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, 2020
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.
(previously known as Cytori Therapeutics, Inc.)
(Exact name of Registrant as Specified in Its Charter)

DELAWARE		**33-0827593**
(State or Other Jurisdiction of Incorporation or Organization)		**(I.R.S. Employer Identification No.)**
4200 MARATHON BLVD. SUITE 200, AUSTIN,TX		**78756**
(Address of principal executive offices)		**(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 by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

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

The aggregate market value of the common stock of the registrant held by non-affiliates of the registrant on June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter, was $5.4 million based on the closing sales price of the registrant's common stock on June 30, 2020 as reported on the Nasdaq Capital Market, of $2.12 per share.

As of February 16, 2021, there were 21,106,217 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant's definitive proxy statement for its 2021 Annual Meeting of Stockholders, which will be filed with the United States Securities and Exchange Commission within 120 days of December 31, 2020, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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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. 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; the Company's strategic collaborations and license agreements, intellectual property, FDA approval process and government regulation; the potential size of the market for our product candidates; our research and development efforts; our IP strategy; competition; future development and/or expansion of our product candidates and therapies in our markets; 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 report, including our potential need for additional financing and the availability thereof; 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 product manufacture for Rhenium NanoLiposome (RNL™) to a contract drug manufacturing organization; and the potential enhancement of our cash position through development, marketing, and licensing arrangements. Our actual results may differ, including materially, from those anticipated in these forward-looking statements as a result of various factors, including, but not limited to, the following: the early stage of our product candidates and therapies, the results of our research and development activities, including uncertainties relating to the clinical trials of our product candidates and therapies; our liquidity and capital resources and our ability to raise additional cash, the outcome of our partnering/licensing efforts, risks associated with laws or regulatory requirements applicable to us, market conditions, product performance, potential litigation, and competition within the regenerative medicine field, among others. The forward-looking statements included in this report are also subject to a number of additional material risks and uncertainties, including but not limited to the risks described under the "Risk Factors" in Item 1A of Part I 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 the statements except as required by law. 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 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 SEC.

- We have incurred losses since inception and expect to incur significant net losses in the foreseeable future and therefore may never become profitable.
- 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.
- The disruption and volatility in the global capital markets may negatively impact our ability to obtain additional debt financings and modify our existing debt facilities and may increase the risk of non-compliance with covenants under our existing loan agreement.
- The report of our independent registered public accounting firm contains an emphasis paragraph regarding the substantial doubt about our ability to continue as a "going concern".
- Our operating results have been and will likely continue to be volatile.
- Our future success is in large part dependent upon our ability to successfully integrate and develop our nanomedicine platform and commercialize RNL and any failure to do so could significantly harm our business and prospects.
- If we are unable to successfully partner with other companies to commercialize our product candidates, our business could materially suffer.
- Our current business strategy is high-risk and may not be successful.
- We face intense competition, and 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.
- Our current and future clinical trials may fail to demonstrate acceptable levels of safety and efficacy for our product candidate, which could prevent or significantly delay their regulatory approval and commercialization, which would have a material and adverse impact on our business.
- We rely on third parties to conduct our clinical trials, manufacture our product candidates, and perform other services. If these parties are not able to successfully perform due to the impact of the COVID-19 pandemic or otherwise, 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 may have difficulty enrolling, or fail to enroll patients, in our clinical trials, which could delay or prevent clinical trials of our drug candidates.
- Our success depends in substantial part on our ability to obtain regulatory approvals for our RNL product candidate. However, we cannot be certain that we will receive regulatory approval for this product candidate or our other product candidates.
- If we or collaborators fail to comply with regulatory requirements applicable to the development, manufacturing, and marketing of our product candidates, regulatory agencies may take action against us or them, which could significantly harm our business.
- 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.
- If we are unable to identify, hire and/or retain key personnel, or if any of our personnel were to test positive for COVID-19, 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.
- 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.
- Our success depends in part on our ability to protect our intellectual property.
- 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.
- 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.
- We could be delisted from Nasdaq, which would seriously harm the liquidity of our stock and our ability to raise capital.
- 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 COVID-19 pandemic could adversely affect our business, results of operations, and financial condition.
- We may face business disruption and related risks resulting from the COVID-19 pandemic and the invocation of the Defense Production Act, either of which could have a material adverse effect on our business.

PART I

Item 1. Business

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

General

Plus Therapeutics is committed to developing and delivering innovative treatments for rare and difficult to treat cancers, with a focus on cancers of the central nervous system. Plus Therapeutics' mission is to transform the clinical care of cancer patients through its innovative drugs that have the potential to improve survival and quality of life.

Plus has a nanoscale drug development platform and the requisite expertise to innovate and produce product candidates that have the potential to become new and better therapeutics for rare cancers. We believe that this approach will produce investigational drugs that provide unique benefits such as improved mechanism of action, better tumor targeting, improved pharmacokinetics and higher treatment doses to the tumor. Benefits such as these may then improve the overall efficacy of drugs while reducing the side effects associated with more traditional drug delivery methods. To support this goal, Plus Therapeutics has an established, GMP-validated nanoscale drug R&D and commercial scale manufacturing facility in San Antonio, TX. This facility is suited to support our efforts to produce nanoliposomal drug candidates for research, development, clinical and commercial use.

As part of our strategy to leverage our nanotechnology platform and expertise, we use a simple multi-step model that management believes allows Plus to best address unmet market needs or underserved medical conditions while managing risks and minimizing development costs. This model includes: (1) market landscape mapping, (2) internal drug redesign, (3) in house drug manufacturing, (4) performance of critical non-clinical (i.e. bench, animal) analyses, (5) scale-up manufacturing for commercial purposes and performance of early-stage clinical trials, and (6) partnering for late-stage clinical trials, regulatory approval, and, ultimately, commercial launch.

Pipeline

Plus Therapeutics currently has four investigational drugs, three of which are at the clinical stage for rare and difficult to treat cancers. The three clinical stage drugs in our pipeline are:

1) Rhenium NanoLiposomes (RNL™), a patented radiotherapy for patients with recurrent glioblastoma (rGBM) that is currently being evaluated in the U.S. NCI-supported, multi-center ReSPECT™ Phase 1 dose-finding clinical trial;

2) DocePLUS™, a patented chemotherapy for patients with solid tumors that has been evaluated in a completed U.S. single-center Phase 1 clinical trial; and

3) DoxoPLUS™, a generic chemotherapy that has been evaluated in a completed, bioequivalence clinical trial in the U.S., Canada, and Ukraine versus Janssen's CAELYX® in patients with ovarian cancer.

In addition, Plus has an early preclinical investigational drug which is a proprietary combination of Rhenium Nanpoliposomes and liposomal doxorubicin. Theoretically, this combination could provide a synergistic combination of both chemotherapy and radiation in a single treatment.

Current business activities related to both DocePLUS and DoxoPLUS are focused on identification of potential partners for these two drugs.

Plus' RNL™ technology was a key part of the licensed radiotherapeutic portfolio that we acquired from NanoTx, Corp. ("NanoTx") on May 7, 2020. The licensed radiolabeled nanoliposome platform can be applied toward several cancer targets and was developed by a multi-institutional consortium based in Texas at the Mays Cancer Center / UT Health San Antonio MD Anderson Cancer Center now 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 licensed technology was previously funded by both the National Institutes of Health/National Cancer Institute (NIH/NCI) and the Cancer Prevention and Research Institute of Texas (CPRIT). Dr. Brenner's RNL research program has an active $3M award from NIH/NCI which will financially support the continued clinical development of RNL for recurrent glioblastoma through the completion of a Phase 2 clinical trial and enrollment of up to 55 patients.

Plus Therapeutics' lead investigational drug, RNL™, is a novel injectable radiotherapy designed to deliver targeted high dose radiation directly into a brain tumor in a safe, effective, and convenient manner to optimize patient outcomes. RNL™, which is composed of radionuclide Rhenium-186 (^{186}Re) and a nanoliposomal carrier, is infused directly into the brain tumor via precision brain mapping and convection enhanced delivery. The RNL radiation dose delivered to patients may be up to 15-20x greater than what is possible with external beam radiation therapy (EBRT). Some additional potential benefits of RNL compared to EBRT include:

- RNL can be visualized in real-time during administration, possibly giving doctors better control of radiation dosing and distribution.
- Potentially more effectively treats the bulk tumor and microscopic disease in surrounding healthy tissue.
- Using a small catheter, RNL is infused directly into the targeted tumor, which may reduce radiation exposure to healthy cells. By contrast, EBRT is less targeted and selective.
- RNL is given during a single 3- to 4-day in-patient hospital visit, while EBRT requires out-patient visits 5 days a week for approximately 6 weeks.

Recurrent glioblastoma (GBM) affects approximately 12,000 patients annually in the U.S. and is the most common and lethal form of brain cancer. The average life expectancy with glioblastoma is less than 24 months, with a one-year survival rate of 40.8% and a five-year survival rate of only 6.8%. GBM can cause headaches, seizures, vision changes and other neurological complications. Despite the best available medical treatments to eliminate the initial brain tumor, some microscopic disease frequently remains, with tumor regrowth within months. In fact, approximately 90% of patients experience tumor recurrence. This tumor type is incredibly difficult to remove completely, and often is resistant or quickly develops resistance to most available therapies. 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. There is no clear standard of care for recurrent GBM and even the few currently approved treatments, in aggregate, provide only marginal survival benefit. Current approved therapies are associated with significant side effects, which limit dosing and prolonged use.

By infusing the RNL™ drug directly into the tumor, bypassing the blood-brain barrier, normal brain and external tissues may be spared from radiation damage. We believe that radiation in the form of high energy electrons may be effective against glioblastoma if an adequate dose can be effectively delivered. For comparison, current EBRT protocols for recurrent glioblastoma typically recommend a total maximum dose of about 35 Gy. In contrast, the most recently dosed patient with RNL in our clinical trial received over 500 Gy without significant adverse effects to-date.

RNL is currently being evaluated for the treatment of recurrent glioblastoma in the Phase 1 multi-center ReSPECT™ dose-finding clinical trial. ReSPECT is evaluating the safety, tolerability, and distribution of RNL for the treatment of recurrent glioblastoma. Thus far, RNL has demonstrated early potential efficacy signals in patients with adequate dosing and tumor coverage with two patients surviving more than 30 months, compared to a median survival of approximately 9 months with the current standard of care. The sixth dose escalation cohort of this trial has been completed, which increased the RNL drug volume to 8.8 milliliters and radiation dose to 22.3 millicuries. The increased treatment volume in the sixth cohort will allow treatment of tumors up to approximately 4.5 cm in size, which may include the majority of glioblastoma tumors that appear in the recurrent setting. No treatment-related SAEs have been observed thus far. ReSPECT is supported by an award from the National Cancer Institute (NCI), part of the U.S. National Institutes of Health (NIH).

In September 2020, the FDA granted both Orphan Drug designation and Fast Track designation to RNL for the treatment of patients with glioblastoma.

Based on substantial preclinical work completed and published, RNL is thought to have potential clinical benefits in other difficult to treat cancers such as leptomeningeal carcinomatosis, peritoneal carcinomatosis, recurrent head and neck cancer, and pediatric brain cancer.

Licensing

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 $400,000 in cash and $300,000 in our voting stock (the "Equity Compensation"). Furthermore, we may pay up to $136.5 million in development and sales milestone payments and a tiered single-digit royalty on U.S. and European sales.

The licensed drug portfolio is anchored around nanoliposome-encapsulated radionuclides for several cancer targets. The lead drug asset is a chelated RNL™, initially being developed for recurrent glioblastoma. RNL is infused directly into the brain tumor via precision brain mapping and convection enhanced delivery technology to deliver very high therapeutic doses of radiation to patients whose cancer has recurred following initial surgical resection and treatment with chemotherapy and radiation.

The licensed radiolabeled nanoliposome platform was developed by a multi-institutional consortium based in Texas at the Mays Cancer Center / UT Health San Antonio 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 National Institutes of Health/National Cancer Institute (NIH/NCI) and the Cancer Prevention and Research Institute of Texas (CPRIT). There is an active $3M award from NIH/NCI which will financially support the continued clinical development of RNL for recurrent glioblastoma.

Manufacturing

We have a dedicated nanoparticle research & development and commercial scale manufacturing facility located in San Antonio, Texas. The facility and processes are designed to comply with current good manufacturing practices ("cGMP") per FDA and EMA regulations for the manufacture of drug candidates for clinical, research, development and commercial use. Upon approval of our drug candidates, our manufacturing capabilities will 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 the analytical 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. Our San Antonio facility enables us to produce drug substances in a cost-effective manner while retaining control over the process and timing. As needed, the use of a qualified Contract Drug Manufacturing Organization (CDMO) may be utilized to perform various manufacturing processes as we deem appropriate to meet our operational objectives. In addition, we have entered into master services agreements with third parties, including Piramal Pharma Solutions, Inc. ("Piramal"), in connection with the manufacture of RNL. The master services agreement with Piramal (the "Piramal MSA") was entered into on January 8, 2021. The Piramal MSA provides for Piramal to perform certain services related to the development, manufacture, and supply of our RNL-Liposome Intermediate Drug Product. The Piramal MSA includes the transfer of analytical methods, development of microbiological methods, process transfer and optimization, intermediate drug product manufacturing, and stability studies for us. The transfer will be performed at Piramal's facility located in Lexington, Kentucky. The parties contemplate that the MSA will lead to clinical and commercial supply agreements between us and Piramal. The Piramal MSA has a term of five years and will automatically renew for successive one-year terms unless either party notifies the other no later than six months prior to the original term or any additional terms of its intention to not renew the Piramal MSA. We have the right to terminate the Piramal MSA for convenience upon thirty days' prior written notice. Either party may terminate the Piramal MSA upon an uncured material breach by the other party or upon the bankruptcy or insolvency of the other party.

