.5 million. Additionally, the Company used net cash of $10.6 million to fund its operating activities for the year ended December 31, 2024. The Company had an outstanding balance of $3.3 million under its line of credit facility (Note 9). The Company expects that its research and development expenditures will increase in absolute dollars in 2025 and beyond. These factors raise substantial doubt about the Company's ability to continue as a going concern.

As disclosed in more detail in Note 15 and Note 18, the Company has entered into various financing agreements and raised capital by issuing its common stock.

Nasdaq Listing Compliance

On March 8, 2024, the Company received a written notice (the "Notice") from the Listing Qualifications staff of Nasdaq, notifying the Company that it no longer complied with the requirement under Nasdaq Listing Rule 5550(b)(1) to maintain a minimum of $2.5 million in stockholders' equity (the "Minimum Stockholders' Equity Requirement") for continued listing on The Nasdaq Capital Market or the alternative requirements of having a market value of listed securities of $35 million or net income from continuing operations of $500,000 in the most recently completed fiscal year or two of the last three most recently completed fiscal years.

On September 5, 2024, Nasdaq notified the Company that it had not regained compliance with Nasdaq Listing Rule 5550(b)(1). The Company requested a hearing before the Nasdaq hearing panel ("Panel"), and on October 30, 2024, the Company received a decision from the Panel, notifying the Company that it had until March 4, 2025, to demonstrate compliance with the Minimum Stockholders' Equity Requirement.

The Company regained compliance with the Minimum Stockholders' Equity Requirement in connection with the private placement entered into on March 4, 2025, as described in more detail in Note 18, Subsequent Events.

Pursuant to Nasdaq Listing Rule 5815(d)(4)(B), the Company will be subject to a Mandatory Panel Monitor until March 7, 2026. If the Nasdaq Listing Qualifications staff (the "Staff") finds the Company again out of compliance with the Minimum Stockholders' Equity Requirement before that date, the Company would not be permitted to provide the Staff with a plan of compliance with respect to that deficiency and the Staff would not be permitted to grant additional time for the Company to regain compliance with respect to that deficiency, nor would the Company be afforded an applicable cure or compliance period. Instead, the Staff would issue a "Delist Determination Letter" and the Company would have an opportunity to request a Nasdaq hearing panel regarding its continued listing.

The Company continues to seek additional capital through strategic transactions and from other financing alternatives. Without additional capital, current working capital and cash generated from sales will not provide adequate funding to make debt repayments, for research, sales and marketing efforts and product development activities at their current levels. If sufficient capital

is not raised, the Company will at a minimum need to significantly reduce or curtail its research and development and other operations, and this would negatively affect its ability to achieve corporate growth goals.

Should the Company fail to raise additional cash from outside sources, this would have a material adverse impact on its operations.

The accompanying financial statements have been prepared assuming the Company will continue to operate as a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business, and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from uncertainty related to its ability to continue as a going concern.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions affecting the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. The most significant estimates and critical accounting policies involve reviewing assets for impairment, and determining the assumptions used in measuring share-based compensation expense and warrant liability.

Actual results could differ from these estimates. Management's estimates and assumptions are reviewed regularly, and the effects of revisions are reflected in the financial statements in the periods they are determined to be necessary.

Cash and cash equivalents

The Company considers all highly liquid investments with maturities of three months or less at the time of purchase to be cash equivalents.

Cash and cash equivalents include cash in readily available checking, savings accounts and money market accounts. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to significant risk on its cash balances due to the financial position of the depository institution in which those deposits are held.

Financial Instruments

Financial instruments include cash equivalents, other current assets, accounts payable, accrued expenses, other liabilities and long-term debt. The carrying values of cash equivalents, other current assets, accounts payable, accrued expenses and other liabilities generally approximate fair value due to the short-term nature of these instruments. Based on level 3 inputs and the borrowing rates currently available for loans with similar terms, the Company believes the fair value of the long-term debt is materially consistent with its carrying value.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation expense, which includes the amortization of capitalized leasehold improvements, is provided for on a straight-line basis over the estimated useful lives of the assets, or the life of the lease, whichever is shorter, and range from three to five years. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and the resulting gain or loss, if any, is included in operations. Maintenance and repairs are charged to operations as incurred.

Impairment

The Company assesses its property and equipment and intangible assets for potential impairment when there is a change in circumstances that indicates carrying values of assets may not be recoverable. Such long-lived assets are deemed to be impaired when the undiscounted cash flows expected to be generated by the asset (or asset group) are less than the asset's carrying amount. Any required impairment loss would be measured as the amount by which the asset's carrying value exceeds its fair value and would be recorded as a reduction in the carrying value of the related asset and a charge to operating expense. The Company recognized no impairment losses during any of the periods presented in these financial statements.

Goodwill

The Company's goodwill represents the excess of the cost over the fair value of net assets acquired from its business combinations. The determination of the value of goodwill arising from business combinations requires extensive use of accounting estimates and judgments to allocate the purchase price to the fair value of the net tangible and intangible assets acquired.

Goodwill is not amortized; however, it is assessed for impairment using fair value measurement techniques on an annual basis or more frequently if facts and circumstance warrant such a review. Goodwill is considered to be impaired if the Company determines that the carrying value of the reporting unit exceeds its fair value.

The Company performs its impairment test annually during the fourth quarter by comparing the Company's estimated fair value, calculated from the Company's market capitalization, to its carrying amount. The Company's annual evaluation for impairment of goodwill consists of one reporting unit. The Company completed its most recent annual evaluation for impairment as of December 31, 2024, when the Company had stockholders' deficit within its sole reporting unit of approximately $8.9 million, and concluded that no impairment existed.

Grant Revenue Recognition

In applying the provisions of Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"), the Company has determined that government grants are out of the scope of ASC 606 because the funding entities do not meet the definition of a "customer," as defined by ASC 606, as there is not considered to be a transfer of control of goods or services. With respect to the grant, the Company determines if it is a collaboration arrangement in accordance with ASC Topic 808, Collaborative Arrangements ("ASC 808"). For grants outside the scope of ASC 808, the Company applies International Accounting Standards No. 20, Accounting for Government Grants and Disclosure of Government Assistance, by analogy, and revenue is recognized when the Company incurs expenses related to the grant for the amount the Company is entitled to under the provisions of the contract.

The Company also considers the guidance in ASC Topic 730, Research and Development ("ASC 730"), which requires an assessment, at the inception of the grant, of whether the agreement is a liability. If the Company is obligated to repay funds received regardless of the outcome of the related research and development activities, then the Company is required to estimate and recognize that liability. Alternatively, if the Company is not required to repay the funds, then payments received are recorded as revenue or contra-expense as the expenses are incurred.

Deferred grant liability represents grant funds received or receivable for which the allowable expenses have not yet been incurred as of the balance sheet date. Grant Receivable represents grant funds not yet received for which the allowable expenses have been incurred as of the balance sheet date.

Research and Development

Research and development expenditures, which are charged to operations in the period incurred, include costs associated with the design, development, testing and enhancement of the Company's products, regulatory fees, the purchase of laboratory supplies, and pre-clinical and clinical studies as well as salaries and benefits for the Company's research and development employees.

Warrants

Warrants are accounted for as either derivative liabilities or as equity instruments depending on the specific terms of the agreement in accordance with applicable accounting guidance provided in ASC Topic 815 - *Derivatives and Hedging*. Equity-classified instruments are recorded in additional paid-in capital at issuance and are not subject to remeasurement. Liability-classified warrants are recorded at fair value at each reporting period with any change in fair value recognized as a component of change in fair value of warrants in the consolidated statements of operations. The Company periodically evaluates changes in facts and circumstances that could impact the classification of warrants.

Available-for-Sale Securities

The Company's available-for-sale securities consist of U.S. government and agency securities. Securities with maturities from the date of purchase of less than three months are included in cash equivalents. The Company classifies its marketable securities as available-for-sale and records such assets at estimated fair value in the consolidated balance sheets, with unrealized gains and losses, if any, reported as a component of other comprehensive income (loss) within the consolidated statements of operations and comprehensive income/loss and as a separate component of stockholders' equity. Realized gains and losses are calculated on the specific identification method and recorded as interest income (loss). At each balance sheet date, the Company assesses available-for-sale securities in an unrealized loss position to determine whether the decline in fair value below amortized cost is a result of credit losses or other factors, whether the Company expects to recover the amortized cost of the security, the Company's intent to sell and if it is more likely than not that the Company will be required to sell the securities before the recovery of amortized cost.

The Company records changes in allowance for expected credit loss in other income (expense). There has been no allowance for expected credit losses recorded during any of the periods presented.

Any premium arising at purchase is amortized to the earliest call date and any discount arising at purchase is accreted to maturity. Accretion of discounts are recorded in interest income in the consolidated statements of operations and comprehensive income/loss.

During the year ended December 31, 2024, the total unrealized gains and losses on the Company's available-for-sale securities were immaterial, and not presented separately in the consolidated statement of operations.

Deferred Financing Costs and Other Debt-Related Costs

Deferred financing costs are capitalized, recorded as an offset to debt balances and amortized to interest expense over the term of the associated debt instrument using the effective interest method. If the maturity of the debt is accelerated because of default or early debt repayment, then the amortization would be accelerated.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income (loss) in the years in which those temporary differences are expected to be recovered or settled. Due to our history of losses, a full valuation allowance has been recognized against our deferred tax assets.

The Company's policy is to recognize interest and penalties related to income tax matters in income tax expense. For the years ended December 31, 2024 and 2023, the Company has not recorded any interest or penalties related to income tax matters. The Company does not foresee any material changes to unrecognized tax benefits within the next twelve months.

Share-Based Compensation

The Company recognizes the fair value of all share-based payment awards in our statements of operations over the requisite vesting period of each award, which approximates the period during which the employee and non-employee director is required to provide service in exchange for the award. The Company estimates the fair value of these options using the Black-Scholes option pricing model using assumptions for expected volatility, expected term, and risk-free interest rate. Expected volatility is based primarily on historical volatility and is computed using daily pricing observations for recent periods that correspond to the expected term of the options. The expected term represents the period of time that options are expected to be outstanding. Because the Company does not have historical exercise behavior, it determines the expected life assumption using the simplified method which is an average of the contractual term of the option and its vesting period. The risk-free interest rate is the interest rate for treasury instruments with maturities that approximate the expected term.

Segment Information

For the years ended December 31, 2024 and 2023, the Company is managed as a single operating segment, and therefore reports its results in one operating segment.

Loss Per Share

Basic per share data is computed by dividing net income or loss applicable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted per share data is computed by dividing net income or loss applicable to common stockholders by the weighted average number of common shares outstanding during the period increased to include, if dilutive, the number of additional common shares that would have been outstanding as calculated using the treasury stock method. Potential common shares were related entirely to outstanding but unexercised options, warrants and convertible preferred stocks for all periods presented.

Concentration Risk

Although the Company's contracts with its vendors are not exclusive, the Company currently uses sole source providers for core materials used in its clinical trials.

Recently Issued Accounting Pronouncements

In November 2023, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures. The new standard is intended to improve annual and interim reportable segment disclosure requirements regardless of number of reporting units,

primarily through enhanced disclosures of significant expenses. The amendment requires public entities to disclose significant segment expenses that are regularly provided to the Company's chief operating decision maker ("CODM") and included within each reported measure of segment profit and loss. This update is effective for fiscal years beginning after December 15, 2023, and interim periods within those fiscal years starting after December 15, 2024. This ASU must be applied retrospectively to all prior periods presented. Management adopted this ASU as of December 31, 2024 and included additional disclosures as required in the footnotes to this annual report on Form 10-K.

In December 2023, the FASB issued ASU No. 2023-09 Income Taxes (Topic 740): Improvements to Income Tax Disclosure. This ASU includes amendments that further enhance income tax disclosures, primarily through standardization and disaggregation of rate reconciliation categories and income taxes paid by jurisdiction. The ASU is effective for years beginning after December 15, 2024, but early adoption is permitted. This ASU should be applied on a prospective basis, although retrospective application is permitted. Management does not expect the adoption of this ASU to have a material impact on the Company's consolidated financial statements and related disclosures.

In November 2024, the FASB issued ASU 2024-03 Income Statement (Topic 220): Reporting Comprehensive Income - Expense Disaggregation Disclosures, which requires an entity to disclose on an annual and interim basis, disaggregated information about specific income statement expense categories. The guidance should be applied prospectively with the option to apply the standard retrospectively. The standard becomes effective for the annual period starting on January 1, 2027 and interim periods starting on January 1, 2028. The Company is in the process of analyzing the impact that the adoption of ASU 2024-03 will have on its disclosures.