Competition

We will compete primarily on the basis of the safety and efficacy of our therapies across a broad range of clinical indications to address significant unmet medical and market needs, supported by our brand name, pricing, products, published clinical data, regulatory approvals, and reimbursement. We believe that our continued success depends on our ability to:

- develop and innovate our product and technology platforms;
- initiate new and advance existing clinical development programs;
- secure and maintain regulatory agency approvals;
- build and expand our commercial footprint;
- produce high quality products per our specifications and in line with customer expectations;
- achieve improved economies of scale;
- generate and protect intellectual property;
- hire and retain key talent; and
- successfully execute acquisition, licensing, and partnership activities.

Competition for RNL™ in the treatment of recurrent glioblastoma may come from a single or combination therapy in the future. Bayer, VBL Therapeutics, Kintara Therapeutics, Istari Oncology, Medicenna, MediciNova, Oncoceutics, PharmAbcine, VBI Vaccines, Ziopharm Oncology, Bristol Myers Squibb, ImmunoCellular, Novartis, EnGeneIC, Berg, Bexion, and others have reported drug development programs at various clinical stages for recurrent glioblastoma and Plus Therapeutics continues to monitor their progress.

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. RNL™ is covered by U.S. Patent No. 7,718,160, (the '160 Patent) which 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 the '160 Patent for the time equal to the regulatory review period for RNL™. This has the potential to extend patent coverage for this product for at least another 5 years. The '160 Patent covers the method of manufacture of RNL™ and product-by-process claims. Our patent family also contains granted patents in Canada (Patent No. 2,490,959), Europe (Patent No. EP1536843), and Australia (Patent No. 2003241598), which are expected to expire in May 2023. We are not aware of any valid patent claims that would be infringed by RNL™.

We also own U.S. Provisional Application No. 63/115,519, titled Radiolabeled Liposomes and Methods of Use Thereof, which is directed to methods of treating cancer comprising administering ^{186}Re nanoliposomes via convection-enhanced delivery. This application was filed on November 18, 2020, and any issued patents resulting from this application are expected to expire in November 2041, not including any patent term adjustment or patent term extension.

In addition, we own the proprietary formulation and proprietary methods of manufacture of a protein-stabilized liposomal form of docetaxel, DocePLUS. DocePLUS is covered by U.S. Patent No. 7,179,484, (the '484 Patent) which will expire in April 2024. 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 the '484 Patent for the time equal to the regulatory review period for DocePLUS. This has the potential to extend patent coverage for this product for at least another 10 years. The '484 Patent covers the method of manufacture of DocePLUS and product-by-process claims. We filed Provisional Patent Application No. 62/542,993 with the USPTO in August 2017. This was converted to a PCT application (US2018/045339) in August 2018 (the '339 application). The '339 Application covers methods of treating refractory small cell lung cancer with DocePLUS and may provide protection until 2037 in the U.S. and worldwide. We are not aware of any valid patent claims that would be infringed by the DocePLUS product, or methods of using the same in the treatment of refractory small cell lung cancer. Docetaxel is a well-known and widely-administered drug that has been off-patent in the U.S. since 2010.

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, 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 products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources. Our nanoparticle oncology drug products must receive regulatory approvals from the EMA and the FDA and from other applicable governments prior to their sale.

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or the FDC Act, 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 products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as clinical hold, FDA refusal to approve pending NDAs, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Product development for a new product or certain changes to an approved product in the United States typically involves preclinical laboratory and animal tests, the submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. 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. The conduct of some preclinical tests must comply with federal regulations and requirements, including good laboratory practices. 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. Long term 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 good clinical practice, or 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.

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. The trial protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support drug products for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug product into healthy human subjects or patients, 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 rare instances where the trial is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.

In addition, the manufacturer of an investigational drug in a Phase 2 or Phase 3 clinical trial for a serious or life-threatening disease 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 is prepared and submitted to the FDA. FDA approval of the drug product is required before marketing of the product may begin in the United States. The drug product must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting a drug product is substantial. The submission of most drug products is additionally 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. These fees are typically increased annually. The FDA has 60 days from its receipt of a drug candidate 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. 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 drug candidates. Most such applications for standard review are reviewed within ten months of the date the FDA files the drug candidate; most applications for priority review are reviewed within six months of the date the FDA files the drug candidate. Priority review can be applied to a drug 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 generally follows such recommendations. Before approving a drug candidate, 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 current good manufacturing practice, or cGMP, is satisfactory and the drug candidate contains data that provide substantial evidence that the drug candidate is safe, pure, potent and effective in the intended indication.

After the FDA evaluates the drug candidate 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, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the drug candidate, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included. 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, or 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, or 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, product approval may require substantial post-approval testing and surveillance to 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. 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 drug candidate or drug candidate supplement before the change can be implemented. A drug candidate 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 drug candidate supplements as it does in reviewing drug candidates.

Fast Track Designation and Accelerated Approval

The FDA is required to facilitate the development, and expedite the review, of drug candidates that are intended for the treatment of a serious or life-threatening disease or condition for which there is no effective treatment and which demonstrate the potential to address unmet medical needs for the condition. Under the fast track program, the sponsor of a new drug candidate may request that the FDA designate the candidate for a specific indication as a fast track drug concurrent with, or after, the filing of the IND for the candidate. The FDA must determine if the drug candidate qualifies for fast track designation within 60 days of receipt of the sponsor's request. Under the fast track program and FDA's accelerated approval regulations, the FDA may approve a drug candidate for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments.

In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval trials, or confirm a clinical benefit during post-marketing trials, will allow the FDA to withdraw the drug candidate from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by the FDA.

In addition to other benefits such as the ability to use surrogate endpoints and engage in more frequent interactions with the FDA, the FDA may initiate review of sections of a fast track product before the application is complete. This rolling review is available if the applicant provides, and the FDA approves, a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, the FDA's time period goal for reviewing an application does not begin until the last section of the IND is submitted. Additionally, the fast track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

Breakthrough Therapy Designation

The FDA is also required to expedite the development and review of the application for approval of drug candidate products that are intended to treat a serious or life-threatening disease or condition where preliminary clinical evidence indicates that the drug candidate may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. Under the breakthrough therapy program, the sponsor of a new drug candidate may request that the FDA designate the candidate for a specific indication as a breakthrough therapy concurrent with, or after, the filing of the IND for the drug candidate. The FDA must determine if the drug candidate product qualifies for breakthrough therapy designation within 60 days of receipt of the sponsor's request.

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—generally a disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making a product available in the United States for such disease or condition will be recovered from sales of the product.

Orphan drug designation must be requested before submitting a IND. 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. The first IND applicant to receive FDA approval for a particular active moiety to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the United States for that product for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market a drug product containing the same principal molecular structural features for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. A product is clinically superior if it is safer, more effective or makes a major contribution to patient care. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug product for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the IND user fee.

Rare Pediatric Disease Priority Review Voucher Program

Under the Rare Pediatric Disease Priority Review Voucher program, 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 approved rare pediatric disease product application. A rare pediatric disease product application is an NDA or IND for a product that treats or prevents a serious or life-threatening disease in which the serious or life-threatening manifestations primarily affect individuals aged from birth to 18 years; in general, the disease must affect fewer than 200,000 such individuals in the U.S.; the NDA or IND must be deemed eligible for priority review; the NDA or IND must not seek approval for a different adult indication (i.e., for a different disease/condition); the product must not contain an active ingredient that has been previously approved by the FDA; and the NDA or IND must rely on clinical data derived from studies examining a pediatric population such that the approved product can be adequately labeled for the pediatric population. 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 365 days of the product's approval.

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

The Rare Pediatric Disease Priority Review Voucher program was reauthorized in the 21st Century Cures Act, allowing a product that is designated as a product for a rare pediatric disease prior to October 1, 2020 to be eligible to receive a rare pediatric disease priority review voucher upon approval of a qualifying NDA or IND prior to October 1, 2022.

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, or PREA, NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug product is safe and effective. The FDA may grant full or partial waivers, or deferrals, for submission of data. Unless otherwise required by statute or regulation, PREA generally does not apply to a drug for an indication for which orphan designation has been granted; however, beginning in 2020, PREA will apply to INDs for orphan-designated drugs if the drug is a molecularly targeted cancer product 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.

Patent Term Restoration

After approval, owners of relevant drug patents may apply for up to a five-year patent extension. The allowable patent term extension is calculated as half of the drug's testing phase—the time between IND application 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.

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 U.S. PTO 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.

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, or 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, or 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, or HIPAA, and similar state laws, each as amended.

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. 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 and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending 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.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Affordable Care Act, or ACA, to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (discussed below).

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 False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the U.S. 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.

HIPAA created new 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, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to business associates, independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of 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 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 and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians 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. Effective January 1, 2022, we will also be required to report on transfers of value to physician assistants, nurse practitioners or clinical nurse specialists, certified registered nurse anesthetists, and certified nurse-midwives.

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

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. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such products. 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 may be separate from the process for setting the price of a product or for establishing the reimbursement rate that such a payor will pay for the product. 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 does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

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 member states allow companies to fix their own prices for medicines, but monitor and control company profits. 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.

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 products for which we receive regulatory approval, 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, retroactive to January 1, 2010, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP;

- a Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;

- 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 Public Health Service pharmaceutical pricing 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.

On January 20, 2017, federal agencies with authorities and responsibilities under the ACA were directed to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. More recently, the Tax Cuts and Jobs Act was signed into law in December 2017, which eliminated certain requirements of the ACA, including the individual mandate, and plans to repeal all or portions of the ACA have also been suggested. 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.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or 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.

Europe / 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, 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. In the EU, for example, a clinical trial application must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. 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.

To obtain regulatory approval of an investigational drug product under EU regulatory systems, we must submit a marketing authorization application. The application used to file the drug product in the United States is similar to that required in the EU, with the exception of, among other things, country-specific document requirements.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, 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.

Employees and Human Capital

As of December 31, 2020, we had twelve full-time employees. Of these full-time employees, six were engaged in research and development, and six 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.

Diversity and Inclusion

We are committed to our continued efforts to increase diversity and foster an inclusive work environment. We recruit the best qualified employees regardless of gender, ethnicity, or other protected traits and it is our policy to fully comply with all laws (domestic and foreign) applicable to discrimination in the workplace. Our diversity, equity and inclusion principles are also reflected in our employee training and policies. We continue to enhance our diversity, equity and inclusion policies which are guided by our executive leadership team.

Workforce Health and Safety

In response to the COVID-19 pandemic in 2020, we instituted a remote work protocol to help ensure the safety of our employees, our community, and to adhere to federal, state, and local requirements and the Center for Disease Control (CDC) recommendations of social distancing and limited public exposure in connection with the COVID-19 pandemic. We did not implement any furlough, layoff, or salary reductions during this time. We continue to evaluate our ability to operate in light of recent resurgences of COVID-19 and the advisability of continuing operations based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, third parties with whom we collaborate, and our stockholders.

Compensation and Benefits

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 4200 Marathon Blvd., Suite 200, Austin, TX. Our telephone number is (737) 255-7194. We maintain a website at www.plustherapeutics.com.

Item 1A. Risk Factors

The risk factors described below, as well as statements described elsewhere in this Annual Report on Form 10-K, including our audited Consolidated 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.

We generated negative cash flows from operations and have incurred net operating losses each year since we started business. For the year ended December 31, 2020, we incurred net losses of $8.2 million and our net cash used in operating activities was $8.4 million. As of December 31, 2020, our accumulated deficit was $433.5 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. While we have implemented and continue to implement cost reduction measures where possible, we nonetheless expect to continue operating in a loss position on a consolidated basis and expect that recurring operating expenses will be at higher levels for the year ended December 31, 2021 as we prepare for and perform clinical trial 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 in compliance with applicable laws and as required for submission to applicable regulatory bodies, including manufacturing, testing and validation of our RNL candidate;
- 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; and
- the degree to which our approved products are accepted in the marketplace.

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 may 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.

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. 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 San Antonio, 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.

We will continue to require substantial additional capital to continue our clinical development and potential commercialization activities. Accordingly, we will need to raise substantial additional capital to continue to fund our operations. Our financing plans include seeking to raise additional cash through the use of debt and/or equity offering programs, strategic corporate partnerships, state and federal development programs, licensing, and sales of assets and equity. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of its 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.

In connection with the purchase agreement (the "2020 Purchase Agreement") and registration rights agreement, dated September 30, 2020, we entered into with Lincoln Park Capital Fund, LLC ("Lincoln Park") we may direct Lincoln Park to purchase up to $25.0 million worth of shares of our common stock under the 2020 Purchase Agreement over a 36-month period generally in amounts up to 50,000 shares of our common stock, which may be increased to up to 100,000 shares of our common stock depending on the market price of our common stock at the time of sale, provided that Lincoln Park's committed obligation under such single regular purchase shall not exceed $500,000. Through December 31, 2020, we have sold a total of 353,113 shares, excluding 180,701 shares issued for commitment fee, under the 2020 Purchase Agreement for net proceeds of $0.7 million. During 2021 and through the date of filing of this Form 10-K, we issued 985,186 shares of our common stock under the 2020 Purchase Agreement for total proceeds of $2.9 million.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we sell all $25.0 million of shares of our common stock under the 2020 Purchase Agreement to Lincoln Park, we may still need additional capital to finance our future production plans and working capital needs, and we may have to raise funds through the issuance of equity or debt securities. 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, 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. 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.

In addition, on October 23, 2020, we entered into an Equity Distribution Agreement (the "Distribution Agreement") with Canaccord Genuity LLC ("Canaccord"), pursuant to which we may issue and sell, from time to time, shares of our common stock

having an aggregate offering price of up to $10,000,000 (the "ATM Shares"), depending on market demand, with Canaccord acting as an agent for sales. Sales of the ATM Shares may be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933, as amended (the "Securities Act"), including, without limitation, sales made directly on or through the NASDAQ Capital Market. Canaccord will use its commercially reasonable efforts to sell the ATM Shares we request to be sold on our behalf, consistent with Canaccord's normal trading and sales practices, under the terms and subject to the conditions set forth in the Distribution Agreement. We have no obligation to sell any of the ATM Shares. We may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price we designate from time to time and we may at any time suspend sales pursuant to the Distribution Agreement.

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.

The disruption and volatility in the global capital markets may negatively impact our ability to obtain additional debt financings and modify our existing debt facilities and may increase the risk of non-compliance with covenants under our existing loan agreement.

Under the Loan and Security Agreement, dated May 29, 2015 (the "Loan and Security Agreement"), as amended, with Oxford Finance, LLC ("Oxford"), Oxford made a term loan to us in an aggregate principal amount of $17.7 million (the "Term Loan") subject to the terms and conditions set forth therein. As of December 31, 2020, the outstanding principal balance of the Term Loan was $4.3 million subsequent to a repayment of $5.0 million on April 1, 2020 pursuant to the Ninth Amendment to the Loan and Security Agreement. In addition, we are obligated to pay a final payment fee of $3.2 million at the earlier of the maturity date, acceleration, or payment of the Term Loan.

The Term Loan accrues interest at a floating rate equal to the three-month LIBOR rate (with a floor of 1.00%) plus 7.95% per annum. On March 29, 2020, we and Oxford amended the Loan and Security Agreement to extend the interest-only period. Beginning May 1, 2021, we will be required to make payments of principal and accrued interest in equal monthly installments to amortize the Term Loan through September 1, 2024, the new maturity date.

As security for our obligations under the Loan and Security Agreement, we granted a security interest in substantially all of our existing and after-acquired assets, excluding our intellectual property assets, subject to certain exceptions set forth in the Loan and Security Agreement. If we are unable to discharge these obligations, Oxford could foreclose on these assets, which would, at a minimum, have a severe material adverse effect on our ability to operate our business.

Our indebtedness to Oxford could adversely affect our operations and liquidity, by, among other things:

- causing us to use a larger portion of our cash flow to fund interest and principal payments, reducing the availability of cash to fund working capital and capital expenditures and other business activities;
- making it more difficult for us to take advantage of significant business opportunities, such as acquisition opportunities, and to react to changes in market or industry conditions; and
- limiting our ability to borrow additional monies in the future to fund working capital and capital expenditures and for other general corporate purposes.

The Loan and Security Agreement, as amended, requires us to maintain at least $2.0 million in unrestricted cash and/or cash equivalents and includes certain reporting and other covenants, that, among other things, restrict our ability to (i) dispose of assets, (ii) change the business we conduct, (iii) make acquisitions, (iv) engage in mergers or consolidations, (v) incur additional indebtedness, (vi) create liens on assets, (vii) maintain any collateral account, (viii) pay dividends, (ix) make investments, loans or advances, (x) engage in certain transactions with affiliates, and (xi) prepay certain other indebtedness or amend other financing arrangements. If we fail to comply with any of these covenants or restrictions, such failure may result in an event of default, which if not cured or waived, could result in Oxford causing the outstanding loan amount to become immediately due and payable. If the maturity of our indebtedness is accelerated, we may not have, or be able to timely procure, sufficient cash resources to satisfy our debt obligations, and such acceleration would adversely affect our business and financial condition.

The COVID-19 pandemic has severely impacted the global economic activity and caused significant volatility and negative pressure in the financial markets. This volatility and downturn may affect our business, liquidity position, and financial results. This in turn may negatively impact our ability to remain in compliance with the financial and operating covenants under the Loan and Security Agreement and may restrict our ability to obtain covenant waivers, restructure or amend the terms of our existing debt, or obtain additional debt financing. If the maturity of our indebtedness is accelerated or if we are unable to amend the terms or obtain any necessary waivers under our debt facilities or obtain additional debt or other financing, it would materially and adversely affect our liquidity position and ability to fund our operations. This in turn would materially harm our business and financial conditions.

The report of our independent registered public accounting firm contains an emphasis paragraph regarding the substantial doubt about our ability to continue as a "going concern."

The audit report of our independent registered public accounting firm covering the December 31, 2020 consolidated financial statements contains an explanatory paragraph that states that our recurring losses from operations, liquidity position, and debt service requirements raises substantial doubt about our ability to continue as a going concern. This going concern opinion could materially limit our ability to raise additional funds through the issuance of new debt or equity securities or otherwise. Future reports on our financial statements may also include an explanatory paragraph with respect to our ability to continue as a going concern. To date, our operating losses have been funded primarily from outside sources of invested capital and gross profits. We have had, and we will likely continue to have, an ongoing need to raise additional cash from outside sources to fund our future operations. However, no assurance can be given that additional capital will be available when required or on terms acceptable to us. 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 the curtailment or cessation of operations. We also cannot give assurance that we will achieve sufficient revenue in the future to achieve profitability and cash flow positive operations to allow us to continue as a going concern. The perception that we may not be able to continue as a going concern may cause third parties to choose not to deal with us due to concerns about our ability to meet our contractual obligations, which could have a material adverse effect on our business.

Our operating results have been and will likely continue to be volatile.

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. Our visibility as to our future operating results and our clinical development timeline may be further limited by the impact of the ongoing COVID-19 pandemic. 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.

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 may have experienced, or may in the future experience, "ownership changes" as a result of shifts in stock ownership. Any such ownership changes could limit our ability to use net operating loss carryforwards and other pre-change tax attributes. Furthermore, under 2017 U.S. tax legislation, although the treatment of tax losses generated before December 31, 2017 has generally not changed, tax losses generated in calendar year 2018 and beyond may be used to offset only 80% of taxable income. This change may require us to pay federal income taxes in future years despite generating a loss for federal income tax purposes in prior years.

Risks Related to Our Business and Industry

Our future success is in large part dependent upon our ability to successfully integrate and develop our nanomedicine platform and commercialize RNL and any failure to do so could significantly harm our business and prospects.

Our ability to successfully integrate, develop and commercialize RNL 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 Plus Therapeutics 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 candidate, 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 candidate. 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;

- conduct of this acquired business will require significant capital, 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 candidate could be materially and adversely impacted;
- we have discontinued development activities for DoxoPLUS and DocoPLUS and are actively seeking to monetize these assets; and
- we are not experienced in acquiring and integrating new businesses.

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/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.

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

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

- we do not have a long operating history as a drug company, or prior experience with obtaining regulatory, reimbursement, or other approvals for product candidates such as RNL and DocePLUS;
- 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 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.

We face intense competition, and 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, many of which have greater financial resources, sales and marketing capabilities, including larger, well-established sales forces, manufacturing capabilities, experience in obtaining regulatory approvals for product candidates, and other resources than we do.

We expect that 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, EMA, 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. In addition, competitors may seek to

develop alternative formulations of or technological approaches to our product candidates and/or drug delivery technologies that address our targeted indications.

We may face competition for our RNL product candidate (which is intended for the treatment of glioblastoma) from multiple drug classes.

Competition for RNL™ in the treatment of recurrent glioblastoma may come from a single or combination therapy in the future. Bayer, VBL Therapeutics, Kintara Therapeutics, Istari Oncology, Medicenna, MediciNova, Oncoceutics, PharmAbcine, VBI Vaccines, Ziopharm Oncology, Bristol Myers Squibb, ImmunoCellular, Novartis, EnGeneIC, Berg, Bexion, and others have reported drug development programs at various clinical stages for recurrent glioblastoma and we continue to monitor their progress.

Competitors may have greater experience in developing drugs, 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.

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.

Our current and future clinical trials may fail to demonstrate acceptable levels of safety and efficacy for our product candidates, which could prevent or significantly delay their regulatory approval and commercialization, which would have a material and adverse impact on our business.

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:

- clinical results may not meet prescribed endpoints for the studies or otherwise 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;
- lack of adequate funding to continue the clinical trial, 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 contract research organizations, and other third parties;
- inability to design appropriate clinical trial protocols;
- slower than expected rates of subject recruitment and enrollment rates in clinical trials;
- regulatory review may not find a product safe or effective enough to merit either continued testing or final approval;
- regulatory review may not find that the data from preclinical testing and clinical trials justifies 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;
- 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;
- a product candidate may be approved only for indications that are narrow or under conditions that place the product at a competitive disadvantage, which may limit the sales and marketing activities for such products or otherwise adversely impact the commercial potential of a product; and
- a regulatory agency may ask us to 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 contract research organizations, 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 rely on third parties to conduct our clinical trials, manufacture our product candidates, and perform other services. If these parties are not able to successfully perform due to the impact of the COVID-19 pandemic or otherwise, 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 contract research organizations, 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. The COVID-19 pandemic has placed a strain on hospitals and clinics, contract research organizations, and other providers of clinical and medical supplies and equipment. This in turn could impact the ability of third parties such as hospitals to support our clinical trials or perform other services in support of our clinical programs. In addition, third parties may not prioritize our clinical trials relative to those of other customers due to resource or other constraints as a result of the COVID-19 pandemic. We may experience enrollment at a slower pace at certain of our clinical trial sites than initially anticipated. Further, our clinical trial sites may be required to suspend enrollment due to travel restrictions, workplace safety concerns, quarantine, facility closures, and other governmental restrictions. Some of our clinical trial sites have imposed limited accessibility to conduct clinical monitoring and training on-site. 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 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.

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

We have only 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 EMA), 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 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.

Competition for RNL™ in the treatment of recurrent glioblastoma may come from a single or combination therapy in the future. Bayer, VBL Therapeutics, Kintara Therapeutics, Istari Oncology, Medicenna, MediciNova, Oncoceutics, PharmAbcine, VBI Vaccines, Ziopharm Oncology, Bristol Myers Squibb, ImmunoCellular, Novartis, EnGeneIC, Berg, Bexion, and others have reported drug development programs at various clinical stages for recurrent glioblastoma.

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 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 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 pre-commercial, 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.

If we or any party to a key collaboration, licensing, development, acquisition or similar arrangement fails 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.

In February 2017, we acquired substantially all of the assets of Azaya Therapeutics Inc ("Azaya"), including DoxoPLUS and DocePLUS, and related manufacturing equipment and inventory pursuant to an asset purchase agreement (the "Azaya Purchase Agreement"). Under the Azaya Purchase Agreement, we are required to use commercial reasonable efforts to develop our DoxoPLUS and DocePLUS product candidates. Further, we are subject to future milestone, earn-out and other payments to Azaya all of which are tied to our commercialization and sale activities for these product candidates. If we are unsuccessful in our efforts to develop our DoxoPLUS and DocePLUS drug assets, or if Azaya and we were to enter into a dispute over the terms of our agreement, then our business could be seriously harmed.

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, RNL. Under the license agreement with NanoTx, we are required to use commercial reasonable efforts to develop the RNL 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.

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 patent 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.

If we or collaborators fail to comply with regulatory requirements applicable to the development, manufacturing, and marketing of our product candidates, regulatory agencies may take action against us or them, which could significantly harm our business.

Our product candidates, along with the clinical development process, the manufacturing processes, post-approval clinical data, labeling, advertising, and promotional activities for these products, are subject to continual requirements and review by the FDA and state and foreign regulatory bodies. 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, Clinical Good Manufacturing Practices (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. 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 our product candidates or manufacturing processes;
- warning 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.

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. RNL is 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, by the FDA under the Federal Food, Drug and Cosmetic Act, and/or in international markets such as Europe, by the EMA under its Medicinal Products Directive;
- our nanomedicine product candidates, if approved, will still be subject to post-market reporting requirements for deaths or serious injuries when 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.

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

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/groups of products 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.

Our nanoparticle technology and pipeline oncology products, such as RNL and DocePLUS, are being developed under existing government criteria, which are subject to change in the future. Clinical and/or pre-clinical criteria in addition to cGMP manufacturing requirements may change and impose additional regulatory burdens. Clinical requirements are subject to change which may result in delays in completing the regulatory process. Divergence in regulatory criteria for different regulatory agencies around the globe could result in the repeat of clinical studies and/or preclinical studies to satisfy local jurisdictional requirements, which would significantly lengthen the regulatory process and increase uncertainty of outcome. Some jurisdictions may require clinical data in their indigenous population, resulting in the repeat of clinical studies in whole or in part. Some jurisdictions 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/ transmissible spongiform encephalopathy risks, banned packaging components, prohibited chemicals, banned substances, etc. There can be no assurance that the FDA or foreign regulatory authorities will accept our pre-clinical and/or clinical data.

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.

In addition, the Drug Supply Chain Security Act enacted in 2013 imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing, and that law is expected to be fully implemented over a ten-year period. Most recently, 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 or the "CREATES Act." The CREATES Act aims to address the concern articulated by both the FDA and others in the industry that some brand manufacturers have improperly restricted the distribution of their products, including by invoking the existence of a REMS for certain products, to deny generic and biosimilar product developers access to samples of brand products. 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 European Union, 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 European Union 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.

Some intellectual property that we have in-licensed may have 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, or 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.

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 European Union, 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 European Union. Currently, this designation provides market exclusivity in the U.S. and the European Union 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 was specifically designated in the approval, nor does it prevent other types of drugs 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 condition if the FDA concludes that the new drug is clinically superior to the orphan product or a market shortage occurs. In the European Union, 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. In September 2020, the FDA granted both Orphan Drug designation and Fast Track designation to RNL for the treatment of patients with glioblastoma.

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, including due to disruption caused by the COVID-19 pandemic, 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.

The COVID-19 pandemic has placed a significant strain on the pharmaceutical and medical industries, manufacturers of clinical supplies, and healthcare-related supplies and resources in general. For instance, we have experienced increased difficulties in obtaining certain materials for manufacturing that are also components of COVID-19 vaccine candidates. The impact of the COVID-19 pandemic has exacerbated the risks to which we are subject due to our reliance on third-party (and in some cases, sole source) suppliers. Additionally, our suppliers may experience operational difficulties, and resource constraints due to the impact of the COVID-19 pandemic. If our third-party suppliers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, our ability to provide our product candidates to patients in clinical trials would be jeopardized. Any delay or interruption in the procurement of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely.

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. 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.

In addition, strategic transactions, including acquisitions and divestitures, may expose us to litigation risks. To this point, we are currently engaged in a dispute with a third party arising out of our sale of certain assets pursuant to an asset and equity purchase agreement entered into in 2019 (the "APA"). In October 2020, we received correspondence from such third party informing us of an alleged breach of certain representations and warranties in the APA and asserting indemnification claims. In December 2020, we responded to the third party and asserted that its improper use of our intellectual property constituted a breach of the APA and further asserted an indemnification claim against the third party for our losses in connection therewith. While we believe the claims asserted against us to be spurious and without merit, this dispute remains ongoing and there can be no assurance that it will not result in litigation. Resolution of this matter or any resulting litigation would be expensive and time-consuming and the outcome is uncertain.