3. Fair Value Measurements

Fair value measurements are market-based measurements, not entity-specific measurements. Therefore, fair value measurements are determined based on the assumptions that market participants would use in pricing the asset or liability. The Company follows a three-level hierarchy to prioritize the inputs used in the valuation techniques to derive fair values. The basis for fair value measurements for each level within the hierarchy is described below:

- Level 1: Quoted prices in active markets for identical assets or liabilities.
- Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.
- Level 3: Valuations derived from valuation techniques in which one or more significant inputs are unobservable in active markets.

The Company has investments in money market accounts, which are included in cash and cash equivalents on the balance sheets. Fair value inputs for these investments are considered Level 1 measurements within the fair value hierarchy since money market account fair values are known and observable through daily published floating net asset values.

The following table summarizes the Company's fair value hierarchy for its financial assets measured at fair value on a recurring basis as of December 31, 2024 and December 31, 2023, respectively (in thousands).

		Fair Value Measurements Using		
December 31, 2024	**Fair Value**	**Level 1**	**Level 2**	**Level 3**
Cash equivalents				
Money market	$ 74	$ 74	$ —	$ —
Total cash equivalents	$ 74	$ 74	$ —	$ —
Investments				
Treasury bills	2,062	—	2,062	—
Government agency bonds	772	772	—	—
Money market	696	696	—	—
Total investments	$ 3,530	$ 1,468	$ 2,062	$ —

		Fair Value Measurements Using		
December 31, 2023	**Fair Value**	**Level 1**	**Level 2**	**Level 3**
Money market	$ 5,449	$ 5,449	$ —	$ —

During the year ended December 31, 2024, the Company issued common stock warrants which were initially classified as liabilities under authoritative accounting standards, and reclassified in the equity section of the balance sheet upon modification

in August 2024 (See Note 15, Stockholders' Deficit - May 2024 Private Placement, for further details). These common stock warrants were valued using the Black Scholes model, with level 3 inputs such as expected volatility, risk-free interest rate, and expected term that are not observable in active markets.

The table below summarizes key inputs used in the valuation of the liability classified warrants as of the issuance date and as of the date of amendment:

	As of issuance date	As of date of amendment
Expected term	1.1 - 5.0 years	0.9 - 4.7 years
Common stock market price	$2.01 - $2.27	$1.45
Risk-free interest rate	4.5% - 5.1%	3.81% - 4.63%
Expected volatility	117.0% - 127.2%	92.2% - 99.79%

The table below provides a summary of the fair value of the Company's warrant liability during year ended December 31, 2024 (in thousands). As of December 31, 2023, the fair value of liability classified warrants was immaterial, and the change in the fair value of liability classified warrants during the year ended December 31, 2023 was immaterial.

Warrant liability	Twelve Months Ended December 31, 2024
Beginning balance	$ —
Issuance of warrants	10,854
Change in fair value of warrants	(5,654)
Reclassification to equity	(5,200)
Ending balance	$ —

Nonfinancial Assets and Liabilities

The Company applies fair value techniques on a non-recurring basis, if and when necessary, associated with: (1) valuing potential impairment losses related to goodwill and intangible assets which are accounted for pursuant to the authoritative guidance for intangibles—goodwill and other; and (2) valuing potential impairment losses related to long-lived assets which are accounted for pursuant to the authoritative guidance for property, plant and equipment. There was no impairment related to long lived assets, intangible assets, or goodwill during the years ended December 31, 2024 or 2023.

4. Investments

As of December 31, 2024, the Company had total investments of $3.5 million of money market accounts, treasury bills, and government agency bonds, with total amortized cost and fair value of $3.5 million. These investments are collateralized marketable securities as described in footnote 10. The Company did not have investments as of December 31, 2023.

As of December 31, 2024, the Company classified available-for-sales as short-term investments in the consolidated balance sheet because the maturity dates were less than one year from the date of the purchase.

5. Loss per Share

The shares of the Company's common stock underlying the pre-funded warrants described in Note 15, are included in the weighted average outstanding common stock in the calculation of basic and diluted net loss per share. The Company considers Series A Warrants, and Series B Warrants to be participating securities, because holders of such instruments participate in the event a dividend is paid on common stock. The holders of the Series A Warrants and Series B Warrants do not have a contractual obligation to share in the Company's losses. As such, losses are attributed entirely to common stockholders.

The following table sets forth the computation of basic and diluted net loss per share of common stock for the periods indicated, in thousands except share and per share data:

	For the Year Ended December 31,	
	2024	2023
Basic and diluted net loss per share of common stock calculation:		
Net loss	$ (12,978)	$ (13,316)
Change in fair value of warrants	(5,047)	-
Net loss attributable to common stockholders - diluted	$ (18,025)	$ (13,316)
Weighted average shares of common stock outstanding - basic	6,640,251	3,140,925
Net loss per share of common stock - basic	$ (1.95)	$ (4.24)
Weighted average shares of common stock - diluted	7,700,774	3,140,925
Net loss per share of common stock - diluted	$ (2.34)	$ (4.24)

The following were excluded from the diluted loss per share calculation for the periods presented because their effect would be anti-dilutive:

	For the Year Ended December 31,	
	2024	2023
Outstanding stock options	598,540	140,109
Preferred stock	28,190	28,190
Outstanding warrants	7,183,064	142,733
Total	7,809,794	311,032

6. Composition of Certain Financial Statement Captions

Other Current Assets

As of December 31, 2024 and 2023, other current assets were comprised of the following (in thousands):

	December 31,	
	2024	2023
Prepaid services	$ 87	$ 410
Deferred costs (Note 7)	436	234
Prepaid insurance	559	636
	$ 1,082	$ 1,280

Property and Equipment, net

As of December 31, 2024 and 2023, property and equipment, net, were comprised of the following (in thousands):

	December 31,	
	2024	2023
Office and computer equipment	$ 1,778	$ 1,632
Leasehold improvements	1,810	1,810
	3,588	3,442
Less accumulated depreciation	(3,140)	(2,536)
	$ 448	$ 906

Depreciation expense totaled $0.6 million for each of the years ended December 31, 2024 and 2023, respectively.

Intangible Assets, net

As of December 31, 2024, intangible assets included the net book value of costs incurred for purchase of Biocept intellectual properties (Note 12) and software upgrades. Amortization expenses totaled $0.1 million for each of the years ended December 31, 2024 and 2023.

As of December 31, 2024 intangible assets, net, were comprised of the following (in thousands):

	December 31, 2024		
	Gross Carrying Amount	Accumulated Amortization	Intangible Asset, Net
Software	$ 221	$ (218)	$ 3
Intellectual Property	546	(80)	466
Total intangible assets	$ 767	$ (298)	$ 469

As of December 31, 2023 intangible assets, net, were comprised of the following (in thousands):

	December 31, 2023		
	Gross Carrying Amount	Accumulated Amortization	Intangible Asset, Net
Software	$ 221	$ (179)	$ 42
Total intangible assets	$ 221	$ (179)	$ 42

As of December 31, 2024, future amortization expense on intangible assets is estimated to be as follows (in thousands):

Year Ending December 31,	Amount
2025	140
2026	136
2027	136
2028	57
Total future amortization expense	$ 469

Accounts Payable and Accrued Expenses

As of December 31, 2024 and 2023, accounts payable and accrued expenses were comprised of the following (in thousands):

	December 31,	
	2024	2023
Accounts payable	$ 9,474	$ 4,758
Accrued payroll and bonus	920	987
Accrued professional fees	236	128
Accrued vacation and compensation	356	370
Accrued R&D studies	185	388
Accrued interest	117	—
	$ 11,288	$ 6,631

7. Commitments and Contingencies

Leases

At the inception of a contractual arrangement, the Company determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time. If both criteria are met, the Company calculates the associated lease liability and corresponding right-of-use asset upon lease commencement using a discount rate based on the rate implicit in the lease or an incremental borrowing rate commensurate with the term of the lease. Lease renewable options are included in the estimation of lease term when it is reasonably certain that the Company will exercise such options.

The Company records lease liabilities within current liabilities or long-term liabilities based upon the length of time associated with the lease payments. The Company records its operating lease right-of-use assets as long-term assets. Leases with an initial

term of 12 months or less are not recorded on the balance sheets. Instead, the Company recognizes lease expense for these leases on a straight-line basis over the lease term in the statements of operations.

The Company leased laboratory, office and storage facilities in San Antonio, Texas, under operating lease agreements that expire in 2025. The Company also leased, through December 31, 2024, certain office space in Austin, Texas under a month-to-month operating lease agreement and certain office space in Charlottesville, Virginia (the "Charlottesville Lease"). The Company's existing operating lease agreements generally provide for periodic rent increases, and renewal and termination options. The Company's lease agreements do not contain any material variable lease payments, residual value guarantees or material restrictive covenants.

The Charlottesville Lease has a term of 12 months and the Company has the ability to renew for three additional one-year periods. On March 31, 2023, Company believed that it was reasonably certain that the Charlottesville Lease will be renewed through March 31, 2026, and as a result, it remeasured the related lease liability as of March 31, 2023 to be $80,000 using the then-in-effect discount rate of 12.76%. Effective July 1, 2023, the Company added additional office lease premises in Charlottesville, which was accounted for as a separate operating lease contract with a lease liability and corresponding right-of-use asset of $19,000, at a discount rate of 13.47%.

Certain leases require the Company to pay taxes, insurance, and maintenance. Payments for the transfer of goods or services such as common area maintenance and utilities represent non-lease components. The Company elected the package of practical expedients and therefore does not separate non-lease components from lease components.

The Company's operating lease liabilities and corresponding right-of-use assets are included in the balance sheets. As of December 31, 2024, the weighted average discount rate used to measure operating lease liabilities and the operating leases remaining term were 11.6% and 0.9 years, respectively.

The table below summarizes the Company's operating lease costs from its statements of operations, and cash payments from its statements of cash flows (in thousands).

	Year Ended December 31,	
	2024	2023
Lease expense:		
Operating lease expense	$ 145	$ 141
Total lease expense	$ 145	$ 141
Cash payment information:		
Operating cash used for operating leases	$ 180	$ 141
Total cash paid for amounts included in the measurement of lease liabilities	$ 180	$ 141

Total rent expenses for each of the years ended December 31, 2024 and 2023 was $0.2 million, which includes leases in the table above, month-to-month operating leases, and common area maintenance charges.

The Company's future minimum annual lease payments under operating leases at December 31, 2024 are as follows (in thousands):

	Operating Leases
2025	$ 69
2026	11
Total minimum lease payments	80
Less: amount representing interest	$ (5)
Present value of obligations under leases	75
Less: current portion	44
Noncurrent lease obligations	$ 31

Manufacturing Agreement with SpectronRX

On November 5, 2024, the Company entered into a manufacturing services agreement with SpectronRx for drug product development and manufacturing, which includes an initial commitment fee of $0.3 million. Under this agreement, the Company will own all rights to intellectual property related to the products developed, while SpectronRx retains rights to its own technology.

SpectronRx is required to negotiate a commercial supply agreement upon six months' written notice before the Company's first commercial manufacturing needs. The agreement will remain in place for five years, automatically renewing for successive one-year terms unless terminated with six months' notice. During the year ended December 31, 2024, the Company did not recognize any expenses related to this agreement.

Other Commitments and Contingencies

The Company has entered into agreements with various research organizations for pre-clinical and clinical development studies, which have provisions for cancellation. Under the terms of these agreements, the vendors provide a variety of services including conducting research, recruiting and enrolling patients, monitoring studies and data analysis. Payments under these agreements typically include fees for services and reimbursement of expenses. The timing of payments due under these agreements is estimated based on current study progress. As of December 31, 2024, the Company did not have any clinical research study obligations.

The Company has entered into service and subscription-based agreements, which are recorded in accounts payable and accrued expenses, with an offsetting amount included in deferred costs within other current assets (see Note 6).

Legal proceedings

The Company is subject to various claims and contingencies related to legal proceedings. Due to their nature, such legal proceedings involve inherent uncertainties including, but not limited to, court rulings, negotiations between affected parties and governmental actions. Management assesses the probability of loss for such contingencies and accrues a liability and/or discloses the relevant circumstances, as appropriate.

8. License Agreements

UT Health Science Center at San Antonio ("UTHSCSA") License Agreement

On December 31, 2021, the Company entered into a Patent and Know-How License Agreement with UTHSCSA, pursuant to which UTHSCSA granted the Company an irrevocable, perpetual, exclusive, fully paid-up license, with the right to sublicense and to make, develop, commercialize and otherwise exploit certain patents, know-how and technology related to the development of biodegradable alginate microspheres containing nanoliposomes loaded with imaging and/or therapeutic payloads.