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 undertake 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 assurance certification and manufacturing approvals.

The manufacture of our product candidates is, and the manufacture of any future drug 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 regulation and inspection from time to time by the FDA for compliance with the FDA's cGMP, Quality System Regulations ("QSRs"), as well as equivalent requirements and inspections by state and non-U.S. 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 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, or if any of our personnel were to test positive for COVID-19, we may not be able to sustain or grow our business.

We maintain a very 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 San Antonio, 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. In addition, if any of our personnel were to test positive for COVID-19, it would likely significantly impair our operations. The loss of services of any of our personnel, including Dr. Hedrick, particularly for an extended period due to COVID-19 or otherwise, 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, RNL is 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 private 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 private 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. As part of the American Recovery and Reinvestment Act 2009 ("ARRA"), Congress amended the privacy and security provisions of the Healthcare Information Portability and Accountability Act ("HIPAA"). HIPAA imposes limitations on the use and disclosure of an individual's healthcare information by healthcare providers conducting certain electronic transactions, healthcare clearinghouses, and health insurance plans, collectively referred to as covered entities. The HIPAA amendments also impose compliance obligations and corresponding penalties for non-compliance on certain individuals and entities that provide services to or perform certain functions on behalf of healthcare providers and other covered entities involving the use or disclosure of individually identifiable health information,

collectively referred to as business associates. ARRA also made significant increases in the penalties for improper use or disclosure of an individual's health information under HIPAA and extended enforcement authority to state attorneys general. The amendments also create notification requirements to federal regulators, and in some cases local and national media, for individuals whose health information has been inappropriately accessed or disclosed. Notification is not required under HIPAA if the health information that is improperly used or disclosed is deemed secured in accordance with certain encryption or other standards developed by the U.S. Department of Health and Human Services ("HHS"). Most states have laws requiring notification of affected individuals and state regulators 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. 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. The European Union's Data Protection Directive, 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. 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.

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.

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 RNL, 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, or NanoTx, as the case may be, might not have been the first to file patent applications for the covered inventions;
- 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 RNL product 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 RNL;
- the active pharmaceutical ingredient (API) used in RNL, 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 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, including in connection with the sale or issuance of our common stock to Lincoln Park and the sale of the shares of common stock acquired by Lincoln Park and the sale of our common stock by Canaccord.

Our charter 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. To raise additional capital, we may in the future sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that are lower than the prices

paid by existing stockholders, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, which could result in substantial dilution to the interests of existing stockholders.

On September 30, 2020, we entered into the 2020 Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park committed to purchase up to $25.0 million of our common stock, subject to certain limitations. Upon the execution of the 2020 Purchase Agreement, we issued 180,701 shares of common stock as commitment shares to Lincoln Park in consideration for its commitment to purchase additional shares of our common stock under the 2020 Purchase Agreement. The remaining shares of our common stock that may be issued under the 2020 Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 36-month period commencing November 6, 2020, subject to satisfaction of certain conditions. The purchase price for the shares that we may sell to Lincoln Park under the 2020 Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some, or none of the additional shares of our common stock that may be available for us to sell pursuant to the 2020 Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all or some of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

We also may issue and sell, from time to time, shares of our common stock having an aggregate offering price of up to $10,000,000, depending on market demand, with Canaccord acting as an agent for sales. Sales of the ATM Shares may be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act, including, without limitation, sales made directly on or through the NASDAQ Capital Market. Canaccord will use its commercially reasonable efforts to sell the ATM Shares we request to be sold on our behalf, consistent with Canaccord's normal trading and sales practices, under the terms and subject to the conditions set forth in the Distribution Agreement. We have no obligation to sell any of the ATM Shares. We may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price we designate from time to time and we may at any time suspend sales pursuant to the Distribution Agreement.

Future sales of our common stock may depress our share price.

As of December 31, 2020, we had 6,749,028 shares of our common stock outstanding. Sales of a number of shares of common stock in the public market could cause the market price of our common stock to decline. We may also sell additional common stock or securities convertible into or exercisable or exchangeable for common stock in subsequent public or private offerings or other transactions, which may adversely affect 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;
- the impact of the COVID-19 impact, including the magnitude, severity, duration, and uncertainty of the downturn in the domestic and global economies and financial markets;
- 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 due to the COVID-19 pandemic. 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 Capital Market, 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.

We could be delisted from Nasdaq, which would seriously harm the liquidity of our stock and our ability to raise capital.

The Nasdaq Stock Market has experienced significant volatility due to the COVID-19 pandemic, which has also impacted our stock price. In addition, we have a limited public float and our stock price has experienced a significant decline since our corporate restructuring in 2019. Between January 1, 2020 and December 31, 2020, our closing stock price has fluctuated from a high of $3.14 at September 16, 2020 to a low of $1.05 at March 23, 2020.

On August 19, 2019, we received a written notice from Nasdaq staff indicating that we no longer met the alternative compliance standards of market value of listed securities or net income from continuing operations for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(1) (the "Nasdaq Rule"). On August 12, 2020, we received a written notice from Nasdaq that we had regained compliance with the Nasdaq Rule. Based on our stockholders' equity of $3.1 million as of December 31, 2020, we continue to meet the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market under the Nasdaq Rule. However, if we fail to meet such requirement in the future, there is a risk that our common stock may be delisted from Nasdaq, which would adversely impact liquidity of our common stock and potentially result in even lower bid prices for our common stock.

If, for any reason, Nasdaq were to delist our securities from trading on its exchange and we are unable to obtain listing on another reputable national securities exchange, a reduction in some or all of the following may occur, each of which could materially adversely affect our stockholders:

- the liquidity and marketability of our common stock;
- the market price of our common stock;
- our ability to obtain financing for the continuation of our operations;
- the number of institutional and general investors that will consider investing in our common stock;
- the number of market makers in our common stock;

- the availability of information concerning the trading prices and volume of our common stock; and
- the number of broker-dealers willing to execute trades in shares of our common stock.

In addition, if we cease to be eligible to trade 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 stock would be 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 further decline.

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. Stockholders who wish to participate in these transactions may not have the opportunity to do so. These provisions:

- authorize our Board of Directors 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 of Directors;
- 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 of Directors 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. Furthermore, our Loan and Security Agreement with Oxford currently prohibits our issuance of cash dividends. 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

The COVID-19 pandemic could adversely affect our business, results of operations, and financial condition.

The COVID-19 pandemic has caused a significant downturn in the worldwide economy, the severity, magnitude, and duration of which is uncertain. In addition, the deterioration in credit markets and financial markets could limit our ability to obtain external financing to fund our operations and capital expenditures. The downturn in the worldwide economy could have a material adverse effect on our business, results of operations, or financial condition.

The effects of the COVID-19 pandemic on our business continue to evolve and are difficult to predict. To date, the COVID-19 pandemic has significantly and negatively impacted the global economy, and the magnitude, severity, and duration of this impact is unclear and difficult to assess. To combat the spread of COVID-19, the United States and other locations in which we operate have imposed measures such as quarantines and "shelter-in-place" orders that are restricting business operations and travel and requiring individuals to work from home ("WFH"), which has impacted all aspects of our business as well as those of the third-parties with

which we collaborate or upon which we rely for certain supplies and services. The continuation of WFH and other restrictions for an extended period of time may negatively impact our productivity, research and development, operations, preclinical studies, clinical trials, business and financial results. Among other things, the COVID-19 pandemic may result in:

- a global economic recession or depression that could significantly and negatively impact our business or those of third parties upon which we rely for services and supplies;
- constraints on our ability to conduct our operations and our preclinical studies and clinical trials;
- constraints on our ability to partner with other companies to commercialize our product candidates;
- constraints on our business strategy to aggressively develop our Nanomedicine platforms;
- reduced productivity in our business operations, research and development, marketing, and other activities;
- disruptions to our third-party manufacturers and suppliers;
- increased costs resulting from WFH or from our efforts to mitigate the impact of COVID-19; and
- reduced access to financing to fund our operations due to a deterioration of credit and financial markets.

The continued disruption of the COVID-19 pandemic may negatively and materially impact our operating and financial operating results, including our cash flows. The resumption of normal business operations may be delayed and a resurgence of COVID-19 could occur, which would result in continued disruption to us or third parties with whom we do business. As a result, the effects of the COVID-19 pandemic could have a material adverse impact on our business, results of operations and financial condition for the foreseeable future.

We may face business disruption and related risks resulting from the COVID-19 pandemic and the invocation of the Defense Production Act, either of which could have a material adverse effect on our business.

Our development programs could be disrupted and materially adversely affected by the COVID-19 pandemic. As a result of measures imposed by the governments in affected regions, many commercial activities, businesses and schools have been suspended as part of quarantines and other measures intended to contain this outbreak. The spread of COVID-19 worldwide has resulted in the International Health Regulations Emergency Committee of the World Health Organization declaring the outbreak of COVID-19 as a "public health emergency of international concern," and the World Health Organization characterizing COVID-19 as a pandemic. International stock markets have also been significantly impacted and their volatility reflect the uncertainty associated with the potential economic impact of the outbreak. The volatility in the Dow Industrial Average since the end of February 2020 has been largely attributed to the effects of the COVID-19 pandemic. While we have not experienced any significant impact on our business as a result of the COVID-19 pandemic, we continue to assess the potential impact the COVID-19 pandemic may have on our ability to effectively conduct our commercialization efforts and development programs and otherwise conduct our business operations as planned. There can be no assurance that we will not be further impacted by the COVID-19 pandemic or by any action taken by the federal government under the Defense Production Act, including downturns in business sentiment generally or in our industry and business in particular.

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

Not applicable.

Item 2. Properties

We have two lease agreements for our San Antonio, Texas locations. We pay an aggregate of approximately $12,000 in rent per month for these properties. The leases for these properties will expire in June 2022 or in 2028.

Item 3. Legal Proceedings

Refer to Note 7 of the Consolidated Financial Statements included in this Form 10-K.

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

Our common stock is traded on the Nasdaq Capital Market under the symbol "PSTV". As of February 2, 2021, we had approximately thirteen record holders of our common stock. Because many of our shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of individual stockholders represented by these record holders.

Equity Compensation Plan Information

The following table gives information as of December 31, 2020 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 and rights (a)	Weighted-average exercise price of outstanding options and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column(a)) (c)
Equity compensation plans not approved by security holders (1)	40,394	$ 82.00	210,389
Equity compensation plans approved by security holders (2)	490,942	$ 4.09	159,939
Total	531,336	$ 10.01	370,328

(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 Consolidated Financial Statements included elsewhere herein for a description of our 2020 Stock Incentive Plan.

Material Features of the Amended and Restated 2015 New Employment Incentive Plan and the 2020 Stock Incentive Plan

The 2015 Plan was adopted by the Company on December 29, 2015 pursuant to Rule 5653(c)(4) of the Nasdaq Global Market. The 2015 Plan was subsequently amended by the Board in May 2016 and January 2020.

Awards granted under the 2015 Plan were intended to constitute "employment inducement awards" under Nasdaq Listing Rule 5635(c)(4) and, therefore, the 2015 Plan was intended to be exempt from the Nasdaq Listing Rules regarding stockholder approval of stock option and stock purchase plans. The 2015 Plan provides for issuance of 133 shares. In January 2017, the Company amended the 2015 Plan to add 500 shares to its share pool. In February 2020, the Company amended the 2015 Plan to add 250,000 shares of stock to its share pool. The 2015 Plan provided for the grant of restricted stock unit awards, restricted stock awards, performance awards, unrestricted securities, stock-equivalent units, stock appreciation units, securities or debentures convertible into common stock or other forms. These awards may have been granted to individuals who were then new employees, or were commencing employment with us or one of our subsidiaries following a bona fide period of non-employment with us, and for whom such awards were granted as a material inducement to commencing employment with us or one of our subsidiaries.

The 2015 Plan is administered by the Compensation Committee. The plan administrator has discretion to take action under the 2015 Plan, such as determining the purchase price, performance measures, any repurchase rights, as well as make adjustment to the terms of any Award to reflect, or related to, such changes in the capital structure of the Company or distributions as it deems appropriate, including modification of performance goals, performance award formulas, and performance periods.

On June 16, 2020, the stockholders of the Company approved the Company's 2020 Stock Incentive Plan (the "2020 Plan"), which replaced the Company's 2014 Equity Incentive Plan. The 2020 Plan provides for the issuance of up to 550,000 shares of common stock, and the number of shares available for issuance will be 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).

The 2020 Plan provides for the direct 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 intended to qualify for preferential tax treatment under Section 422 of the Code and nonstatutory stock options to purchase common stock that do not qualify for such treatment under the Code. All employees (including officers) and directors of the Company or any subsidiary and any consultant who performs services for the Company or a subsidiary are eligible to purchase shares of common stock and to receive awards of shares or grants of nonstatutory stock options, stock units and stock appreciation rights. Only employees are eligible to receive grants of incentive stock options.

The 2020 Plan is administered by the Compensation Committee. Subject to the limitations set forth in the 2020 Plan, the Compensation Committee has the authority to determine, among other things, to whom awards will be granted, the number of shares subject to awards, the term during which an option, stock unit or stock appreciation right may be exercised and the rate at which the awards may vest or be earned, including any performance criteria to which they may be subject. The Compensation Committee also has the authority to determine the consideration and methodology of payment for awards.

Item 6. Selected Financial Data

Not required.

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 and some of the relevant trends.
- Results of Operations that includes a detailed discussion of our revenue and expenses.
- Liquidity and Capital Resources which discusses key aspects of our statements of cash flows, changes in our financial position and our financial commitments.
- Significant changes since our most recent Annual Report on Form 10-K in the Critical Accounting Policies and Significant Estimates that we believe are important to understanding the assumptions and judgments underlying our financial statements.