NanoTx License Agreement

On March 29, 2020, the Company and NanoTx, Corp. ("NanoTx") entered into a Patent and Know-How License Agreement (the "NanoTx License Agreement"), pursuant to which NanoTx granted the Company an irrevocable, perpetual, exclusive, fully paid-up license, with the right to sublicense and to make, develop, commercialize and otherwise exploit certain patents, know-how and technology related to the development of radiolabeled nanoliposomes.

The transaction terms included an upfront payment of $0.4 million in cash and $0.3 million in the Company's voting stock. The transaction terms also included success-based milestone and royalty payments contingent on key clinical, regulatory and sales milestones, as well as the requirement to pay 15% of any non-dilutive monetary awards or grants received from external agencies to support product development of the nanoliposome encapsulated BMEDA-chelated radioisotope, which includes grants from the Cancer Prevention & Research Institute of Texas ("CPRIT"). As of December 31, 2024, the Company accrued $1.0 million of payments due to NanoTx as a result of the CPRIT grant received (Note 11).

9. Term Loan Obligations

On May 29, 2015, the Company entered into the Loan and Security Agreement (the "Loan and Security Agreement"), pursuant to which Oxford Finance, LLC ("Oxford") funded an aggregate principal amount of $17.7 million (the "Term Loan"), subject to the terms and conditions set forth in the Loan and Security Agreement.

Pursuant to the Loan and Security Agreement, as amended, the Company made interest only payments through May 1, 2021, and thereafter was required to make payments of principal and accrued interest in equal monthly installments sufficient to amortize the Term Loan through June 1, 2024, the maturity date. On June 3, 2024, the Company paid off the Term Loan by making a final payment in an aggregate amount equal to approximately $3.3 million, which included both the balance of outstanding principal and interest and the final payment fee due. The repayment in full of the Term Loan terminated Oxford's security interest in the Company's existing and after-acquired assets, as well as all other restrictions and covenants under the Term Loan.

10. Line of Credit Facility

On May 31, 2024, the Company drew down $3.3 million on a new margin loan facility under a line of credit (the "Pershing Credit Facility") with Pershing LLC ("Pershing"), an affiliate of The Bank of New York Mellon Corporation. The available credit line limit under the Pershing Credit Facility fluctuated based on the Company's request for extensions from time to time, subject to the value of the collateralized marketable securities the Company holds with Pershing, provided that the amount available to draw under the Pershing Credit Facility cannot exceed 91.5% of the value of the collateralized marketable securities deposited with Pershing. Depending on the value of the marketable securities the Company held with Pershing, Pershing could have required the Company from time-to-time to deposit additional funds or marketable securities in order to restore the level of collateral to an acceptable level. The amounts borrowed under the Pershing Credit Facility were due on demand. As of December 31, 2024, the Company held collateralized marketable securities with Pershing with a total value of $3.5 million.

Borrowings under the Pershing Credit Facility bore interest at the target interest rate set by the Federal Open Market Committee, subject to a floor of 5.5%, plus a spread of 1.75% and applicable fees of 0.5%, subject to a maximum interest rate of the then applicable Prime Rate as published in The Wall Street Journal plus 3.0%. Interest payments thereunder were calculated on a monthly basis and, unless paid, were added to the outstanding balance under the Pershing Credit Facility. The proceeds under the Pershing Credit Facility are available for working capital needs and other general corporate purposes. Volatility in the global markets could cause the interest rate to fluctuate from time to time increasing the Company's costs, or could cause Pershing to terminate the Company's ability to borrow funds. In addition, borrowings under the Pershing Credit Facility have the effect of limiting the Company's use of cash and marketable securities.

On January 3, 2025, the Pershing Credit Facility was fully repaid and the collateralized marketable securities were fully redeemed.

11. Grant Revenue

CPRIT Grant

On September 19, 2022, the Company entered into that certain Cancer Research Grant Contract (the "CPRIT Contract"), effective as of August 31, 2022, with the Cancer Prevention and Research Institute of Texas ("CPRIT"), pursuant to which CPRIT provides the Company with a CPRIT grant ("CPRIT Grant") over a three-year period to fund the continued development of REYOBIQ™ for the treatment of patients with leptomeningeal metastases. The CPRIT Grant is subject to customary CPRIT funding conditions, including, but not limited to, a matching fund requirement (one dollar for every two dollars awarded by CPRIT), revenue sharing obligations upon commercialization of REYOBIQ™ based on specific dollar thresholds and tiered low single digit royalty rates until CPRIT receives the aggregate amount of 400% of the proceeds awarded under the CPRIT Grant, and certain reporting requirements.

The CPRIT Contract will terminate on August 30, 2025, unless terminated earlier by (a) the mutual written consent of all parties to the CPRIT Contract, (b) CPRIT for an event of default by the Company, (c) CPRIT, if the funds allocated to the CPRIT Grant become legally unavailable during the term of the CPRIT Contract and CPRIT is unable to obtain additional funds for such purposes, and (d) the Company for convenience. CPRIT may require the Company to repay some or all of the disbursed CPRIT Grant proceeds (with interest not to exceed 5% annually) in the event of the early termination of the CPRIT Contract by CPRIT for an event of default by the Company or by the Company for convenience, or if the Company relocates its principal place of business outside of the state of Texas during the CPRIT Contract term or within three years after the final payment of the grant funds.

The Company retains ownership over any intellectual property developed under the CPRIT Contract (each, a "Project Result"). With respect to non-commercial use of any Project Result, the Company granted to CPRIT a nonexclusive, irrevocable, royalty-free, perpetual, worldwide license with right to sublicense any necessary additional intellectual property rights to exploit all Project Results by CPRIT, other governmental entities and agencies of the State of Texas, and private or independent institutions of higher education located in Texas, for education, research and other non-commercial purposes.

The Company recognized $5.8 million and $4.9 million in grant revenue from the CPRIT Contract during the years ended December 31, 2024 and 2023, respectively. As of December 31, 2024, the Company had $0.6 million of grant revenue receivable related to the CPRIT Grant. As of December 31, 2023, the Company had $1.9 million of deferred CPRIT grant revenue.

In February 2025, the Company received $2.0 million under the CPRIT Contract.

Department of Defense Award

Effective September 1, 2024, the Company entered into an agreement with the Department of Defense office of the Congressionally Directed Medical Research Programs to receive a $3.0 million award for research and development purposes ("DoD Award") over a three year period. The DoD Award will be used to support the planned expansion of the Company's clinical

trial for pediatric brain cancer. On October 4, 2024, the Company received its first payment under the DoD Award in the amount of $0.9 million, which was recorded as deferred grant liability as of December 31, 2024. As of December 31, 2024, no grant revenue has been recognized related to the DoD Award.

12. Biocept Asset Acquisitions

On April 26, 2024, the Company, after having its bid accepted by the United States Bankruptcy Court for the District of Delaware, acquired from Biocept, for a total cash payment of $400,000, substantially all of the right, title and interest in a cerebrospinal fluid cancer diagnostic portfolio (the "CNSide™ Platform"), including (i) intellectual property, (ii) inventory and raw materials, and (iii) data, information, results and reports pertaining to the completed and on-going clinical studies involving the use of the CNSide™ Platform (including, but not limited to, the FORESEE clinical study that was being conducted by Biocept), related to the development, making, selling, and exporting or importing of the CNSide™ proprietary cell enumeration test (the "CNSide™ Test").

The Company concluded that the acquisition of the Biocept assets was not a business combination, as Biocept did not meet the definition of a business in ASC 805, Business Combination. The Company accounted for the asset purchase transaction under the authoritative guidance for asset acquisitions, and allocated the costs of acquisitions of approximately $45,000 among the assets acquired based on the relative fair value of such assets, which is predominately concentrated in the intellectual property acquired including patents and trademarks. The intangible assets acquired from Biocept are capitalized and amortized over a useful life of four years.

13. Income Taxes

Pursuant to the Internal Revenue Code ("IRC") of 1986, as amended, specifically IRC §382 ("Section 382") and IRC §383, the Company's ability to use net operating loss ("NOLs") and R&D tax credit carry forwards ("tax attribute carry forwards") to offset future taxable income is limited if the Company experiences a cumulative change in ownership of more than 50% within a three-year testing period. The Company's use of federal and state NOLs and research credits could be limited further by the provisions of Section 382 depending upon the timing and amount of additional equity securities that the Company has issued or will issue. State NOL carryforwards may be similarly limited. If a change in ownership were to have occurred, NOL and tax credits carryforwards could be eliminated or restricted. If eliminated, the related asset would be removed from the deferred tax asset schedule with a corresponding reduction in the valuation allowance. Due to the existence of the valuation allowance, limitations created by ownership changes, if any, will not impact the Company's effective tax rate.

The Company has recorded a full valuation allowance against its net deferred tax assets and due to our net losses for the years ended December 31, 2024 and 2023, there was no provision or benefit for income taxes recorded.

The table below summarizes the Company's net loss before income tax provision for the years ended December 31, 2024 and 2023 (in thousands):

	2024	2023
Domestic	$ (12,978)	$ (13,316)
Foreign	—	—
Net loss before provision for income taxes	$ (12,978)	$ (13,316)

A reconciliation of the total income tax provision tax rate to the statutory federal income tax rates of 21.0% for the years ended December 31, 2024 and 2023, respectively, is as follows:

	2024	2023
Income tax expense (benefit) at federal statutory rate	(21.0)%	(21.0)%
Change in valuation allowance	23.8%	25.5%
Income tax benefit at state statutory rate	(0.3)%	(0.2)%
Share-based compensation	0.9%	1.0%
Warrants	(2.6)%	—
NOLs expiring and adjustments to NOL	(0.1)%	(0.1)%
Research credit	(0.7)%	(5.1)%
Return to provision	—	(0.1)%
	(0.0)%	0.0%

The tax effects of temporary differences that give rise to significant portions of our deferred tax assets and deferred tax liabilities as of December 31, 2024 and 2023 are as follows (in thousands):

	2024	2023
Deferred tax assets:		
Accrued expenses	$ 249	$ 269
Share-based compensation	94	99
Net operating loss carryforwards	15,412	13,397
Income tax credit carryforwards	1,725	1,630
Property and equipment, net	218	154
Intangible assets	730	685
Capitalized R&D	3,949	2,842
Other, net	213	453
Total deferred tax assets	22,590	19,529
Valuation allowance	(22,575)	(19,486)
Total deferred tax assets, net of allowance	15	43
Deferred tax liabilities:		
Other	(15)	(43)
Total deferred tax liability	(15)	(43)
Net deferred tax assets (liability)	$ —	$ —

The Company has established a valuation allowance against its net deferred tax assets due to the uncertainty surrounding the realization of such assets. The Company periodically evaluates the recoverability of the deferred tax assets. At such time as it is determined that it is more likely than not that deferred tax assets are realizable, the valuation allowance will be reduced. The Company has recorded a full valuation allowance of $22.6 million as of December 31, 2024 as it does not believe it is more likely than not the net deferred tax assets will be realized. The Company increased its valuation allowance by approximately $3.1 million during the year ended December 31, 2024.

At December 31, 2024, the Company had federal and state tax loss carry forwards of approximately $72.6 million, and $3.3 million, respectively. The federal and state net operating loss carry forwards begin to expire in 2037 and 2044, if unused, respectively. The federal net operating loss carryover includes $69.2 million of net operating losses generated after 2017. Federal net operating losses generated from 2018 onwards carryover indefinitely and may generally be used to offset up to 80% of future taxable income. At December 31, 2024, the Company had federal tax credit carry forwards of approximately $1.9 million, before reduction for uncertain tax positions. The federal credits will begin to expire in 2039, if unused. In addition, at December 31, 2024, the Company had state tax credit carry forwards of approximately $0.2 million, before reduction for uncertain tax positions. The state credits will begin to expire in 2039, if unused.

The Company follows the provisions of income tax guidance which provides recognition criteria and a related measurement model for uncertain tax positions taken or expected to be taken in income tax returns. The guidance requires that a position taken or expected to be taken in a tax return be recognized in the financial statements when it is more likely than not that the position would be sustained upon examination by tax authorities. Tax positions that meet the more likely than not threshold are then measured using a probability weighted approach recognizing the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement. The Company has not recognized any liability for uncertain tax positions as of December 31, 2024 and 2023.

Following is a tabular reconciliation of the unrecognized tax benefits activity during the years ended December 31, 2024 and 2023 (in thousands):

	2024	2023
Unrecognized Tax Benefits – Beginning	$ 408	$ 209
Gross decreases – tax positions in prior period	(5)	(16)
Gross increase – current-period tax positions	21	215
Unrecognized Tax Benefits – Ending	$ 424	$ 408

The unrecognized tax benefit amounts are reflected in the determination of the Company's deferred tax assets. If recognized, none of these amounts would affect the Company's effective tax rate, since it would be offset by an equal reduction in the deferred tax asset valuation allowance. The Company does not foresee material changes to its liability for uncertain tax benefits within the next twelve months.