Overview

Plus Therapeutics is committed to developing and delivering innovative treatments for rare and difficult to treat cancers, with a focus on cancers of the central nervous system. Plus Therapeutics' mission is to transform the clinical care of cancer patients through its innovative drugs that have the potential to improve survival and quality of life.

Plus has a nanoscale drug development platform and the requisite expertise to innovate and produce new and better therapeutics for rare cancers. We believe that this approach will produce investigational drugs that provide unique benefits such as improved mechanism of action, better tumor targeting, improved pharmacokinetics and higher treatment doses to the tumor. Benefits such as these may then improve the overall efficacy of drugs while reducing the side effects associated with more traditional drug delivery methods. To support this goal, Plus Therapeutics has an established, GMP-validated nanoscale drug R&D and commercial scale manufacturing facility in San Antonio, TX. This facility is ideally suited to produce nanoliposomal drug candidates for research, development, clinical and commercial use.

As part of our strategy to leverage our nanotechnology platform and expertise, we use a simple multi-step model that management believes allows Plus to best address unmet market needs or underserved medical conditions while managing risks and minimizing development costs. This model includes: (1) market landscape mapping, (2) internal drug redesign, (3) in house drug manufacturing, (4) performance of critical non-clinical (i.e. bench, animal) analyses, (5) scale-up manufacturing for commercial purposes and performance of early-stage clinical trials, and (6) partnering for late-stage clinical trials, regulatory approval, and, ultimately, commercial launch.

Pipeline

Plus Therapeutics currently has four investigational drugs, three of which are at the clinical stage for rare and difficult to treat cancers. The three clinical stage drugs in our pipeline are:

1) Rhenium NanoLiposomes (RNL™), a patented radiotherapy for patients with recurrent glioblastoma (rGBM) that is currently being evaluated in the U.S. NCI-supported, multi-center ReSPECT™ Phase 1 dose-finding clinical trial;

2) DocePLUS™, a patented chemotherapy for patients with solid tumors that has been evaluated in a completed U.S. single-center Phase 1 clinical trial; and

3) DoxoPLUS™, a generic chemotherapy that has been evaluated in a completed, bioequivalence clinical trial in the U.S., Canada, and Ukraine versus Janssen's CAELYX® in patients with ovarian cancer.

In addition, Plus has an early preclinical investigational drug which is a proprietary combination of Rhenium Nanpoliposomes and liposomal doxorubicin. Theoretically, this combination could provide a synergistic combination of both chemotherapy and radiation in a single treatment.

Current business activities related to both DocePLUS and DoxoPLUS are focused on identification of potential partners for these two drugs.

Plus' RNL™ technology was a key part of the licensed radiotherapeutic portfolio that we acquired from NanoTx, Corp. ("NanoTx") on May 7, 2020. The licensed radiolabeled nanoliposome platform can be applied toward several cancer targets and was developed by a multi-institutional consortium based in Texas at the Mays Cancer Center / UT Health San Antonio MD Anderson Cancer Center now 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 licensed technology was previously funded by both the National Institutes of Health/National Cancer Institute (NIH/NCI) and the Cancer Prevention and Research Institute of Texas (CPRIT). Dr.

Brenner's RNL research program has an active $3M award from NIH/NCI which will financially support the continued clinical development of RNL for recurrent glioblastoma through the completion of a Phase 2 clinical trial and enrollment of up to 55 patients.

Plus Therapeutics' lead investigational drug, RNL™, is a novel injectable radiotherapy designed to deliver targeted high dose radiation directly into a brain tumor in a safe, effective, and convenient manner to optimize patient outcomes. RNL™, which is composed of radionuclide Rhenium-186 (^{186}Re) and a nanoliposomal carrier, is infused directly into the brain tumor via precision brain mapping and convection enhanced delivery. The RNL radiation dose delivered to patients may be up to 15-20x greater than what is possible with external beam radiation therapy (EBRT). Some additional potential benefits of RNL compared to EBRT include:

- RNL can be visualized in real-time during administration, possibly giving doctors better control of radiation dosing and distribution.
- Potentially more effectively treats the bulk tumor and microscopic disease in surrounding healthy tissue.
- Using a small catheter, RNL is infused directly into the targeted tumor, which may reduce radiation exposure to healthy cells. By contrast, EBRT is less targeted and selective.
- RNL is given during a single 3- to 4-day in-patient hospital visit, while EBRT requires out-patient visits 5 days a week for approximately 6 weeks.

Recurrent glioblastoma (GBM) affects approximately 12,000 patients annually in the U.S. and is the most common and lethal form of brain cancer. The average life expectancy with glioblastoma is less than 24 months, with a one-year survival rate of 40.8% and a five-year survival rate of only 6.8%. GBM can cause headaches, seizures, vision changes and other neurological complications. Despite the best available medical treatments to eliminate the initial brain tumor, some microscopic disease frequently remains, with tumor regrowth within months. In fact, approximately 90% of patients experience tumor recurrence. This tumor type is incredibly difficult to remove completely, and often is resistant or quickly develops resistance to most available therapies. 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. There is no clear standard of care for recurrent GBM and even the few currently approved treatments, in aggregate, provide only marginal survival benefit. Current approved therapies are associated with significant side effects, which limit dosing and prolonged use.

By infusing the RNL™ drug directly into the tumor, bypassing the blood-brain barrier, normal brain and external tissues may be spared from radiation damage. We believe that radiation in the form of high energy electrons may be effective against glioblastoma if an adequate dose can be effectively delivered. For comparison, current EBRT protocols for recurrent glioblastoma typically recommend a total maximum dose of about 35 Gy. In contrast, the most recently dosed patient with RNL in our clinical trial received over 500 Gy without significant adverse effects to-date.

RNL is currently being evaluated for the treatment of recurrent glioblastoma in the Phase 1 multi-center ReSPECT™ dose-finding clinical trial. ReSPECT is evaluating the safety, tolerability, and distribution of RNL for the treatment of recurrent glioblastoma. Thus far, RNL has demonstrated early potential efficacy signals in patients with adequate dosing and tumor coverage with two patients surviving more than 30 months, compared to a median survival of approximately 9 months with the current standard of care. The sixth dose escalation cohort of this trial has been completed, which increased the RNL drug volume to 8.8 milliliters and radiation dose to 22.3 millicuries. The increased treatment volume in the sixth cohort will allow treatment of tumors up to approximately 4.5 cm in size, which may include the majority of glioblastoma tumors that appear in the recurrent setting. No treatment-related SAEs have been observed thus far. ReSPECT is supported by an award from the National Cancer Institute (NCI), part of the U.S. National Institutes of Health (NIH).

In September 2020, the FDA granted both Orphan Drug designation and Fast Track designation to RNL for the treatment of patients with glioblastoma.

Based on substantial preclinical work completed and published, RNL is thought to have potential clinical benefits in other difficult to treat cancers such as leptomeningeal carcinomatosis, peritoneal carcinomatosis, recurrent head and neck cancer, and pediatric brain cancer.

Recent Developments

Piramal Master Services Agreement

On January 8, 2021, we entered into a Master Services Agreement (the "MSA") with Piramal Pharma Solutions, Inc. ("Piramal"), for Piramal to perform certain services related to the development, manufacture, and supply of our RNL-Liposome Intermediate Drug Product. The MSA includes the transfer of analytical methods, development of microbiological methods, process transfer and optimization, intermediate drug product manufacturing, and stability studies for us. The transfer will be performed at

Piramal's facility located in Lexington, Kentucky. The parties contemplate that the MSA will lead to clinical and commercial supply agreements between us and Piramal.

The MSA has a term of five years and will automatically renew for successive one-year terms unless either party notifies the other no later than six months prior to the original term or any additional terms of its intention to not renew the MSA. We have the right to terminate the MSA for convenience upon thirty days' prior written notice. Either party may terminate the MSA upon an uncured material breach by the other party or upon the bankruptcy or insolvency of the other party.

Clinical Trials

In December 2020, we completed the sixth cohort of our National Cancer Institute (NCI)-supported, multi-center ReSPECT™ Phase 1 dose-finding clinical trial evaluating Rhenium NanoLiposomes (RNL™) for the treatment of recurrent glioblastoma (GBM). The sixth cohort of the ReSPECT trial included an increase in both the RNL drug volume and radiation dose to 8.8 milliliters and 22.3 millicuries, respectively. RNL is designed to safely, effectively and conveniently deliver a very high dose of radiation, with a dose that is up to 25 times greater than currently used external beam radiation therapy, directly into the brain tumor for maximum effect. In addition, in December 2020, we started using University of Texas MD Anderson Cancer Center as an active clinical trial site in our ongoing ReSPECT™ Phase 1 clinical trial, currently supported by the National Cancer Institute (NCI).

Recent Financings

At-the-Market Transaction

On October 23, 2020, we entered into an Equity Distribution Agreement (the "Distribution Agreement") with Canaccord Genuity LLC ("Canaccord"), pursuant to which we may issue and sell, from time to time, shares of our common stock having an aggregate offering price of up to $10,000,000 (the "ATM Shares"), depending on market demand, with Canaccord acting as an agent for sales. Sales of the ATM Shares may be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933, as amended (the "Securities Act"), including, without limitation, sales made directly on or through the NASDAQ Capital Market. Canaccord will use its commercially reasonable efforts to sell the ATM Shares we request to be sold on our behalf, consistent with Canaccord's normal trading and sales practices, under the terms and subject to the conditions set forth in the Distribution Agreement. We have no obligation to sell any of the ATM Shares. We may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price we designate from time to time and we may at any time suspend sales pursuant to the Distribution Agreement. During the year ended December 31, 2020, we issued 1,616,331 shares under the Distribution Agreement for net proceeds of approximately $3.2 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 536,070 shares under the Distribution Agreement for net proceeds of $1.5 million.

Lincoln Park Purchase Agreement

On September 30, 2020, we entered into a purchase agreement (the "2020 Purchase Agreement") and registration rights agreement pursuant to which Lincoln Park Capital Fund, LLC ("Lincoln Park") has committed to purchase up to $25.0 million of our common stock. Under the terms and subject to the conditions of the 2020 Purchase Agreement, we have the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to $25.0 million of our common stock. Such sales of common stock by us, if any, will be subject to certain limitations, and may occur from time to time, at our sole discretion, over the 36-month period commencing November 6, 2020, subject to the satisfaction of certain conditions. The number of shares we may sell to Lincoln Park on any single business day in a regular purchase is 50,000, but that amount may be increased up to 100,000 shares, depending upon the market price of our common stock at the time of sale and subject to a maximum limit of $500,000 per regular purchase. The purchase price per share for each such regular purchase will be based on prevailing market prices of our common stock immediately preceding the time of sale as computed under the 2020 Purchase Agreement. In addition to regular purchases, we may also direct Lincoln Park to purchase other amounts as accelerated purchases or as additional accelerated purchases if the closing sale price of the common stock exceeds certain threshold prices as set forth in the 2020 Purchase Agreement. We issued 180,701 shares of common stock to Lincoln Park as a commitment fee in connection with entering into the 2020 Purchase Agreement. During the year ended December 31, 2020, we issued 353,113 shares, excluding 180,701 shares issued as commitment fee, under the 2020 Purchase Agreement for net proceeds of approximately $0.7 million. During 2021 and through the date of filing of this Form 10-K, we issued 985,186 shares of our common stock under the 2020 Purchase Agreement for total proceeds of $2.9 million.

Recent Exercise of Warrants

In February 2021, certain warrant holders exercised warrants to purchase 896,500 shares of our common stock for total exercise proceeds of $2.0 million.

COVID-19 Impact

A novel strain of coronavirus (COVID-19) was declared a global pandemic by the World Health Organization in March 2020. COVID-19 has presented substantial public health and economic challenges and is affecting economies, financial markets, and business operations around the world. International and U.S. governmental authorities in impacted regions have taken action in an effort to slow the spread of COVID-19, including issuing varying forms of "stay-at-home" orders, and restricting business functions outside of one's home. In response, we have put restrictions on employee travel and working from our executive offices with many employees continuing their work remotely. While we have implemented additional health and safety precautions and protocols in response to the pandemic and government guidelines, we have not experienced a significant impact on our business and operations. However, we may experience disruptions that could adversely impact our business operations as well as our preclinical studies and clinical trials. We are currently continuing the clinical trials we have underway in sites across the U.S., and we expect that COVID-19 precautions may directly or indirectly impact the timeline for some of our clinical trials. Some of our clinical trial sites, including those located in areas severely impacted by the pandemic, have placed new patient enrollment into clinical trials on hold or, for patients traveling from out-of-state, have implemented a 14-day self-quarantine before appointments. In addition, some clinical trial sites have imposed limited accessibility to conduct clinical monitoring and training on-site. We considered the impacts of COVID-19 on the assumptions and estimates used to prepare our financial statements and determined that there were no material adverse impacts on our results of operations and financial position at December 31, 2020.

The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. For example, as certain states and regions across the United States have relaxed various restrictions on businesses and other activities, it is uncertain whether and to what extent federal, state, or local governments may reinstate additional restrictions and safety protocols in response to any increases in COVID-19 cases. Although there are vaccines available, the ability to obtain a vaccine or know when herd immunity will be met, is difficult to anticipate As such, it is uncertain as to the full magnitude that the pandemic will have on our operations, including our preclinical studies and clinical trials, financial condition, liquidity, and future results of operations. Management is actively monitoring the global situation and its impact on our clinical program and timeline, financial condition, liquidity, operations, suppliers, industry, and workforce. We continue to evaluate the extent to which delays as a result of the COVID-19 pandemic will impact our ability to manufacture our product candidates for our clinical trials and conduct other research and development operations and maintain applicable timelines. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, we are not able to estimate the effects of the COVID-19 outbreak on our results of operations, financial condition, or liquidity for fiscal year 2020.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law on March 27, 2020. The CARES Act, among other things, includes tax provisions relating to refundable payroll tax credits, deferment of employer's social security payments, net operating loss utilization and carryback periods, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property (QIP). The CARES Act had no material impact on our income tax provision for the year ended December 31, 2020. We continue to evaluate the impact of the CARES Act on our financial position, results of operations, and cash flows.