The Company did not recognize interest related to unrecognized tax benefits in interest expense and penalties in operating expenses for the year ended December 31, 2024.

The Company files income tax returns with the United States and various state jurisdictions. The Company is currently not under examination by the Internal Revenue Service or any other taxing authority.

With few exceptions, the Company's tax years prior to 2021 are no longer open to examination by the taxing authority. While not open to examination, the tax attributes generated in tax years prior to 2021 remain subject to adjustment by the taxing authorities if utilized in tax years which are still open to examination.

14. Employee Benefit Plan

The Company implemented a 401(k) retirement savings and profit sharing plan (the "Plan") effective January 1, 1999. During 2022, the Company commenced safe harbor matching contribution for up to 4% of eligible employee contributions. Total matching contribution under the Plan amounted to approximately $138,000 and $107,000 for the year ended December 31, 2024 and 2023, respectively.

15. Stockholders' Equity

Preferred Stock

The Company has authorized 5,000,000 shares of preferred stock, par value $0.001 per share. The Board is authorized to designate the terms and conditions of any preferred stock the Company issues without further action by the common stockholders.

Series F Preferred Stock

On March 3, 2023, the Company filed a certificate of designation (the "Certificate of Designation") with the Secretary of State of the State of Delaware, effective as of the time of filing, designating the rights, preferences, privileges and restrictions of the Series F Preferred Stock, with the total authorization of one (1) share of Series F Preferred Stock. The Certificate of Designation provided that the share of Series F Preferred Stock would have 50,000,000 votes per share of Series F Preferred Stock and would vote together with the Company's common stock as a single class exclusively with respect to any proposal to amend the Company's certificate of incorporation to effect a reverse stock split. On March 3, 2023, the Company entered into a subscription and investment representation agreement with Richard J. Hawkins, chairman of the board of the Company, who is an accredited investor (the "Series F Preferred Stock Purchaser"), pursuant to which the Company agreed to issue and sell one (1) share of the Company's Series F Preferred Stock, par value $0.001 per share, to the Series F Preferred Stock Purchaser for $1,000 in cash. The sale closed on March 3, 2023.

The outstanding share of Series F Preferred Stock was redeemed in whole, automatically effective upon the approval by the Company's stockholders of the reverse stock split in April 2023. Upon such redemption, the Series F Preferred Stock Purchaser received consideration of $1,000 in cash.

On November 12, 2024, the Company filed a Certificate of Elimination ("Certificate of Elimination") with the Secretary of State of the State of Delaware effecting the elimination of the Certificate of Designation relating to the Series F Preferred Stock. Following the filing of the Certificate of Elimination the previously authorized share of the Series F Preferred Stock resumed the status of an undesignated share of the Company's preferred stock.

Series B and C Preferred Stock

As of December 31, 2024, there were 938 outstanding shares of Series C Preferred Stock that can be converted into an aggregate of 27,792 shares of common stock, and 1,014 shares of Series B Convertible Preferred Stock that can be converted into an aggregate of 398 shares of common stock.

Common Stock

May 2024 Private Placement

On May 5, 2024, the Company entered into a securities purchase agreement (the "Securities Purchase Agreement") with certain investors, including certain of the Company's directors and executive officers ("Company Insiders") (collectively, the "Purchasers"), for the sale and issuance by the Company of its securities (the "Initial Subscription"). On May 8, 2024, the Company entered into a first amendment to the Securities Purchase Agreement (together with the Securities Purchase Agreement, the "Purchase Agreement"), for the sale and issuance by the Company of additional securities to two of

the Purchasers (the "Additional Subscription," and together with the Initial Subscription, the "May 2024 Private Placement"). The Purchase Agreement provides for the sale and issuance by the Company of an aggregate of 3,591,532 shares (the "Private Placement Shares") of the Company's common stock or, at the election of each Purchaser, pre-funded warrants (the "Pre-Funded Warrants"), exercisable immediately at an exercise price of $0.001 per share, with each Private Placement Share or Pre-Funded Warrant accompanied by (i) a Series A common warrant ("Series A Warrants") to purchase one share of common stock, for an aggregate of 3,591,532 Series A Warrants, and (ii) one Series B common warrant ("Series B Warrants") to purchase one share of common stock, for an aggregate of 3,591,532 Series B Warrants.

The combined purchase price for each Private Placement Share and Pre-Funded Warrant from the Initial Subscription was $2.022, and $2.158 from the Additional Subscription, in each case together with one accompanying Series A Warrant and one accompanying Series B Warrant provided, that the Company Insiders participated in the Initial Subscription at an offering price of $2.04 per Private Placement Share and accompanying Series A Warrant and Series B Warrant.

The exercise price of Series A Warrants and Series B Warrants from the Initial Subscription is $1.772 per share from the Initial Subscription and $1.908 per share from the Additional Subscription, provided that the exercise price for the Series A Warrants and Series B Warrants issued to the Company Insiders is $1.79 per share. Subject to certain ownership limitations, the Series A Warrants will be exercisable until May 9, 2029, which is the five-year anniversary of issuance. Subject to certain ownership limitations, the Series B Warrants will be exercisable until June 24, 2025. The Pre-Funded Warrant will not expire until exercised in full.

Prior to the Amendment and Restatements (as defined below), if a holder of a Series A Warrant or a Series B Warrant was unable to exercise the warrant due to the limitation contained in the warrant that restricts the holder from owning above a specified beneficial ownership level (generally 4.99% or 9.99%) as the result of exercise of the warrant, then the holder had the right to elect upon exercise of the warrant to receive a Pre-Funded Warrant for the same number of shares of common stock that would otherwise have been received upon exercise of the warrant. In addition, prior to the Amendment and Restatements, the Series A Warrants and Series B Warrants provided for a call right starting June 24, 2025, in favor of the Company, if the volume-weighted average price of the shares of common stock exceeds specified prices.

The May 2024 Private Offering closed on May 9, 2024. The Company issued 1,439,988 shares of common stock, 2,151,544 Pre-Funded Warrants, 3,591,532 Series A Warrants and 3,591,532 Series B Warrants to purchase shares of its common stock in connection with the May 2024 Private Placement. The net proceeds from the May 2024 Private Placement were approximately $7.3 million.

The Company reviewed the terms of the Pre-Funded Warrants, Series A Warrants and Series B Warrants under the authoritative accounting guidance as of the issuance date.

As described above, the Series A Warrants and Series B Warrants were initially classified as liabilities for the reason that they could have been exercised into either shares of common stock or Pre-Funded Warrants at the holder's option and thus failed the indexation guidance under ASC 815, Derivatives and Hedging. The Series A Warrant and Series B Warrant liability were initially recorded at fair value as of the issuance date, and under the terms of the Series A Warrants and Series B Warrants when issued that liability was subject to adjustment to estimated fair value at each balance sheet date until the warrants were settled. Refer below for additional information regarding the amendment of the Series A Warrants and Series B Warrants that eliminated the ability of the Series A Warrants and Series B Warrants to be exercised into Pre-Funded Warrants, and as a result, the reclassification of the Series A and B Warrants from liability to equity section of the consolidated balance sheet.

The Pre-Funded Warrants are equity classified because they (1) are freestanding financial instruments that are legally detachable and separately exercisable from the common stock, (2) are immediately exercisable, (3) do not embody an obligation for the Company to repurchase its shares, (4) permit the holder to receive a fixed number of shares of common stock upon exercise, (5) are indexed to the Company's common stock and (6) meet the equity classification criteria.

The proceeds from the May 2024 Private Placement were first allocated to the full fair value of the Series A Warrants and Series B Warrants due to the initial liability classification. As disclosed in Note 3, Fair Value Measurements, the fair value of the Series A Warrants and Series B Warrants at issuance was $10.9 million. Under authoritative guidance, if the fair value of a warrant liability exceeds the proceeds received in an arm's length transaction with no rights or privileges that require separate accounting recognition as an asset identified, then the warrant liability is recorded at fair value with the excess of fair value over proceeds recognized as a loss in earnings. The Company recognized approximately $3.5 million in financing expense in the consolidated statement of operations during year ended December 31, 2024, which represents the excess of the fair value of the Series A Warrants and Series B Warrants at issuance over the proceeds. During the year ended December 31, 2024, the Company recognized a fair value gain on warrant liability of $5.7 million. Proceeds from the May 2024 Private Placement are shown as

cash from financing transactions and the gain on warrant liability is included as an adjustment to reconcile the net loss to net cash used in operating activities in the statements of cash flows for the year ended December 31, 2024.

In addition, total offering expenses related to the May 2024 Private Placement of $0.4 million were recorded as a component of other expenses as the entire proceeds were allocated to the warrant liability, which, prior to the amendment described below, could be settled with either the Company's shares of common stock or Pre-Funded Warrants, which are exercisable into the Company's shares of common stock at any time at the holders' option, but not in cash payment to the holders.

As of December 31, 2024, all of the Series A Warrants, and Series B Warrants issued in connection with the May 2024 Private Placement remained outstanding, and Pre-Funded Warrants to purchase 1,959,430 shares of the Company's common stock remained outstanding.

Amendment and Restatement of Series A Warrants and Series B Warrants

On August 9, 2024, the Company amended and restated the Series A Warrants and Series B Warrants (the "Amendment and Restatements") issued in the May 2024 Private Placement. The Amendment and Restatements eliminated the ability of the holders of the Series A Warrants and Series B Warrants to elect to purchase Pre-Funded Warrants upon exercise of the Series A Warrants and Series B Warrants in lieu of shares of common stock if the holder would have been restricted because of the specified beneficial ownership level in the Series A Warrants and Series B Warrants.

In addition, the Amendment and Restatements eliminated the Company's call right under the terms of the Series A Warrants to call the Series A Warrants after June 24, 2025, if the volume-weighted average price of shares of common stock exceeded specified prices. There were no other changes in the terms of the Series A Warrants and Series B Warrants.

As a result of the Amendment and Restatements, the Series A Warrants and Series B Warrants, as amended, no longer fail the indexation guidance under ASC 815, Derivatives and Hedging, and the fair value of the warrant liability at the amendment date, in the amount of $5.2 million, was reclassified to equity.

Lincoln Park Purchase Agreement

On August 2, 2022, the Company entered into a purchase agreement (the "2022 Purchase Agreement") and registration rights agreement pursuant to which Lincoln Park Capital Fund ("Lincoln Park") committed to purchase up to $50.0 million of the Company's common stock. Under the terms and subject to the conditions of the 2022 Purchase Agreement, the Company has the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to $50.0 million of the Company's common stock. Such sales of common stock by the Company are subject to certain limitations, and can occur from time to time, at the Company's sole discretion, over the 36-month period commencing on August 17, 2022, subject to the satisfaction of certain conditions.

On May 16, 2022, the Company received stockholder approval for purposes of the Nasdaq listing rules to permit issuances of up to 57.5 million shares of the Company's common stock (including the issuance of more than 19.99% of the Company's common stock) to Lincoln Park, and it was pursuant to that approval that the Company entered into the 2022 Purchase Agreement.

Upon execution of the 2022 Purchase Agreement, the Company paid $0.1 million in cash as the initial commitment fee, and issued 32,846 shares as the initial commitment shares, to Lincoln Park as consideration for its irrevocable commitment to purchase shares of the Company's common stock at its direction under the 2022 Purchase Agreement. The Company has agreed to pay an additional commitment fee, which it may elect to pay in cash or shares of its common stock, or a combination of cash and shares of its common stock, upon receipt of $25.0 million aggregate gross proceeds from sales of common stock to Lincoln Park under the 2022 Purchase Agreement.

On August 17, 2022, a registration statement (the "First Registration Statement") was declared effective to cover the resale of up to 633,333 shares of the Company's common stock comprised of (i) the 32,846 initial commitment shares, and (ii) up to 600,486 that the Company has reserved for issuance and sale to Lincoln Park under the 2022 Purchase Agreement from time to time from and after the date of the prospectus. The Company sold 527,166 shares of common stock to Lincoln Park in connection with the First Registration Statement.

On August 18, 2023, a second registration statement (the "Second Registration Statement") was declared effective to cover the resale of up to an additional 1,500,000 shares of the Company's common stock that the Company reserved for issuance and sale to Lincoln Park under the 2022 Purchase Agreement from time to time. The Company sold 150,000 shares of common stock to Lincoln Park in connection with the Second Registration Statement. The Company cannot sell more shares than registered under the Second Registration Statement under the 2022 Purchase Agreement without registering additional shares.

Actual sales of shares of common stock to Lincoln Park under the 2022 Purchase Agreement depend on a variety of factors to be determined by the Company from time to time, including, among others, market conditions, the trading price of the common stock and determinations by the Company as to the appropriate sources of funding for the Company and its operations. The net proceeds under the 2022 Purchase Agreement to the Company depend on the frequency and prices at which the Company sells shares of its common stock to Lincoln Park.