Results of Operations

Development revenue

We recognized a total of $0.3 million in revenue for the year ended December 31, 2020, as well as $0.3 million in qualified expenditures for those periods. Our BARDA contract was terminated in December 2019 and the contract close out process was completed during 2020, and we do not expect additional BARDA revenue in the future.

Development revenue for the year ended December 31, 2019 was $7.0 million, which included $4.6 million of revenue recognized under the BARDA contract based on finalization of the indirect cost rates during fiscal years 2012 through 2019.

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, 2020 and 2019 (in thousands):

	Years ended December 31,	
	2020	2019
Research and development	$ 2,668	$ 5,325
Share-based compensation	32	40
Total research and development expenses	$ 2,700	$ 5,365

The decrease in research and development expenses for the year ended December 31, 2020 as compared to the same period in 2019 is due primarily to decreased professional services as a result of discontinuing manufacturing subsequent to sale of our former cell therapy business, as well as reduction in research and development expenses related to Doceplus and Doxoplus.

We expect aggregate research and development expenditures to increase in absolute dollars during 2021 due to the expected costs of development of the RNL™ therapy acquired from NanoTx.

In process research and development acquired from NanoTx

In process research and development acquired from NanoTx in the amount of $781,000 represents the upfront cash payment and fair value of 230,769 shares of common stock, with fair value of $1.65 per share, issued to NanoTx in accordance with the terms of the License Agreement.

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, 2020 and 2019 (in thousands):

	Years ended December 31,	
	2020	2019
General and administrative	$ 6,191	$ 5,203
Share-based compensation	215	87
Total general and administrative expenses	$ 6,406	$ 5,290

General and administrative expenses increased by $1.1 million during the year ended December 31, 2020, as compared to the same period in 2019 due to increase of legal and professional fees in the year ended December 31, 2020.

We expect general and administrative expenditures to remain generally consistent in 2021 as compared with the year ended December 31, 2020.

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 stock-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, 2020 and 2019 (in thousands):

	Years ended December 31,	
	2020	2019
Research and development	$ 32	$ 40
General and administrative	215	87
Total share-based compensation	$ 247	$ 127

On June 16, 2020, our stockholders approved the 2020 Stock Incentive Plan (the "2020 Plan"). The 2020 Plan replaced our 2014 Equity Incentive Plan. Pursuant to the 2020 Plan, we reserved for issuance 550,000 shares of our common stock for future awards, and granted 444,000 options to our employees, directors, and, as appropriate, to non-employee service providers. In addition, previously-granted options will continue to vest in accordance with their original terms. As of December 31, 2020, the total

compensation cost related to non-vested stock options and stock awards not yet recognized for all our plans is approximately $704,000 which is expected to be recognized as a result of vesting under service conditions over a weighted average period of 2.81 years.

Financing items

The following table summarizes interest income, interest expense, and other income and expense for the years ended December 31, 2020 and 2019 (in thousands):

	Years ended December 31,	
	2020	2019
Interest income	50	55
Interest expense	(1,107)	(1,855)
Change in fair value of liability instruments	2,400	3,407
Issuance cost of warrants	—	(1,233)
Total	$ 1,343	$ 374

The decrease in interest expense for the year ended December 31, 2020 as compared to the same period in 2019 was primarily due to the repayments of debt principal of $3.1 million 2019 and $5.0 million in 2020. The changes in fair value of our warrant liabilities are primarily due to fluctuations in the valuation inputs for the warrants. See Note 3 to the consolidated financial statements included elsewhere herein for disclosure and discussion of our warrant liabilities.

We expect interest expense in 2021 to decrease as compared with 2020 due to principal repayment of $5.0 million on April 1, 2020. In April, June, July and September 2020, we entered into revised warrant agreements with the holders of 3,447,500 Series U warrants and in September 2020, we entered into revised warrant agreements for 75,000 of Representative Warrants (defined below). In return for reducing the strike price of the warrants, the warrant holders agreed to amend the settlement provisions upon fundamental transactions. The amended Series U warrants meet the requirements for equity classification under authoritative accounting guidance and are no longer subject to fair value accounting post amendment.

Liquidity and Capital Resources

Short-term and long-term liquidity

The following is a summary of our key liquidity measures (for continuing operations) at December 31, 2020 and 2019 (in thousands):

	As of December 31,	
	2020	2019
Cash and cash equivalents	$ 8,346	$ 17,552
Current assets	$ 9,175	$ 19,825
Current liabilities	8,539	14,486
Working capital	$ 636	$ 5,339

To date, these operating losses have been funded primarily from outside sources of invested capital in our common stock, proceeds raised from the Loan and Security Agreement, and gross profits. We have had, and we will continue to have, an ongoing need to raise additional cash from outside sources to fund our future clinical development programs and other operations. Our inability to raise additional cash would have a material and adverse impact on operations and would cause us to default on our loan.

On October 23, 2020, we entered into the Distribution Agreement with Canaccord, pursuant to which we may issue and sell, from time to time, ATM Shares, depending on market demand, with Canaccord acting as an agent for sales. Sales of the ATM Shares may be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933, as amended (the "Securities Act"), including, without limitation, sales made directly on or through the NASDAQ Capital Market. Canaccord will use its commercially reasonable efforts to sell the ATM Shares we request to be sold on our behalf, consistent with Canaccord's normal trading and sales practices, under the terms and subject to the conditions set forth in the Distribution Agreement. We have no obligation to sell any of the ATM Shares. We may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price we designate from time to time and we may at any time suspend sales pursuant to the Distribution Agreement. During the year ended December 31, 2020, we issued 1,616,331 shares under the Distribution Agreement for net proceeds of approximately $3.2 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 536,070 shares under the Distribution Agreement for net proceeds of $1.5 million.

On September 30, 2020, we entered into the 2020 Purchase Agreement and a registration rights agreement with Lincoln Park, pursuant to which Lincoln Park committed to purchase up to $25.0 million of our common stock. Under the terms and subject to the conditions of the 2020 Purchase Agreement, we have the right, but not the obligation, to sell to Lincoln Park, and Lincoln Park is obligated to purchase up to $25.0 million of our common stock. Such sales of common stock by us, if any, will be subject to certain limitations, and may occur from time to time, at our sole discretion, over the 36-month period commencing November 6, 2020, subject to satisfaction of certain conditions. The net proceeds under the 2020 Purchase Agreement will depend on the frequency and prices at which we sell shares of our common stock to Lincoln Park. We expect that any proceeds received from such sales to Lincoln Park will be used for working capital and general corporate purposes. During the year ended December 31, 2020, we issued 353,113 shares, excluding 180,701 shares issued as commitment fee, under the 2020 Purchase Agreement for net proceeds of approximately $0.7 million. During 2021 and through the date of filing of this Form 10-K, we issued 985,186 shares of our common stock under the 2020 Purchase Agreement for total proceeds of $2.9 million.

On March 29, 2020, we entered into the Ninth Amendment, pursuant to which, among other things, Oxford agreed to defer the start date of principal repayment from May 1, 2020 to May 1, 2021. In addition, on April 1, 2020, we made a $5.0 million paydown of principal upon execution of the Ninth Amendment. As a result of this Ninth Amendment, the term of the Term Loan has been extended from September 1, 2021 to September 1, 2024, with all other major terms remained consistent.

In September 2019, we finalized the indirect cost rate under the BARDA Agreement for indirect costs incurred during the years 2012 through 2019, which resulted in approximately $4.6 million of revenue recognized during the year ended December 31, 2019. The BARDA contract was terminated in December 2019 and the contract close out process was completed during the year ended December 31, 2020.

In September 2019, we entered into an underwriting agreement with H.C. Wainwright & Co., LLC (the "Representative"), as representative of the underwriters (the "Underwriters"), pursuant to which we sold in an underwritten public offering an aggregate of (i) 289,000 Class A Units, each consisting of one share of our common stock, par value $0.001 per share, and one Series U warrant to purchase one share of common stock, and (ii) 2,711,000 Class B Units, each consisting of one pre-funded Series V warrant to purchase one share of common stock and one Series U warrant to purchase one share of common stock at a public offering price of $5.00 per Class A Unit and $4.9999 per Class B Unit (the "September 2019 Offering"). In addition, we granted the Underwriters a 45-day option to purchase up to an additional 450,000 shares of our common stock and/or Series U warrants at the public offering price, less the underwriting discounts and commissions. The Underwriters exercised their option to purchase an additional 450,000 Series U warrants. We also issued to the Representative warrants (in the form of the Series U warrants) to purchase 75,000 shares of common stock with an exercise price of $6.25 per share of common stock (the "Representative Warrants"). In September 2020, we entered into revised warrant agreements for the Representative Warrants that reduced the strike price of the warrants to $2.82 per share.

On April 24, 2019, we received $3.3 million of net cash proceeds related to the sale of the UK subsidiary and our cell therapy assets (excluding such assets used in Japan or relating to our contract with BARDA), of which $1.7 million was used to pay down principal, interest and fees on the Loan and Security Agreement, and on April 25, 2019, we received $2.4 million of net cash proceeds related to the sale of our Japanese subsidiary, Cytori Therapeutics, K.K., and substantially all of our cell therapy assets used in Japan, of which $1.4 million was used to pay down principal, interests and fees on the Loan and Security Agreement.

In August 2019, we consummated a 1-for-50 reverse stock split pursuant to which the minimum bid price of our common stock rose above $1.00. On August 29, 2019, the Company received written notice from Nasdaq staff that the Company had regained compliance with the Nasdaq Stock Market Listing Rule 5550(a)(2) concerning our minimum bid price per share of its common stock.

On August 16, 2019, we received written notice from the Nasdaq indicating that the Company no longer meets the requirements for continued listing under Nasdaq Listing Rule 5550(a)(4) due to the our failure to meet the minimum 500,000 publicly held shares requirement for continued listing. On September 11, 2019, we received written notice from Nasdaq staff that, based on having 786,807 publicly held shares outstanding as of August 31, 2019, we had regained compliance with Nasdaq Listing Rule 5550(a)(4).

On August 19, 2019, we received written notice from Nasdaq indicating that, based on our stockholders' deficit of $6.3 million as of June 30, 2019, as reported in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, we were no longer in compliance with the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders' equity of at least $2.5 million.

We continue to seek additional capital through strategic transactions and other financing alternatives. Without additional capital, current working capital and cash generated from sales will not provide adequate funding for research and product development activities at their current levels. If sufficient capital is not raised, we will at a minimum need to significantly reduce or curtail our research and development and other operations, and this would negatively affect our ability to achieve corporate growth goals. Although the stock markets and our stock price have recovered to some extent in recent weeks, there may likely be continued market volatility due to the pandemic or other events, which could cause our stock price to decline. This in turn will likely negatively impact our ability to raise funds through equity-related financings. Further, a continued global economic downturn may impair our ability to obtain additional financing through other means, such as strategic transactions or debt financing. The overall deterioration

of the credit and financial markets due to the COVID-19 pandemic will likely generally reduce our ability to obtain additional financing to fund our operations.

Should we be unable to raise additional cash from outside sources or if we are unable to do so in a timely manner or on commercially reasonable terms, it would have a material adverse impact on our operations.

Cash (used in) provided by operating, investing and financing activities for the years ended December 31, 2020 and 2019 is summarized as follows (in thousands):

	Years Ended December 31,	
	2020	2019
Net cash used in operating activities	$ (8,434)	$ (5,906)
Net cash (used in) provided by investing activities	(493)	5,570
Net cash (used in) provided by financing activities	(319)	12,631
Effect of exchange rate changes on cash and cash equivalents	—	(4)
Net (decrease) increase in cash and cash equivalents	$ (9,246)	$ 12,291

Operating activities

Net cash used in operating activities for the year ended December 31, 2020 was $8.4 million compared to $5.9 million in the same period of 2019. Overall, our operational cash use increased during the year ended December 31, 2020 as compared to the same period in 2019, due primarily to timing of cash payments made for operating assets and liabilities.

Investing activities

Net cash used in investing activities for year ended December 31, 2020 was primarily related to cash payments of $0.4 million made for in process research and development assets from NanoTx, and $0.1 million for purchases of fixed assets. Net cash provided by investing activities for the year ended December 31, 2019 were related to the sale of the cell therapy business for gross proceeds of $5.6 million.

Financing Activities

Net cash used for financing activities for the year ended December 31, 2020 was related to repayment of $5.0 million of the Term Loan in April 2020, and cash payments of $0.1 million for our finance leases, offset by cash proceeds received from issuance of common stock of $4.0 million and warrant exercises of $1.1 million. Net cash provided by financing activities for the year ended December 31, 2019 was primarily related to net proceeds of $16 million received from the September 2019 Offering, and the sale of common stock under the purchase agreement dated September 21, 2018 with Lincoln Park, proceeds from the exercise of warrants of $0.5 million, partially offset by the principal payment of long-term obligations of $3.7 million.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements (as defined by applicable regulations of the SEC) that are reasonably likely to have a current or future material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Policies and Significant Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States 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.

While our estimates are based on assumptions we consider reasonable at the time they were made, our actual results may differ from our estimates, perhaps significantly. If results differ materially from our estimates, we will make adjustments to our financial statements prospectively as we become aware of the necessity for an adjustment.

We believe it is important for you to understand our most critical accounting policies. These are our policies that require us to make our most significant judgments and, as a result, could have the greatest impact on our future financial results.

Impairment

We assess certain of our long-lived assets, such as property and equipment and intangible assets other than goodwill, 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. There was no impairment in 2020 or 2019.

G*oodwill*

Goodwill is reviewed for impairment annually or more frequently if indicators of impairment exist. We perform our impairment test annually during the fourth quarter. The goodwill is considered to be impaired if we determine that the carrying value of the reporting unit exceeds its respective fair value. We perform the annual impairment analysis by comparing our estimated fair value, calculated from our market capitalization, to our carrying amount. In connection with the sale of our Cell Therapy business to Lorem Vascular Pte, Ltd. ("Lorem") pursuant to the Asset and Shares Sale and Purchase Agreement (the "Lorem Purchase Agreement") dated March 30, 2019, we disposed approximately $3.5 million of goodwill that was attributed to the businesses sold. As of December 31, 2020, we had $0.4 million of remaining goodwill related to our ongoing business. Our annual evaluation for impairment of goodwill consists of one reporting unit. We completed our most recent annual evaluation for impairment as of December 31, 2020, and determined that no impairment existed and, consequently, no impairment charge has been recorded during the year.

Warrant Liability

Liability classified warrants issued in connection with the September 2019 Offering and the rights offering closed on July 25, 2018 and originally filed under a Form S-1 registration statement in April 2018 (the "2018 Rights Offering") do not trade in an active securities market, and as such, we estimate the fair value of these warrants using an option pricing model. Following the authoritative accounting guidance, warrants with variable exercise price features or with potential cash settlement outside control of the Company are accounted for as liabilities, with changes in the fair value included in operating expenses. We estimated the fair value of the warrants using the option pricing model. As mentioned above, in April, June, July and September 2020, we entered into revised warrant agreements with the holders of 3,447,500 Series U warrants, and in September 2020, we entered into revised warrant agreements for 75,000 of Representative Warrants, both originally issued in connection with the September 2019 Offering and initially accounted for as liabilities. In return for reducing the strike price of the warrants, the warrant holders agreed to amend the settlement provisions upon fundamental transactions. The amended Series U warrants meet the requirements for equity classification under authoritative accounting guidance and are no longer subject to fair value accounting post amendment.

Recent Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements included elsewhere herein for disclosure and discussion of new accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

PART I. FINANCIAL INFORMATION
Item 1. Financial Statements

Report of Independent Registered Public Accounting Firm

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

Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Plus Therapeutics, Inc. (the "Company") (formerly Cytori Therapeutics, Inc.) as of December 31, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for 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, 2020 and 2019, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

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 Matters

The critical audit matter communicated below is matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee of the Company's board of directors and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of 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 separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Classification of Warrants

As described in Note 12 to the consolidated financial statements, between April and September 2020, the Company entered into revised warrant agreements with the holders of the Series U warrants. In return for reducing the strike price of the warrants, the

warrant holders agreed to amend certain settlement provisions such that the warrants would meet the requirements to be classified within stockholders' equity. As a result, the Company reclassified the fair value of the Series U warrant liability of approximately $4.5 million to stockholders' equity at the date of modification.

We identified the classification of warrants as a critical audit matter. The assessment of the warrants' classification involves an evaluation of the relevant terms and provisions of the warrant contract to determine the accounting guidance to be applied in the recognition of the warrants in the consolidated financial statements. The accounting guidance surrounding the classification of warrants is complex and therefore, applying such guidance to the contract terms is subjective and requires significant judgment. Auditing management's conclusions related to this matter involved especially challenging auditor judgment due to the nature and extent of audit evidence and effort required to address these matters, including the extent of specialized skills and knowledge needed.

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

Utilizing personnel with specialized knowledge and skills in technical accounting to assist in assessing management's analysis over the warrant classification including: (i) evaluating the revised warrant contracts to identify relevant terms that affect the recognition in the consolidated financial statements, and (ii) assessing the appropriateness of conclusions reached by management.

/s/ BDO USA, LLP

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

San Diego, California
February 22, 2021

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

	As of December31,	
	2020	**2019**
Assets		
Current assets:		
Cash and cash equivalents	$ 8,346	$ 17,552
Accounts receivable	—	1,169
Restricted cash	—	40
Inventories, net	—	107
Other current assets	829	957
Total current assets	9,175	19,825
Property and equipment, net	1,820	2,179
Operating lease right-use-of assets	636	781
Goodwill	372	372
Intangible assets, net	86	—
Other assets	16	72
Total assets	$ 12,105	$ 23,229
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 2,081	$ 3,279
Operating lease liability	123	147
Term loan obligation, net of discount	6,335	11,060
Total current liabilities	8,539	14,486
Noncurrent operating lease liability	528	646
Warrant liability	7	6,929
Other noncurrent liabilities	—	8
Total liabilities	9,074	22,069
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; 1,954 and 1,959 shares issued and outstanding in 2020 and 2019, respectively	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 6,749,028 and 3,880,588 shares issued and outstanding in 2020 and 2019, respectively	7	4
Additional paid-in capital	436,535	426,426
Accumulated deficit	(433,511)	(425,270)
Total stockholders' equity	3,031	1,160
Total liabilities and stockholders' equity	$ 12,105	$ 23,229

See Accompanying Notes to these Consolidated Financial Statements

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

	For the Years Ended December 31,	
	2020	**2019**
Development revenue:		
Government contracts and other	$ 303	$ 6,998
	303	6,998
Operating expenses:		
Research and development	2,700	5,365
In process research and development acquired from NanoTx	781	—
General and administrative	6,406	5,290
Total operating expenses	9,887	10,655
Operating loss	(9,584)	(3,657)
Other income (expense):		
Interest income	50	55
Interest expense	(1,107)	(1,855)
Change in fair value of liability instruments	2,400	3,407
Issuance cost of warrants	—	(1,233)
Total other expense	1,343	374
Loss from continuing operations	$ (8,241)	$ (3,283)
Loss from discontinued operations	—	(7,604)
Net loss	$ (8,241)	$ (10,887)
Loss from continuing operations	$ (8,241)	$ (3,283)
Beneficial conversion feature for convertible preferred stock	—	(554)
Net loss allocable to common stockholders - continuing operations	$ (8,241)	$ (3,837)
Net loss allocable to common stockholders - discontinued operations	-	(7,604)
Net loss allocable to common stockholders	$ (8,241)	$ (11,441)
Basic and diluted net loss per share attributable to common stockholders - continuing operations	$ (1.86)	$ (2.77)
Basic and diluted net loss per share attributable to common stockholders - discontinued operations	-	(5.49)
Net loss per share, basic and diluted	$ (1.86)	$ (8.27)
Basic and diluted weighted average shares used in calculating net loss per share attributable to common stockholders	4,427,835	1,384,012

See Accompanying Notes to these Consolidated Financial Statements

PLUS THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019
(in thousands, except share data)

	Convertible preferred stock		Common stock		Additional paid-in capital	Accumulated other comprehensive income	Accumulated deficit	Total stockholders' equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2018	4,606	$ —	296,609	$ —	$ 418,390	$ 1,218	$ (414,383)	$ 5,225
Share-based compensation	—	—	—	—	127	—	—	127
Sale of common stock, pre-funded warrants and warrants for common stock, net of offering costs of $0.6 million	—	—	3,000,000	4	4,417	—	—	4,421
Sale of common stock, net	—	—	184,666	—	2,208	—	—	2,208
Conversion of Series B and Series C Convertible Preferred Stock into common stock	(2,647)	—	334,199	—	—	—	—	—
Exercise of warrants	—	—	65,114	—	490	—	—	490
Warrant liability reclasssified to equity due to exercise of warrants	—	—	—	—	794	—	—	794
Beneficial conversion feature related to Series C Convertible Preferred Stock	—	—	—	—	554	—	—	554
Accretion of beneficial conversion feature related to Series C Convertible Preferred Stock	—	—	—	—	(554)	—	—	(554)
Foreign currency translation adjustment and accumulated other comprehensive income	—	—	—	—	—	(1,218)	—	(1,218)
Net loss	—	—	—	—	—	—	(10,887)	(10,887)
Balance at December 31, 2019	1,959	$ —	3,880,588	$ 4	$ 426,426	$ —	$ (425,270)	$ 1,160
Share-based compensation	—	—	—	—	247	—	—	247
Issuance of common stock, net of offering costs of $0.6 million	—	—	2,150,113	2	3,880			3,882
Issuance of common stock for exercise of warrants	—	—	487,521	1	1,097	—	—	1,098
Reclassification of warrant liabilities	—	—	—	—	4,504	—	—	4,504
Issuance of common stock for in process research and development acquired from NanoTx Therapeutics	—	—	230,769	—	381	—	—	381
Conversion of Series B convertible preferred stock into common stock	(5)	—	37	—	—	—	—	—
Net loss	—	—	—	—	—	—	(8,241)	(8,241)
Balance at December 31, 2020	1,954	$ —	6,749,028	$ 7	$ 436,535	$ —	$ (433,511)	$ 3,031

See Accompanying Notes to these Consolidated Financial Statements

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

	For the Years Ended December 31,	
	2020	**2019**
Cash flows used in operating activities:		
Net loss	$ (8,241)	$ (10,887)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	366	896
Amortization of deferred financing costs and debt discount	584	550
In process research and development acquired from NanoTx Therapeutics	781	—
Change in fair value of liability instruments	(2,400)	(3,407)
Share-based compensation expense	247	127
Inventory write off	107	—
Noncash lease expense	3	12
Loss on sale of business	—	6,508
Allocation of issuance cost associated with warrants	—	1,233
Increases (decreases) in cash caused by changes in operating assets and liabilities:		
Accounts receivable	1,169	(1,203)
Inventories	—	259
Other current assets	126	(211)
Other assets	58	263
Accounts payable and accrued expenses	(1,234)	(28)
Deferred revenue	—	29
Other long-term liabilities	—	(47)
Net cash used in operating activities	(8,434)	(5,906)
Cash flows from (used in) investing activities:		
Purchases of property and equipment and intangible assets	(93)	(67)
In process research and development acquired from NanoTx Therapeutics	(400)	—
Proceeds from sale of business	—	5,637
Net cash provided by (used in) investing activities	(493)	5,570
Cash flows from financing activities:		
Principal payments of long-term obligations	(5,307)	(3,692)
Payment of financing lease liability	(117)	(131)
Proceeds from exercise of warrants	1,098	490
Proceeds from sale of common stock	4,007	15,964
Net cash (used in) provided by financing activities	(319)	12,631
Effect of exchange rate changes on cash and cash equivalents	—	(4)
Net increase (decrease) in cash and cash equivalents	(9,246)	12,291
Cash, cash equivalents, and restricted cash at beginning of period	17,592	5,301
Cash, cash equivalents, and restricted cash at end of period	$ 8,346	$ 17,592
Supplemental disclosure of cash flows information:		
Cash paid during period for:		
Interest	$ 567	$ 1,188
Supplemental schedule of non-cash investing and financing activities:		
Issuance costs paid in common stock	$ 463	$ —
Common stock issued in payment for in process research and development	$ 381	$ —
Unpaid offering cost	$ 125	$ —
Reclassification of warrants liability to equity	$ 4,504	$ 794
Proceeds from sales of business, net, paid directly to lender for principal payment of long-term obligations	$ —	$ 3,050
Offering cost paid in warrants	$ —	$ 213
Fair value of Convertible Preferred Stock beneficial conversion feature	$ —	$ 554

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.

Principles of Consolidation

The accompanying consolidated financial statements include the Company's accounts and those of its subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation.

Up to the sale transactions as described below, the Company had five wholly-owned subsidiaries located in Japan, United Kingdom, Switzerland, India and Spain that have been established primarily to support our sales and marketing activities in these regions.

On March 30, 2019, the Company entered into an Asset and Share Sale and Purchase Agreement (the "Lorem Purchase Agreement") with Lorem Vascular Pte. Ltd. ("Lorem"), pursuant to which, among other things, Lorem agreed to purchase the Company's UK subsidiary, Cytori Ltd. (the "UK Subsidiary"), and the Company's cell therapy assets (the "Cell Therapy Assets"), excluding such assets used in Japan or relating to the Company's contract with the U.S. Department of Health and Human Service's Biomedical Advanced Research and Development Authority ("BARDA"). Both the Company and Lorem made customary representations, warranties and covenants in the Lorem Purchase Agreement. The transaction was completed on April 24, 2019 and the Company received $4.0 million of cash proceeds, of which $1.7 million was used to pay down principal, interest and fees under the Loan and Security Agreement, dated May 29, 2015 (the "Loan and Security Agreement"), with Oxford Finance, LLC ("Oxford").

On April 19, 2019, the Company entered into an Asset and Share Sale and Purchase Agreement (the "Shirahama Purchase Agreement") with Seijirō Shirahama, pursuant to which, among other things, Mr. Shirahama agreed to purchase the Company's Japanese subsidiary, Cytori Therapeutics, K.K. (the "Japanese Subsidiary"), and substantially all of the Company's Cell Therapy assets used in Japan. Both the Company and Mr. Shirahama made customary representations, warranties and covenants in the Shirahama Purchase Agreement. The transaction was completed on April 25, 2019 and the Company received $3.0 million of cash proceeds, of which $1.4 million was used to pay down principal, interest and fees under the Loan and Security Agreement (defined in Note 4).

Amendments to Certificate of Incorporation and Reverse Stock Split

On July 29, 2019, the Company amended its Certificate of Incorporation with the State of Delaware to change its corporate name from Cytori Therapeutics, Inc. to Plus Therapeutics, Inc. The Company also changed its trading symbol for its common stock on the Nasdaq Capital Market to "PSTV".

On August 5, 2019, following stockholder and Board approval, the Company filed a Certificate of Amendment to its Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to effectuate a one-for-fifty (1:50) reverse stock split of its common stock, par value $0.001 per share, without any change to its par value. Proportional adjustments for the reverse stock split were made to the Company's outstanding stock options, warrants and equity incentive plans for all periods presented.

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.

Liquidity and Going Concern

The Company incurred net losses of $8.2 million for the year ended December 31, 2020, and as of December 31, 2020, the Company had an accumulated deficit of $433.5 million and cash and cash equivalents of $8.3 million. Additionally, the

Company used net cash of $8.4 million to fund its operating activities for the year ended December 31, 2020. In addition, as discussed in Note 13, the full magnitude of the coronavirus pandemic on the Company's financial condition, liquidity and future results of operations is uncertain. These factors raise substantial doubt about the Company's ability to continue as a going concern.