During the period from August 17, 2022 to December 31, 2022, the Company issued 266,666 shares of common stock under the 2022 Purchase Agreement for net proceeds of approximately $3.2 million. The Company issued 410,500 shares of common stock under the 2022 Purchase Agreement for net proceeds of approximately $1.0 million from January 1, 2023 to December 31, 2023. The Company did not issue any shares of common stock under the 2022 Purchase Agreement during the year ended December 31, 2024.

Share Repurchase Program and Treasury Stock

On October 31, 2023, the Company announced that its Board has approved a share repurchase program (the "Share Repurchase Program"), with authorization to repurchase up to $500,000 of the outstanding shares of the Company's common stock. The Company funded repurchases under the Share Repurchase Program with available cash.

During the year ended December 31, 2023, the Company purchased 78,559 shares of its common stock for approximately $0.1 million as treasury stock. The Company purchased 179,866 shares of its common stock for approximately $0.4 million as treasury stock during the year ended December 31, 2024. As of December 31, 2024, no amount remained authorized for repurchase.

16. Share-based Compensation

Under the Company's 2015 New Employee Incentive Plan (the "2015 Plan"), awards may only be granted to employees who were not previously an employee or director of the Company, or following a bona fide period of non-employment, as a material inducement to entering into employment with the Company. As of December 31, 2024, there were 62,908 shares of common stock remaining and available for future issuances under the 2015 Plan.

The Company's 2020 Stock Incentive Plan (the "2020 Plan"), which replaced the Company's 2014 Equity Incentive Plan, provides for the award or sale of shares of common stock (including restricted stock), the award of stock units and stock appreciation rights, and the grant of both incentive stock options to purchase common stock to directors, officers, employees and consultants of the Company. The 2020 Plan, as amended, provides for the issuance of up to 3,550,000 shares of common stock, plus the number of shares available for issuance is increased to the extent that awards granted under the 2020 Plan and the Company's 2014 Equity Incentive Plan are forfeited or expire (except as otherwise provided in the 2020 Plan). As of December 31, 2024, there were 692,596 shares remaining and available for future issuances under the 2020 Plan.

Generally, options issued under the 2020 Plan are subject to a two-year or four-year vesting schedule with 25% of the options vesting on the one year anniversary of the grant date followed by equal monthly installment vesting, and have a contractual term of 10 years.

A summary of activity for the year ended December 31, 2024 is as follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Balance as of December 31, 2023	140,109	$ 37.48	8.07	
Granted	506,127	1.58		
Cancelled/forfeited	(47,696)	38.02		
Balance as of December 31, 2024	598,540	$ 7.08	9.00	$ -
Vested and expected to vest at December 31, 2024	547,893	$ 7.52	9.00	$ -
Exercisable at December 31, 2024	144,739	$ 22.96	7.60	$ -

The Company settles exercises of stock options with newly issued shares of its common stock. There were no stock options exercised in 2024 or 2023.

The estimated fair value of options, including the effect of estimated forfeitures, is recognized over the requisite service period, which is typically the vesting period of each option. The fair value of each option awarded during the years ended December 31, 2024 and 2023 was estimated on the date of grant using the Black-Scholes-Merton option valuation model based on the following weighted-average assumptions:

	December 31, 2024	December 31, 2023
Expected term	6.0 years	6.0 years
Risk-free interest rate	3.79%	4.06%
Expected volatility	120.6%	127.0%
Dividends	0%	0%
Resulting fair value	$ 1.39	$ 4.47

The weighted average risk-free interest rate represents the interest rate for treasury constant maturity instruments published by the Federal Reserve Board. If the term of available treasury constant maturity instruments is not equal to the expected term of an employee option, the Company uses the weighted average of the two Federal Reserve securities closest to the expected term of the employee option.

The dividend yield has been assumed to be zero as the Company (a) has never declared or paid any dividends and (b) does not currently anticipate paying any cash dividends on its outstanding shares of common stock in the foreseeable future.

The following table summarizes share-based compensation recognized during the years ended December 31, 2024 and 2023 in the statement of operations (in thousands):

	Years ended December 31,	
	2024	2023
Research and development	$ 51	$ 66
General and administrative	499	503
Total share-based compensation	$ 550	$ 569

As of December 31, 2024, the total compensation cost related to non-vested stock options and stock awards not yet recognized for all our plans is approximately $0.7 million, which is expected to be recognized as a result of vesting under service conditions over a weighted average period of 2.8 years.

17. Segment Information

The Company operates under one reportable business segment to advance the development, manufacturing and commercialization of complex and innovative treatments for patients battling cancer and other life-threatening diseases. The determination of a single reportable business segment is consistent with the consolidated financial information regularly provided to the Company’s CODM. All of the Company's long-term assets and operations are located in the United States. The Company’s CODM is its Chief Executive Officer, who reviews financial information presented on a consolidated basis for purposes of making operating decisions, allocating resources, and evaluating financial performance, including comparing actual results to budgets and forecasts to assess variances, identify trends, and guide strategic planning.

In addition to the significant expense categories included within the consolidated statements of operations, the below disaggregated amounts comprise significant research and development and general and administrative expenses. These expenses consist of (1) clinical, manufacturing and research contracts for research and development programs, (2) personnel-related expenses, including salaries, benefits and share-based compensation, (3) professional fees, including third-party costs for goods and services such as lab supplies and contract research, and legal and other professional expenses, and (4) facility and other overhead expenses, including depreciation, occupancy, travel, insurance and other costs.

(in thousands)	Twelve Months Ended December 31, 2024	Twelve Months Ended December 31, 2023
Research and development		
Clinical, development and licensing expenses	$ 4,549	$ 5,062
Personnel related expenses	3,026	2,852
Professional fees	1,733	635
Facility and other overhead expenses	1,272	1,141
Total research and development	10,580	9,690
General and administrative		
Personnel related expenses	3,454	3,006
Professional expenses	4,828	3,870
Facility and other overhead expenses	1,657	1,668
Total general and administrative	$ 9,939	$ 8,544

18. Subsequent Events

February 2025 SPEA Agreements

On February 13, 2025 (the "Closing Date"), the Company entered into a Securities Purchase and Exchange Agreement (the "February 2025 SPEA") with certain existing accredited investors (the "Purchasers"). Pursuant to the February 2025 SPEA, on the Closing Date the Company issued secured convertible promissory notes (the "Funding Notes") in the aggregate principal amount of $3,362,251 together with common stock purchase warrants (the "Warrants") to purchase 3,002,009 shares of the Company common stock, par value $0.001 (the "Common Stock") at an exercise price of $1.12 per share (the "Warrant Exercise Price"). The aggregate purchase price for the Funding Notes and Warrants was approximately $3.7 million (the "Aggregate Purchase Price") and included payment of $0.125 per Warrant. The Funding Notes mature on February 13, 2026, and bear interest at a rate of 10% per annum, subject to increase upon Events of Default. The Warrants are exercisable for five-years from the date of issuance.

Secured Interest

The obligations of the Company under the February 2025 SPEA and the Notes (as defined below) were secured by a pledge of substantially all of assets of the Company pursuant to a security agreement, dated as of the Closing Date, among the Company, CNSide Diagnostics, LLC (a subsidiary of the Company, "CNSide Diagnostics"), and Iroquois Master Fund Ltd., as collateral agent for the Purchasers (the "Security Agreement), subject to certain exceptions. The Security Agreement contained certain customary affirmative and negative covenants, including limitations on the Company's and CNSide Diagnostic's ability to dispose of assets, subject to customary exceptions. The repayment of the Company's obligations under the February 2025 SPEA and Notes were guaranteed pursuant to a subsidiary guarantee, dated as of the Closing Date (the "Subsidiary Guarantee"), by and among CNSide and the Purchasers. The Security Agreement and the Subsidiary Guarantee were subsequently terminated after the closing of the private placement pursuant to the March 2025 SPA (as defined below).

Terms of the February 2025 SPEA

The February 2025 SPEA contains certain representations and warranties, covenants and indemnities customary for similar transactions. Under the February 2025 SPEA, the Company agreed, among other conditions, to not effect or enter an agreement to effect any variable rate transaction, except for certain exempt issuances of equity securities, until the later of the two year anniversary of the Closing Date or such date that the Notes are no longer outstanding. The Company also agreed to hold a stockholder meeting by no later than May 30, 2025, to seek approvals for future adjustments of the Warrant Exercise Price and Conversion Price for anti-dilution adjustments and similar matters, the reduction of the exercise price of the Warrants by $0.125, the extension of the period of exercise for the Series B common warrants issued pursuant to the May 2024 Purchase Agreement until five years from the original issue date of those warrants, and other matters necessary for compliance with Nasdaq Listing Rule 5635(d) (the "Stockholder Approvals").

Exchange Notes

As previously disclosed in Note 15, the Company entered into that certain securities purchase agreement, dated May 5, 2024, as amended on May 8, 2024 (the "May 2024 Purchase Agreement"), with the Purchasers, among other investors, for the private placement of securities, including Series A common warrants ("Series A Warrants") to purchase an aggregate of up to 3,591,532 shares of common stock. The May 2024 Purchase Agreement included certain limitations and restrictions on the Company's ability to issue securities and provided the Purchasers and the other investors signatories to the May 2024 Purchase Agreement participation rights in future equity and equity-linked offerings of securities, subject to certain limited exceptions (the "Financing Restrictions"). On the Closing Date, pursuant to the February 2025 SPEA, the Company issued to the Purchasers secured convertible promissory notes in the aggregate amount of $3,188,922 (the "Exchange Notes" and together with the Funding Notes, the "Notes") in exchange for cancellation of the Series A Warrants held by the Purchasers, and the Purchasers entered into a second amendment to the May 2024 Purchase Agreement to eliminate the Financing Restrictions. The terms and conditions of the Exchange Notes were substantially identical in all material respects to the Funding Notes, except that the Mandatory Conversion applied to all of the principal amount of the Exchange Notes instead of being limited to seventy-five percent, and the Maximum Amount did not apply. The Security Agreement and Subsidiary Guarantee also applied to the obligations under the Exchange Notes.

March 2025 SPEA Agreements

On March 4, 2025, the Company entered into a securities purchase agreement (the "March 2025 SPA") with accredited investors, including certain existing stockholders of the Company, identified on the signature page thereto (collectively, the "March 2025 Private Placement Purchasers") for a private placement of securities (the "March 2025 Private Placement"). The March 2025 SPA, provides for the sale and issuance by the Company of an aggregate of 28,042,140 shares (the "March 2025 Private Placement Shares") of the Company's Common Stock, or, at the election of each Purchaser, prefunded warrants to purchase Common Stock

(the "Prefunded Warrants"), exercisable immediately at an exercise price of $0.001 per share (the "Prefunded Warrant Shares"), with each Private Placement Share or Prefunded Warrant accompanied by (i) a Series A common warrant (the "Series A Warrants") to purchase one share of Common Stock (the "Series A Warrant Shares"), and (ii) one Series B common warrant (the "Series B Warrants") to purchase one share of Common Stock (the "Series B Warrant Shares," and together with the Series A Warrant Shares, the "Common Warrant Shares"). The March 2025 Private Placement Shares, Prefunded Warrants, Prefunded Warrant Shares, Series A Warrants, Series B Warrants, and the Common Warrant Shares are collectively referred to herein as the "Securities."

The combined purchase price of $0.66 for each Private Placement Share or $0.659 for each Prefunded Warrant in the Private Placement, together with one accompanying Series A Warrant and one accompanying Series B Warrant, represents the applicable "Minimum Price".

The initial exercise price of each Series A Warrant issued in the Private Placement is $1.32 per share of Common Stock. The Series A Warrants are exercisable only following stockholder approval and expire five (5) years thereafter. The number of securities issuable under the Series A Warrant is subject to adjustment as described in more detail in the Series A Warrant. The Series A Warrant exercise price and the related number of shares of Common Stock issuable upon exercise are subject to a "reset" provision upon certain events and are subject to anti-dilution protection upon any subsequent transaction at a fixed price lower than the warrant exercise price then in effect, as more fully described in the Series A Warrant.

The initial exercise price of each Series B Warrant issued in the Private Placement is $1.98 per share of Common Stock or pursuant to an alternative cashless exercise option. The Series B Warrants are exercisable only following stockholder approval and expire two and one-half (2.5) years thereafter. The Series B Warrant exercise price and the related number of shares of Common Stock issuable upon exercise are subject to a "reset" provision upon certain events, as more fully described in the Series A Warrant, and the Series B Warrant alternative cashless exercise provision provides that the Series B Warrant can be exercised without further payment to the Company and for three times the number of shares of Common Stock then subject to the Series B Warrant.

The Prefunded Warrants will be exercisable from the date of issuance until exercised in full and may not be exercised to the extent that immediately following such exercise, the holder would beneficially own greater than 4.99% (or, at the election of the holder, greater than 9.99%) of the Company's outstanding Common Stock.

Of the securities issued in the March 2025 Private Placement, 22,727,270 of the shares of Common Stock, or Prefunded Warrants in lieu thereof, and the accompanying 22,727,270 Series A Warrants and 22,727,270 Series B Warrants, were issued in consideration of new capital subscriptions, and 5,314,870 of the shares of Common Stock, or Prefunded Warrants in lieu thereof, and the accompanying 5,314,870 Series A Warrants and 5,314,870 Series B Warrants, were issued in exchange (the "Exchange") for the cancelation of approximately $3.2 million in aggregate principal amount of the Exchange Notes.

The March 2025 Private Placement closed on March 7, 2025 (the "Closing Date"). The aggregate gross proceeds at the Closing Date totaled approximately $15.0 million, before deducting certain expenses payable by the Company.

In addition to the stockholder approval of the Series A Warrants and Series B Warrants, the Company also covenanted to seek if necessary stockholder approval to, among other things, amend the Company's Certificate of Incorporation, as amended, to increase the authorized share capital of the Company to an amount sufficient to cover the shares of Common Stock issuable upon the exercise of the Series A Warrants and Series B Warrants.

First Amendment to the February 2025 SPEA

In connection with entering into the March 2025 SPA, the Company entered into that certain First Amendment to the February 2025 SPEA (the "First Amendment"). The February 2025 SPEA included certain limitations and restrictions on the Company's ability to issue securities and provided the Investors participation rights in future equity and equity-linked offerings of securities, subject to certain limited exceptions (the "New Financing Restrictions"). Pursuant to the First Amendment, subject to consummation of the March 2025 Private Placement, the Company agreed to repurchase from the Investors $3,362,251 in principal amount of the Company's outstanding senior convertible promissory notes (the "Funding Notes") and 3,002,009 warrants (the "SPEA Warrants") issued pursuant to the February 2025 SPEA for an aggregate purchase price of $4.25 million. In exchange for the repurchase by the Company of the Funding Notes and SPEA Warrants, the Purchasers agreed to consent to the March 2025 Private Placement and eliminate the New Financing Restrictions.

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

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (our principal executive officer) and Chief Financial Officer (our principal accounting officer and principal financial officer), as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Exchange Act as of the end of the period covered by this Annual Report on Form 10-K. Based on the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this Annual Report were effective.

(b) Management's 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 Rule 13a-15(f) or 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer) and effected by our Board, 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 our assets;
- 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 are being made only in accordance with authorizations of management and our Board; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, 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.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have conducted an evaluation of the effectiveness of our internal control over financial reporting as of the end of the fiscal year covered by this Annual Report on Form 10-K based on the criteria set forth in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2024 based on the COSO criteria.

This report does not include an attestation report on internal control over financial reporting by the Company's independent registered public accounting firm because the Company is a smaller reporting company under the rules of the SEC.

(c) Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

(a) None.

(b) Insider Trading Arrangements

For the quarter ended December 31, 2024, none of the Company's directors or officers (as defined under SEC Rule 16a-1(f)) adopted, modified or terminated any contract, instruction or written plan for the purchase or sale of Company securities intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement" as defined under Item 408(c) of Regulation S-K.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspection

Not Applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be set forth under the captions "Corporate Governance – Director Candidates," "Corporate Governance – Biographical Information About Our Director Nominees," "Corporate Governance – Term of Office," "Corporate Governance – Family Relationships," "Executive Officers," "Corporate Governance – Delinquent Section 16(a) Reports," "Corporate Governance – Code of Business Conduct and Ethics," "Corporate Governance – Board Committees" and "Corporate Governance – Insider Trading Policy" in our definitive proxy statement to be filed with the SEC, in connection with our 2025 annual meeting of stockholders (the "Proxy Statement"), which is expected to be filed not later than 120 days after the end of our fiscal year ended December 31, 2024, and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item will be set forth under the captions "Executive Compensation," "Corporate Governance – Compensation Committee Interlocks and Insider Participation," "Corporate Governance – Compensation Committee Report," "Director Compensation" and "Pay Versus Performance" in the Proxy Statement and is incorporated herein by reference.

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

The information required by this item will be set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" and "Executive Compensation — Equity Compensation Plan Information" in the Proxy Statement and is incorporated herein by reference.

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

The information required by this item will be set forth under the caption "Certain Relationships and Related Transactions" and in the Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this item will be set forth under the caption "Audit Matters" in the Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) (1) Financial Statements.

The responses to this portion of Item 15 are set forth under Part II, Item 8 above. The following documents statements are filed as part of this report:

Balance Sheets — December 31, 2024 and 2023
Statements of Operations — December 31, 2024 and 2023
Statements of Stockholders' Equity (Deficit) — December 31, 2024 and 2023
Statements of Cash Flows — December 31, 2024 and 2023
Notes to Financial Statements
Report of Independent Registered Public Accounting Firm

(a) (2) Financial Statement Schedules.

None.

(a) (3) Exhibits.

List of Exhibits required by Item 601 of Regulation S-K. See Item 15(b) below.

(b) Exhibits.

The exhibits listed in the accompanying "Exhibit Index" are filed, furnished or incorporated by reference as part of this Annual Report, as indicated.

Item 16. Form 10-K Summary.

None.

EXHIBIT INDEX
PLUS THERAPEUTICS, INC.

Exhibit Number	Exhibit Title	Filed with this Form 10-K	Incorporated by Reference		
			Form	File No.	Date Filed
3.1	Composite Certificate of Incorporation		10-K	001-34375 Exhibit 3.1	03/11/2016
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation		8-K	001-34375 Exhibit 3.1	05/10/2016
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation		8-K	001-34375 Exhibit 3.1	05/23/2018
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation		8-K	001-34375 Exhibit 3.1	07/29/2019
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation		8-K	001-34375 Exhibit 3.1	08/06/2019
3.6	Certificate of Amendment to Amended and Restated Certificate of Incorporation		8-K	001-34375 Exhibit 3.1	4/28/2023
3.7	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock		8-K	001-34375 Exhibit 3.1	11/28/2017
3.8	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock		8-K	001-34375 Exhibit 3.1	07/25/2018
3.9	Amended and Restated Bylaws of Plus Therapeutics, Inc.		8-K	001-34375 Exhibit 3.1	09/21/2021
4.1	Description of Securities		10-K	001-34375 Exhibit 4.1	03/30/2020
4.2	Form of Common Stock Certificate		10-K	001-34375 Exhibit 4.33	03/09/2018
4.3	Form of Warrant Amendment Agreement		8-K	011-34375 Exhibit 4.1	04/23/2020
4.4	Form of Underwriters' Warrant Amendment Agreement		8-K	011-34375 Exhibit 4.1	10/05/2020
4.5	Form of Pre-Funded Warrant		8-K	011-34375 Exhibit 4.1	05/09/2024
4.6	Form of Series A Warrant (May 2024, as amended and restated August 2024)		10-Q	011-34375 Exhibit 4.5	08/14/2024
4.7	Form of Series B Warrant (May 2024, as amended and restated August 2024)		10-Q	011-34375 Exhibit 4.6	08/14/2024
4.8	Form of Amendment and Restatement of the Plus Therapeutics, Inc. Series A Common Stock Purchase Warrant		10-Q	011-34375 Exhibit 4.7	08/14/2024
4.9	Form of Amendment and Restatement of the Plus Therapeutics, Inc. Series B Common Stock Purchase Warrant		10-Q	011-34375 Exhibit 4.8	08/14/2024
4.10	Form of Pre-Funded Warrant		8-K	011-34375 Exhibit 4.1	02/18/2025
4.11	Form of Warrant issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein		8-K	011-34375 Exhibit 4.2	02/18/2025
4.12	Form of Pre-Funded Warrant		8-K	011-34375 Exhibit 4.1	03/04/2025
4.13	Form of Series A Warrant		8-K	011-34375 Exhibit 4.2	03/04/2025
4.14	Form of Series B Warrant		8-K	011-34375 Exhibit 4.3	03/04/2025

10.1+	Patent and Know-How License Agreement, dated March 29, 2020, by and between Plus Therapeutics, Inc. and NanoTx, Corp.	8-K	011-34375 Exhibit 10.1	3/30/2020
10.2+	Patent & Technology License Agreement, dated December 31, 2021, by and between Plus Therapeutics, Inc. and the University of Texas Health Science Center at San Antonio	10-K	011-34375 Exhibit 10.2	2/24/2022
10.3	Purchase Agreement, dated August 2, 2022, by and between Lincoln Park Capital Fund, LLC and Plus Therapeutics, Inc.	8-K	011-34375 Exhibit 10.1	08/08/2022
10.4	Registration Rights Agreement, dated August 2, 2022, by and between Plus Therapeutics, Inc. and Lincoln Park Capital Fund	8-K	001-34375 Exhibit 10.6	08/08/2022
10.5#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Marc Hedrick and Plus Therapeutics, Inc.	10-Q	001-34375 Exhibit 10.6	5/14/2020
10.6#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Andrew Sims and Plus Therapeutics, Inc.	10-Q	001-34375 Exhibit 10.7	5/14/2020
10.7#	2015 New Employee Incentive Plan	8-K	001-34375 Exhibit 10.1	01/05/2016
10.8#	First Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated January 26, 2017	10-K	001-34375 Exhibit 10.42	03/24/2017
10.9#	Second Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated February 6, 2020	10-K	001-34375 Exhibit 10.25	03/30/2020
10.10#	Third Amendment to the 2015 New Employee Incentive Plan	S-1	333-280061 Exhibit 10.15	06/07/2024
10.11#	Form of Notice of Grant of Stock Option under the 2015 New Employee Incentive Plan	S-8	333-210211 Exhibit 99.5	03/15/2016
10.12#	Form of Stock Option Agreement under the 2015 New Employee Incentive Plan	S-8	333-210211 Exhibit 99.4	03/15/2016
10.13#	Plus Therapeutics, Inc. 2020 Stock Incentive Plan, as amended and restated	8-K	001-34375 Exhibit 10.1	05/20/2021
10.14#	Form of Notice of Grant and Stock Option Agreement under the 2020 Stock Incentive Plan	10-K	001-34375 Exhibit 10.26	02/24/2022
10.15#	Form of Indemnification Agreement	8-K	001-34375 Exhibit 10.1	02/06/2020
10.16#	Form of Agreement for Acceleration and/or Severance	10-K	001-34375 Exhibit 10.113	03/11/2016
10.17	Medidata Services Agreement and Statement of Work, dated November 5, 2021, by and between Medidata Solutions, Inc. and Plus Therapeutics, Inc.	10-Q	001-34375 Exhibit 10.1	04/21/2022
10.18+	Cancer Research Grant Contract, effective August 31, 2022, by and between the Cancer Prevention and Research Institute of Texas and Plus Therapeutics, Inc.	8-K	001-34375 Exhibit 10.1	09/22/2022
10.19	Subscription and Investment Representation Agreement, dated March 3, 2023, by and between Plus Therapeutics, Inc. and the purchaser signatory thereto	8-K	001-34375 Exhibit 10.1	03/03/2023
10.20#	Plus Therapeutics, Inc. 2020 Stock Incentive Plan, as further amended and restated	8-K	001-34375 Exhibit 10.1	04/20/2023
10.21	Securities Purchase Agreement, dated as of May 5, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375 Exhibit 10.1	05/09/2024
10.22	First Amendment to Securities Purchase Agreement, dated as of May 8, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375 Exhibit 10.2	05/09/2024

10.23	Registration Rights Agreement, dated as of May 5, 2024, by and among Plus Therapeutics, Inc., and the purchases named therein		8-K	001-34375 Exhibit 10.3	05/09/2024
10.24	Lending Agreement, dated April 5, 2024, by and between Plus Therapeutics, Inc and Pershing LLC		8-K	001-34375 Exhibit 10.1	06/04/2024
10.25	Loan Interest Rate Form, dated May 24, 2024, by and between Plus Therapeutics, Inc and Pershing LLC		8-K	001-34375 Exhibit 10.2	06/04/2024
10.26	Extension of Credit, dated May 29, 2024, by and between Plus Therapeutics, Inc. and Pershing LLC		8-K	001-34375 Exhibit 10.3	06/04/2024
10.27*	Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein		8-K	001-34375 Exhibit 10.1	02/18/2025
10.28	Form of Secured Convertible Note for Funding Notes issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers names therein		8-K	001-34375 Exhibit 10.2	02/18/2025
10.29	Form of Secured Convertible Note for Exchange Notes issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers names therein		8-K	001-34375 Exhibit 10.3	02/18/2025
10.30*	Security Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc., CNSide Diagnostics, LLC and Iroquois Master Fund Ltd., as collateral agent for the purchasers names therein		8-K	001-34375 Exhibit 10.4	02/18/2025
10.31	Subsidiary Guarantee, dated as of February 13, 2025, by and among CNSide Diagnostics, LLC and the purchasers named therein		8-K	001-34375 Exhibit 10.5	02/18/2025
10.32	Registration Rights Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein		8-K	001-34375 Exhibit 10.6	02/18/2025
10.33	Second Amendment to Securities Purchase Agreement, dated May 5, 2024, as amended on May 9, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein		8-K	001-34375 Exhibit 10.7	02/18/2025
10.34	Securities Purchase Agreement, dated as of March 4, 2025		8-K	001-34375 Exhibit 10.1	03/04/2025
10.35	Registration Rights Agreement, dated as of March 4, 2025		8-K	001-34375 Exhibit 10.2	03/04/2025
10.36	First Amendment to Securities Purchase and Exchange Agreement, dated as of March 4, 2025		8-K	001-34375 Exhibit 10.3	03/04/2025
19	Insider Trading Policy	X			
21	List of Subsidiaries	X			
23.1	Consent of BDO USA, P.C., Independent Registered Public Accounting Firm	X			
31.1	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of Principal Financial and Accounting Officer Pursuant to Securities Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			

32.1†	Certifications Pursuant to 18 U.S.C. Section 1350/ Securities Exchange Act Rule 13a-14(b), as adopted pursuant to Section 906 of the Sarbanes - Oxley Act of 2002	X			
97.1	Incentive Compensation Recovery Policy		10-K	001-34375 Exhibit 97.1	03/05/2024
101.INS	The following financial information from The Plus Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2024, formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Balance Sheets as of December 31, 2024 and 2023; (ii) Statements of Operations for the years ended December 31, 2024 and 2023; (iii) Statements of Stockholders' Equity (Deficit) for the years ended December 31, 2024 and 2023; (iv) Statements of Cash Flows for the years ended December 31, 2024 and 2023; and (v) Notes to Financial Statements.	X			
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	X			

 # Indicates management contract or compensatory plan or arrangement.
+ Portions of this exhibit have been redacted pursuant to Item 601(b)(10)(iv).
† Furnished herewith.
* Schedules and exhibits have been Omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish supplemental copies of any of the Omitted schedules or exhibits upon request by the Securities and Exchange Commission; provided that the Company may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended, for any schedules or exhibits so furnished.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

PLUS THERAPEUTICS, INC.

By: /s/ Marc H. Hedrick, MD
Marc. H. Hedrick, MD
President & Chief Executive Officer

March 31, 2025

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Richard J. Hawkins Richard J. Hawkins	*Chairman of the Board*	March 31, 2025
/s/ Marc H. Hedrick, MD Marc H. Hedrick, MD	*President & Chief Executive Officer (Principal Executive Officer)*	March 31, 2025
/s/ Andrew Sims Andrew Sims	*Chief Financial Officer and VP of Finance (Principal Financial and Accounting Officer)*	March 31, 2025
/s/ An van Es-Johansson, MD An van Es-Johansson, MD	*Director*	March 31, 2025
/s/ Greg Petersen Greg Petersen	*Director*	March 31, 2025
/s/ Howard Clowes Howard Clowes	*Director*	March 31, 2025
/s/ Robert Lenk Robert Lenk	*Director*	March 31, 2025

Exhibit 19

PLUS THERAPEUTICS, INC.

INSIDER TRADING AND COMMUNICATIONS POLICY

Policy as to Trades in the Company's Securities By Company Personnel
and
Treatment of Confidential Information

1. Purpose.

Both the Securities and Exchange Commission (the "***SEC***") and Congress are very concerned about maintaining the fairness and integrity of the U.S. capital markets. The securities laws are continually reviewed and amended to prevent people from taking advantage of "inside information" and to increase the punishment for those who do. These laws require publicly-traded companies to have clear policies on insider trading. While the regulatory authorities usually concentrate their efforts on the individuals who trade, or who tip inside information to others who trade, the federal securities laws also impose potential liability on companies and other "controlling persons" if they fail to take reasonable steps to prevent insider trading by company personnel. If companies like ours do not take active steps to adopt preventive policies and procedures covering securities trades by company personnel, the consequences could be severe.

We are adopting this Insider Trading and Communications Policy to avoid even the appearance of improper conduct on the part of anyone employed by or associated with our Company (not just so-called insiders). We have all worked hard to establish our reputation for integrity and ethical conduct. We cannot afford to damage this reputation.

2. Applicability.

This policy applies to all employees, officers, members of the Board of Directors, consultants and contractors of the Company or any subsidiary of the Company (the "***Individuals***"). This policy also applies to family members, other members of a person's household and entities controlled by a person covered by this policy, as described below. This policy applies to all trading or other transactions in the Company's securities, including common stock, options to purchase common stock and restricted stock units and any other securities that the Company may issue, such as preferred stock, notes, bonds and convertible securities, as well as to derivative securities relating to any of the Company's securities, whether or not issued by the Company.

3. The Consequences.

The consequences of insider trading violations can be substantial:

For Individuals who trade on inside information (or tip information to others):

- jail term of up to 20 years (30 years in certain circumstances);
- civil penalty of up to three times the profit gained or loss avoided; and
- criminal fine (no matter how small the profit) of up to $5 million.

For a company (as well as possibly any supervisory person) that fails to take appropriate steps to prevent illegal trading:

- civil penalty of the greater of $1 million or three times the profit gained or loss avoided as a result of the Individual's violation; and

- criminal penalty of up to $25 million.

In addition, plaintiffs may claim that Individuals or the Company are also liable to contemporaneous traders.

Further, if the Company has a reasonable basis to conclude that an employee has violated the Company's Insider Trading and Communications Policy, whether or not knowingly, the Company may impose sanctions, including dismissal for cause. Needless to say, any of the above consequences, even an SEC investigation that does not result in prosecution, can tarnish one's reputation (as well as the Company's) and irreparably damage a career. Finally, the size of a transaction has no impact on potential insider trading liability. In the past, even relatively small trades (e.g., trades as small as $400) have resulted in SEC investigations and lawsuits.

4. Our Policy.

No Trading When in Possession of Material Non-Public Information. If a member of the Board of Directors, officer, any employee, consultant or contractor of the Company or any subsidiary of the Company has possession of material non-public information (often referred to as "inside information") relating to our Company or any other company as to which the person receives information not available to investors generally, it is our policy that neither that person nor any related person may buy or sell securities of the Company, make a gift of Company securities, or engage in any other action to take advantage of, or pass on to others, that information. This policy also applies to information relating to any other company, including our customers or partners, obtained in the course of you rendering services to the Company or any subsidiary of the Company.

Transactions that may be necessary or justifiable for independent reasons (such as the need to raise money for an emergency expenditure) are no exception. Even the appearance of an improper transaction must be avoided to preserve our reputation for adhering to the highest standards of conduct.

What is Material Information? "Material information" is any information that a reasonable investor would consider important in deciding whether to buy, hold or sell securities of the Company or any securities of any other company as to which the person receives information not available to investors generally. In short, "material information" includes any information that reasonably could affect the price of our securities or any other securities. Either positive or negative information may be material. It can be information about the Company or about a company with which we do business.

Examples: Common examples of information that will frequently be regarded as material are:

- projections of future earnings, losses or other business activity such as data from clinical trials;
- news of a possible merger, acquisition or tender offer;
- news of a possible agreement, collaboration or partnership;
- significant new products or services or delays in new product or service introduction or development;
- plans to raise additional capital through stock sales or otherwise;

- gain or loss of a significant partner or customer;
- discoveries, or grants or allowances or disallowances of patents;
- changes in management;
- news of a significant sale of assets;
- impending bankruptcy or financial liquidity problems; and
- changes in dividend policies or the declaration of a stock split.

20/20 Hindsight. Remember, if your securities transactions become the subject of scrutiny, they will be viewed after-the-fact with the benefit of hindsight. As a result, before engaging in any transaction you should carefully consider how regulators and others might view your transaction in hindsight.

Transactions by Family Members. The same restrictions apply to your immediate family members and others living in your household (collectively, "***Family Members***"). You are responsible for the compliance of your Family Members.

Transactions by Entities that You Influence or Control. This policy also applies to any entities that you influence or control, including any corporations, partnerships or trusts (collectively referred to as "***Controlled Entities***"), and transactions by these Controlled Entities should be treated for the purposes of this policy and applicable securities laws as if they were for your own account.

Transactions of Non-Residents. The same restrictions apply regardless of whether a person is resident within the United States.

Do Not Pass Information to Others. Whether the information is proprietary information about our Company or information that could have an impact on our stock price, Individuals must not pass the information on to others. It is illegal to advise others to trade on the basis of undisclosed material information. Liability in these cases can extend to both the "tippee" — the person to whom the insider disclosed inside information — and you, as the "tipper," and will apply whether or not you derive any benefit from another's actions. You should not make recommendations to others concerning the purchase or sale of securities of the Company. You should never trade, tip or recommend securities (or otherwise cause the purchase or sale of securities) while in possession of material nonpublic information about any other company that was obtained in the course of your involvement with the Company, including communicating material nonpublic information to, any other person or otherwise disclose such information without the Company's authorization.

When Information is Public. As you can appreciate, it is also improper for any Individual to enter a trade immediately after the Company has made a public announcement of material information, including earnings releases. We impose certain "trading blackouts" to ensure that the Company's stockholders and the investing public will be afforded the time to receive the information and act upon it. These are discussed below under the heading "Trading Blackouts." To avoid the appearance of impropriety, as a general rule, you should not engage in any transaction until at least two full trading days have passed following the release of the information. Thus, if an announcement were made after the market close on a Monday, Thursday generally would be the first day on which you would be able to trade. If an announcement were made after the market close on a Friday, Wednesday generally would be the first eligible trading day.

Pre-Clearance of Trades of Company Stock. To provide assistance in preventing inadvertent violations and avoiding even the appearance of an improper transaction (which could result, for example, where an Individual engages in a trade while unaware of a pending major development), all members of

the Board of Directors, all individuals designated as "officers" for the purposes of Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended ("***Section 16 Officers***"), and certain employees of the Company and its subsidiaries in a position to have access to material non-public information and designated on a pre-clearance list by our Chief Executive Officer or Chief Financial Officer from time to time, which may include legal and finance personnel, certain pre-determined insiders ("***Pre-Determined Insiders***") and the Family Members and Controlled Entities of such persons must obtain pre-clearance in writing from our General Counsel (in the absence of a General Counsel, our Chief Financial Officer) of all transactions in Company securities (acquisitions, dispositions, transfers, gifts, etc.). You must submit a written request for pre-clearance of a transaction no later than two business days before the proposed date of execution of the transaction unless you obtain a waiver from the Audit Committee of the Board of Directors. You will be notified if you are one of the specified persons subject to this pre-clearance policy and the Company will maintain a list of all Pre-Determined Insiders. Pre-clearance is subject to a five business day expiration and must be renewed by the applicant after five business days to be valid.

Pre-clearance does not relieve anyone of their responsibility under SEC rules. All Individuals, whether subject to pre-clearance or not, are responsible for adherence to this Insider Trading and Communications Policy, including, but not limited to: not trading on insider information; not trading during trading blackout periods; not trading for two full trading days after earnings announcements; and not trading in securities on a short-term basis. Individuals normally not subject to pre-clearance are still responsible for written pre-clearance for the sale of stock purchased in the open market and that has been owned less than six months. If any Individual is in doubt of whether or not pre-clearance is required, the Individual should inquire with our General Counsel (in the absence of a General Counsel, our Chief Financial Officer) or obtain pre-clearance as a cautionary measure.

Trading Blackouts. From time to time, the Company may require that members of the Board of Directors, officers, employees of the Company and subsidiaries of the Company and others, including Family Members and Controlled Entities, to suspend trading because of developments known to the Company and not yet disclosed to the public. In that event, these persons are advised not to engage in any transaction involving the purchase or sale of the Company's securities during that period, and should not disclose to others the fact that they have been suspended from trading. The Company will also require the following mandatory trading blackout:

- ***Earnings Trading Blackouts*** – All members of the Board of Directors of the Company or its subsidiaries, Section 16 Officers, Individuals, Pre-Determined Insiders and the Family Members and Controlled Entities of such persons will be subject to a stock trading blackout period beginning two weeks prior to the end of a fiscal quarter until two full trading days has passed after earnings for that quarter are released. All such persons whose employment or affiliation with the Company ceases during a blackout period shall remain subject to the blackout period for the duration of the blackout period.

Of course, no trading should be done at any time that an Individual is actually aware of a major undisclosed corporate development.

Options/RSUs. Cash exercise of options currently may be done at any time. This policy also does not apply to the exercise of a tax withholding right pursuant to which you elect to have the Company withhold shares subject to an option or restricted stock unit to satisfy tax withholding requirements which occur as a result of certain option exercises or the vesting or settlement of any restricted stock units. Same-day-sales to exercise stock options are subject to trading windows, as are any other market sale of shares subject to an option or restricted stock unit for the purpose of generating the cash needed to pay the exercise price and/or taxes (a "sell to cover").

Exception for Approved 10b5-1 Plans. Trades by Individuals in the Company's securities that are executed pursuant to an approved 10b5-1 trading plan (a "***Trading Plan***") are not subject to the prohibition on trading on the basis of material non-public information contained in this Insider Trading and Communications Policy or to the restrictions set forth above relating to pre-clearance procedures and blackout periods.

SEC Rule 10b5-1 provides an affirmative defense from insider trading liability under the federal securities laws for trading plans that meet certain requirements. This Insider Trading and Communications Policy permits Individuals to adopt Trading Plans with brokers that outline a pre-set plan for trading of the Company's securities, including those received upon the exercise of options and settlement of restricted stock units. Trading Plans are to be implemented only during open windows and when the individual is not aware of any material non-public information.

Any Trading Plan must comply with SEC Rule 10b5-1 and the adoption, modification or revocation of such plan be approved in writing in advance by our Chief Financial Officer or General Counsel (if any). The establishment of such a Trading Plan with respect to an Individual may be publicly announced by the Company.

Any Trading Plan may only be adopted or modified at a time when the person adopting the Trading Plan is not aware of any material nonpublic information. The Trading Plan must also be entered in good faith and not as part of a plan or scheme to evade the prohibitions of Rule 10b5-1. All Trading Plans adopted by directors or officers of the Company must also include a representation in their Trading Plan certifying, at the time of the adoption of the new or modified plan, that: (1) they are not aware of material nonpublic information about the issuer or its securities; and (2) they are adopting the plan in good faith and not as part of a plan or scheme to evade the prohibitions of Rule 10b-5-1.Establishing a Trading Plan does not exempt Individuals from complying with the Section 16 six-month short swing profit rules or liability.

Under certain circumstances, a Trading Plan must be suspended or revoked. This includes circumstances such as the announcement of a merger, capitalization changes or the occurrence of an event that would cause the transaction either to violate the law or to have an adverse effect on the Company. The Chief Financial Officer, General Counsel (if any) or their designee or any stock administrator of the Company is authorized to notify the broker in such circumstances.

Post-Termination Transactions. This Insider Trading and Communications Policy continues to apply to your transactions in Company securities even after your employment, board service or consulting services terminate. If you are in possession of material nonpublic information when your service to the Company or a subsidiary of the Company terminates, you may not trade in Company securities until that information has become public or is no longer material.

5. Additional Prohibited Transactions.

We believe it is improper and inappropriate for any of the Individuals to engage in short-term or speculative transactions involving Company securities. We believe that this trading can reflect badly on the Company and that Individuals should not engage in any types of transactions that are commonly viewed as a form of "betting" for or against the Company. Accordingly, it is the Company's policy that members of the Board of Directors, officers, employees, consultants and contractors may not engage in any of the following activities with respect to securities of the Company, without prior written pre-clearance:

- ***Director and officer cashless exercise*** – In response to the restrictions set forth in the Sarbanes-Oxley Act of 2002, the Company will not arrange with brokers to administer cashless exercises on behalf of directors and officers of the Company. Directors and officers of the

Company may only utilize the cashless exercise feature of their options if (i) the director or officer retains a broker independently of the Company, (ii) the Company's involvement is limited to confirming that it will deliver the stock promptly upon payment of the exercise price and (iii) the director or officer uses a "T+3" cashless exercise arrangement, in which the Company agrees to deliver stock against the payment of the purchase price on the same day the sale of the stock underlying the option settles. Under a T+3 cashless exercise, a stock broker, the issuer, and the transfer agent of the issuer work together to make all transactions settle simultaneously. This approach is to avoid any inference that the Company has "extended credit" in the form of a personal loan to the director or executive officer. Any employee who has any questions about cashless exercises may obtain additional guidance from our Chief Financial Officer or General Counsel (if any).

- ***Director and officer trading during pension and 401(k) plan blackout periods*** – If Company securities are available as an investment option or used as a Company match in the Company's 401(k) plan, directors and officers of the Company are prohibited from trading Company securities during pension and 401(k) plan blackouts, if any, in response to the restrictions set forth in the Sarbanes-Oxley Act of 2002.

- ***Trading in securities on a short-term basis*** — As a general rule, any Company securities purchased in the open market (i.e., not including stock purchased upon exercise of an employee stock option or restricted stock unit or under an employee stock purchase plan) should be held for a minimum of six months and ideally longer. The top executives and members of the Board of Directors of the Company are already subject to the SEC's "short-swing" profit rule, which penalizes purchases and sales within any six-month period. Any employee who wishes to sell Company securities that were purchased in the open market and that have been owned less than six months must obtain prior written clearance from our Chief Financial Officer or General Counsel (if any). You must submit a written request for pre-clearance of a transaction no later than three business days before the proposed date of execution of the transaction.

- ***Short sales of Company securities*** — This involves selling Company securities that you do not own in the expectation that the price of the securities will fall, or as part of an arbitrage transaction.

- ***Buying or selling puts or calls, or their equivalent positions, on Company securities*** — This includes options and derivatives trading on any of the stock exchanges or futures exchanges, including cashless collars.

- ***Margin accounts or pledging***. This means securities held in a margin account as collateral for a margin loan, and securities pledged (or hypothecated) as collateral for a loan. This also includes borrowing from a brokerage firm, bank or other entity in order to buy Company securities (other than in connection with a so-called "cashless" exercise of options under the Company's stock plans).

- ***Hedging***. Hedging or monetization transactions can be accomplished through a number of possible mechanisms, including through the use of financial instruments such as prepaid variable forwards, equity swaps, collars and exchange funds. Such hedging transactions may permit a director, officer or employee to continue to own Company securities obtained through employee benefit plans or otherwise, but without the full risks and rewards of ownership. When that occurs, the director, officer or employee may no longer have the same objections as the Company's other stockholders.

6. Confidential Information and Communications with the Media.

Unauthorized disclosure of internal information relating to the Company (including information regarding facilities, products or services or the Company's partners, suppliers or customers) could cause competitive harm to the Company and in some cases could result in liability for the Company.

Unauthorized Disclosure. Individuals should not disclose internal information about the Company to *anyone* outside the Company, except as required in the performance of regular duties for the Company. In this regard, Individuals are prohibited from posting internal information about the Company on a "bulletin board" or "blog" on the Internet, communicating about the Company and its business in Internet-based "chat" rooms or blogs or having a blog that discusses the Company and its business.

Communications with the Media, Securities Analysts and Investors. Communications on behalf of the Company with the media, securities analysts and investors must be made only by specifically designated representatives of the Company, as communications may be regulated by federal securities laws including but not limited to Regulation FD. Unless you have been expressly authorized to make such communications, if you receive any inquiry relating to the Company from the media, a securities analyst or an investor, you should refer the inquiry to our Chief Financial Officer or General Counsel (if any).

Safeguarding Confidential Information. Care must be taken to safeguard the confidentiality of internal information. For example, sensitive documents should not be left lying on desks, and visitors should not be left unattended in offices containing internal company documents.

Rumors. Rumors concerning the business and affairs of the Company may circulate from time to time. Our general policy is not to comment upon those rumors. Individuals should also refrain from commenting upon or responding to rumors and should refer any requests for comments or responses to our Chief Financial Officer or General Counsel (if any).

Analyst Reports. The Company views analyst reports as the proprietary information of the analyst's firm. The Company will not provide such reports on our corporate or other websites or through any other means to persons outside of the Company. The Company should avoid directing anyone outside the Company to an analyst report, in part to avoid the appearance of endorsing such a report.

7. Company Assistance.

Any person who has any questions about specific transactions may obtain additional guidance from our Chief Financial Officer or our General Counsel (if any).

Remember, however, you are ultimately responsible for adhering to this Insider Trading and Communications Policy and avoiding improper transactions. In this regard, it is imperative that you use your best judgment.

Section 16 Filings. While the Company expects to assist each director and Section 16 Officer (including Family Members and Controlled Entities of such persons) (collectively, "***Section 16 Reporting Persons***") with such Section 16 filings, and expects such assistance to include form preparation for all Section 16 Reporting Persons other than those who do not require such assistance, the obligation to file Section 16 reports (Forms 3, 4 and 5) is a personal obligation of each such person, and the Company is not responsible for any failure to file accurate and timely Section 16 reports. Each Section 16 Reporting Person must ensure that his or her broker provides the Company with detailed information (trade date, number of shares, exact price) regarding every transaction involving the securities of the Company, including gifts,

transfers, pledges and all Rule 10b5-1 transactions, both in connection with mandatory pre-clearance requirements for such Section 16 Reporting Persons and immediately following execution.

8. Modifications.

This Insider Trading and Communications Policy has been approved by the Company's Board of Directors. Officers of the Company may, from time to time, make non-substantive modifications to this Insider Trading and Communications Policy (including, without limitation, substitution of the names of the appropriate contact persons within the Company) with subsequent notice to the Company's Board of Directors or the Nominating and Corporate Governance Committee of the Board of Directors.

9. Acknowledgements.

All directors, officers, employees, consultants and contractors of the Company and its subsidiaries will be required to acknowledge, electronically or in writing, their understanding of, and intent to comply with, this Insider Trading and Communications Policy. This agreement will constitute each such person's consent for the Company to issue any necessary stop-transfer orders to the Company's transfer agent to enforce compliance with this policy. As a condition of continued employment or engagement, all employees, contractors and consultants must periodically acknowledge, electronically or in writing, that they have read and agree to abide by this policy.

ACKNOWLEDGMENT

I have received and read a copy of the Plus Therapeutics, Inc. Insider Trading and Communications Policy and I understand and agree to comply with the specific requirements of the policy. I agree that I will be subject to sanctions imposed by the Company, in its discretion, for violation of the Company's policy, including dismissal for cause, and that the Company may give stop-transfer and other instructions to the Company's transfer agent against transfer of Company securities by me in a transaction that the Company considers to be in contravention of this policy.

Signed: ____

Printed Name: ____

Date: ____

Exhibit 21

List of Subsidiaries of the Registrant

Wholly Owned Subsidiary	Place of Incorporation
CNSide Diagnostics, LLC	Delaware

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-1 (Nos. 333-227485, 333-215365, 333-249728, 333-253612, 333-259325, 333-266684, 333-275531 and 333-273823), Forms S-3 (No. 333-282507) and Forms S-8 (Nos. 333-223566, 333-210211, 333-202858, 333-239548 and 333-281758) of Plus Therapeutics, Inc. (the "Company") of our report dated March 31, 2025, relating to the consolidated financial statements, which appears in this Annual Report on Form 10-K.

Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ BDO USA, P.C.
Austin, Texas

March 31, 2025

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EXHIBIT 31.1

Certification of Principal Executive Officer Pursuant to
Securities Exchange Act Rule 13a-14(a)
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Marc H. Hedrick, certify that:

1. I have reviewed this Annual Report on Form 10-K of Plus Therapeutics, 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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 31, 2025
/s/ Marc H. Hedrick, MD
Marc. H. Hedrick,
President & Chief Executive Officer

EXHIBIT 31.2

Certification of Principal Financial Officer Pursuant to
Securities Exchange Act Rule 13a-14(a)
As Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Andrew Sims, certify that:

1. I have reviewed this Annual Report on Form 10-K of Plus Therapeutics, 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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 31, 2025
/s/ Andrew Sims
Andrew Sims
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATIONS PURSUANT TO 18 U.S.C. SECTION 1350/ SECURITIES EXCHANGE ACT RULE 13a-14(b), AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES – OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Plus Therapeutics, Inc. for the year ended December 31, 2024 as filed with the Securities and Exchange Commission on March 31, 2025, (the "Report"), Marc H. Hedrick, as President & Chief Executive Officer of Plus Therapeutics, Inc., and Andrew Sims, as Chief Financial Officer of Plus Therapeutics, Inc., each hereby certifies, respectively, that:

1. The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934.

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Plus Therapeutics, Inc.

By: /s/ Marc H. Hedrick, MD
Marc H. Hedrick, MD
President & Chief Executive Officer

Dated: March 31, 2025

By: /s/ Andrew Sims
Andrew Sims
Chief Financial Officer

Dated: March 31, 2025