On October 23, 2020, the Company entered into an Equity Distribution Agreement (the "Distribution Agreement") with Canaccord Genuity LLC ("Canaccord"), pursuant to which the Company may issue and sell, from time to time, shares of our common stock having an aggregate offering price of up to $10,000,000 (the "ATM Shares"), depending on market demand, with Canaccord acting as an agent for sales. The Company has no obligation to sell any of the ATM Shares. The Company may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price the Company designates from time to time and the Company may at any time suspend sales pursuant to the Distribution Agreement. During the year ended December 31, 2020, the Company issued 1,616,299 shares of its common stock for aggregate net proceeds of $3.2 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 536,070 shares under the Distribution Agreement for net proceeds of $1.5 million.

On September 30, 2020, the Company entered into a purchase agreement (the "2020 Purchase Agreement") and registration rights agreement pursuant to which Lincoln Park Capital Fund LLC ("Lincoln Park") has committed to purchase up to $25.0 million of the Company's common stock. Under the terms and subject to the conditions of the 2020 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 $25.0 million of the Company's common stock. Such sales of common stock by the Company, if any, will be subject to certain limitations, and may occur from time to time, at the Company's sole discretion, over the 36-month period commencing on the date that the registration statement covering the resale of shares of common stock that have been and may be issued under the 2020 Purchase Agreement, is declared effective by the SEC and a final prospectus in connection therewith is filed. During the year ended December 31, 2020, the Company sold 353,113 shares, excluding 180,701 shares issued as commitment fee, of common stock under the 2020 Purchase Agreement for net proceeds of $0.7 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 985,186 shares of its common stock under the 2020 Purchase Agreement for total proceeds of $2.9 million.

In September 2019, the Company finalized the indirect cost rate under the contract we were awarded in September 2012 with the Biomedical Advanced Research and Development Authority, or BARDA, a division of the U.S. Department of Health and Human Services (the "BARDA Agreement"), for indirect costs incurred during the years 2012 through 2019, which resulted in approximately $4.6 million of revenue recognized during the year ended December 31, 2019.

In September 2019, the Company entered into an underwriting agreement with H.C. Wainwright & Co., LLC (the "Representative"), as representative of the underwriters (the "Underwriters"), pursuant to which the Company sold in an underwritten public offering an aggregate of (i) 289,000 Class A Units, each consisting of one share of common stock, par value $0.001 per share, of the Company and one Series U warrant to purchase one share of common stock, and (ii) 2,711,000 Class B Units, each consisting of one pre-funded Series V warrant to purchase one share of common stock and one Series U Warrant to purchase one share of common stock at a public offering price of $5.00 per Class A Unit and $4.9999 per Class B Unit (the "September 2019 Offering"). In addition, the Company granted the Underwriters a 45-day option to purchase up to an additional 450,000 shares of the Company's common stock and/or Series U Warrants at the public offering price, less the underwriting discounts and commissions. The Underwriters exercised their option to purchase an additional 450,000 Series U warrants. The Company also issued to the Representative warrants (in the form of the Series U warrants) to purchase 75,000 shares of common stock with an exercise price of $6.25 per share of common stock (the "Representative Warrants").

On April 24, 2019, the Company received $3.3 million of net cash proceeds related to the sale of the UK Subsidiary and the Cell Therapy Assets (excluding such assets used in Japan or relating to the Company's contract with BARDA), of which $1.7 million was used to pay down principal, interest and fees on the Loan and Security Agreement, and on April 25, 2019 the Company received $2.4 million of net cash proceeds related to the sale of the Japanese Subsidiary, and substantially all of the Company's Cell Therapy assets used in Japan, of which $1.4 million was used to pay down principal, interests and fees on the Loan and Security Agreement.

The Company continues to seek additional capital through strategic transactions and from other financing alternatives. Without additional capital, the Company's current working capital will not provide adequate funding to make debt repayments or support its research, 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 consolidated 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 consolidated 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, determining the assumptions used in measuring share-based compensation expense, valuing warrants and valuing allowances for doubtful accounts.

Actual results could differ from these estimates. Management's estimates and assumptions are reviewed regularly, and the effects of revisions are reflected in the consolidated 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 includes cash in readily available checking and savings accounts. The Company held no investments as of December 31, 2020 and 2019. 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.

Restricted Cash

Restricted cash consists of cash invested in certificate of deposits used as collateral for the issuance of letters of credit pursuant to lease agreements for leasing of property at 3020 and 3030 Callan Road, San Diego, CA, which required us to execute a letter of credit for $40,000 naming the landlord as a beneficiary as of December 31, 2019. There was no restricted cash as of December 31, 2020.

Accounts Receivable

Accounts receivable are recorded at the invoiced amount and do not bear interest. As of December 31, 2019, accounts receivable represents outstanding invoices under the BARDA Agreement for work performed prior to the BARDA contract termination. There were no accounts receivable as of December 31, 2020.

Financial Instruments

Financial instruments include cash equivalents, accounts receivable, other current assets, accounts payable, accrued expenses, other liabilities and long-term debt. The carrying values of cash equivalents, accounts receivable, other current assets, accounts payable, accrued expenses, other liabilities generally approximate fair value due to the short-term nature of these instruments. Based on level 3 inputs and the borrowing rates current available for loans with similar terms, the Company believes the fair value the long-term debt approximates 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 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, 2020 and determined that no impairment existed.

Warrant Liability

Warrants are accounted for in accordance with the applicable authoritative accounting guidance as either liabilities or as equity instruments depending on the specific terms of the agreements. Liability-classified instruments 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 warrant liabilities in the consolidated statements of operations and comprehensive loss.

Revenue Recognition

Development Revenue

The Company earns revenue for performing tasks under research and development agreements with governmental agencies like BARDA. Revenue derived from reimbursement of direct out-of-pocket expenses for research costs associated with government contracts are recorded as government contract and other within development revenue. Government contract revenue is recorded at the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in our statements of operations. The Company recognized $0.3 million and $7.0 million in BARDA revenue for the years ended December 31, 2020 and 2019, respectively.

The BARDA Agreement was terminated by the U.S. Department of Health and Human Services effective in December 2019 and the contract close out process was completed during 2020.

Concentration of Significant Customers & Geographical Sales

After the Company sold its Cell Therapy business, BARDA accounted for 100% of our revenue from continuing operations which are recognized for year ended December 31, 2020 and 2019 and accounted for 100% of total outstanding accounts receivable presented in the accompanying consolidated financial statements.

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 our research and development employees.

Also included in research and development expenditures are costs incurred to support the government reimbursement contract, including $0.3 million and $1.5 million qualified expenses that were incurred for the years ended December 31, 2020 and 2019, related to the BARDA Agreement.

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, 2020 and 2019, 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 is calculated based on historical data for and applied to all employee awards as a single group as the Company does not expect (nor does historical data suggest) substantially different exercise or post-vesting termination behavior amongst our employee population. 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, 2020 and 2019, the Company is managed as a single operating segment, therefore we report our 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.

The Company excluded all potentially dilutive securities from the calculation of diluted loss per share attributable to common stockholders for the years ended December 31, 2020 and 2019, as their inclusion would be antidilutive.

Reclassification

Certain amounts have been reclassified to conform to current year presentation.

Recently Issued and Recently Adopted Accounting Pronouncements

Recently Issued Accounting Pronouncements

In September 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments. The standard amends the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses for most financial assets and certain other instruments that aren't measured at fair value through net income. For available-for-sale debt securities, entities will be required to recognize an allowance for credit losses rather than a reduction in carrying value of the asset. Entities will no longer be permitted to consider the length of time that fair value has been less than amortized cost when evaluating when credit losses should be recognized. This new guidance is effective in the first quarter of 2023 for calendar-year SEC filers that are smaller reporting companies as of the one-time determination date. Early adoption is permitted beginning in 2019. The Company plans to adopt the new guidance on January 1, 2023, and it does not expect that adoption of this standard will have a material impact on its consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU 2020-06"). ASU 2020-06 eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, ASU 2020-06 modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in ASU 2020-06 are effective for smaller reporting companies as defined by the SEC for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. The Company is currently evaluating the impact of ASU 2020-06 on its financial statements.

Recently Adopted Accounting Pronouncements

In August 2018, the FASB issued ASU No. 2018-13 (ASU 2018-13), *Changes to the Disclosure Requirements for Fair Value Measurement*. This ASU eliminates, adds and modifies certain disclosure requirements for fair value measurements as part of its disclosure framework project. The standard is effective for all entities for financial statements issued for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company adopted ASU 2018-13 as of January 1, 2020, which did not have a material impact on the Company's financial statements.

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. We follow 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.

Warrants issued by the Company in connection with the 2018 Rights Offering in July 2018 ("Series T Warrants") and in the September 2019 Offering ("Series U Warrants") were classified as liabilities at issuance. The Series T and Series U warrants were marked to market at each subsequent reporting date through as non-operating income or loss in the statement of operations. As described in more detail in Note 12, during 2020 the Company amended the terms of 3,522,500 Series U Warrants such that those amended Series U Warrants met the requirements to be classified within stockholders' equity and were no longer required to be re-measured at fair value at each balance sheet date.

Expected volatility was computed using daily pricing observations of traded shares of the Company for recent periods that correspond to the expected term of the warrants. The Company believes this method produces an estimate that is representative of our expectations of future volatility over the expected term of these warrants. The Company currently has no reason to believe future volatility over the expected remaining life of these warrants is likely to differ materially from historical volatility. The expected life is based on the remaining contractual term of the warrants. The risk-free interest rate is the U.S. Treasury bond rate as of the valuation date. Because some of the inputs to our valuation model are either not observable or are not derived principally from or corroborated by observable market data by correlation or other means, the warrant liability is classified as Level 3 in the fair value hierarchy. Fluctuations in the fair value of the warrants are impacted by unobservable inputs. Significant increases (decreases) in this input in isolation would result in a significantly higher (lower) fair value measurement.

The Series T Warrants are not traded in an active securities market, and as such the estimated fair value as of December 31, 2020 and 2019 was determined by using an option pricing model with the following assumptions. All outstanding Series T warrants expired unexercised in January 2021.

	As of December 31, 2020	As of December 31, 2019
Expected term	0.1 years	1.1 years
Common stock market price	$ 2.02	$ 2.40
Risk-free interest rate	0.08%	1.59%
Expected volatility	57%	168%
Resulting fair value (per warrant)	$ 0.05	$ 1.47

The Company estimated the fair value of the liability-classified Series U Warrants on the issuance date as well as at each subsequent balance sheet date with the Black Scholes model. The assumptions used in the Black Scholes option pricing model to determine the fair value of the Series U warrants were as follows:

	As of December 31, 2020	As of December 31, 2019
Expected term	3.75 years	4.75 years
Common stock market price	$ 2.02	$ 2.40
Risk-free interest rate	0.24%	1.68%
Expected volatility	149.0%	134.5%
Resulting fair value (per warrant)	$ 1.56	$ 1.94

The following table summarizes the change in our Level 3 warrant liability value (in thousands):

	Years ended December 31,	
Warrant liability	**2020**	**2019**
Beginning balance	$ 6,929	$ 916
Issuance of warrants	—	10,214
Exercises	—	(794)
Change in fair value of warrants	(2,418)	(3,407)
Reclassification to equity	(4,504)	—
Ending balance	$ 7	$ 6,929

On September 30, 2020, the Company committed to issue 180,701 shares to Lincoln Park as a committee fee ("Commitment Shares") in connection with the 2020 Purchase Agreement, and these shares were issued on October 2, 2020. The change in fair value of the Commitment Shares between September 30, 2020 and the issuance date, in the amount of $18,000 and calculated using the closing stock prices on respective dates, was recorded in change in fair value of liability-classified instruments on the statement of operations and comprehensive income/loss.

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 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.

4. Discontinued Operations

As explained in Note 1, on April 24, 2019 and April 25, 2019, the Company completed the sale of its Cell Therapy business to Lorem and Mr. Shirahama. The following table summarizes the calculation of the loss on sale of the Cell Therapy business, which was finalized during the fourth quarter of 2019 (in thousands):

Consideration received	$	7,000
Transaction costs		(1,363)
Net cash proceeds		5,637
Less:		
Carrying value of business and assets sold		12,145
Net loss on sale of business	$	(6,508)

There were no assets or liabilities related to discontinued operations as of December 31, 2020 or 2019.

The following table summarizes the results of discontinued operations for the periods presented (in thousands).

		Year ended December 31, 2019
Product revenue	$	901
Cost of revenue		857
Gross profit		44
Operating expenses:		
Research and development		656
Sales and marketing		411
General and administrative		185
Total operating expenses		1,252
Operating loss		(1,208)
Other income (expense)		112
Loss from discontinued operations	$	(1,096)
Loss from sale of business		(6,508)
Net loss from discontinued operations	$	(7,604)

During the year ended December 31, 2019, revenue from discontinued operations were related to the Cell Therapy business. Because of the sale of the Cell Therapy business to Lorem and Mr. Shirahama, all product revenue and costs of product revenue for these periods have been recorded in loss from discontinued operations in the consolidated statements of operations.

Included in the statement of cash flows are the following non-cash adjustments related to the discontinued operations (in thousands):

		For the year ended December 31, 2019
Depreciation and amortization	$	467
Provision for excess inventory	$	—
Loss on asset disposal	$	—

5. Loss per Share

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,	
	2020	2019
Outstanding stock options	531,336	1,865
Preferred stock	422,985	298,000
Outstanding warrants	3,113,625	3,637,000
Total	4,067,946	3,936,865

Net loss per share for the year ended December 31, 2019 included a deemed dividend of $554,000 due to beneficial conversion feature recorded as a result of the adjustment of the conversion price of Series C Preferred Stock from $39.93 to $7.50 per share in August 2019.

6. Composition of Certain Financial Statement Captions

Other Current Assets

As of December 31, 2020 and 2019, other current assets were comprised of the following (in thousands):

	December 31,	
	2020	2019
Prepaid services	$ 131	$ 277
Prepaid insurance	639	536
Other	59	144
	$ 829	$ 957

Property and Equipment, net

As of December 31, 2020 and 2019, property and equipment, net, were comprised of the following (in thousands):

	December 31,	
	2020	2019
Office and computer equipment	$ 1,525	$ 1,518
Leasehold improvements	1,682	1,682
	3,207	3,200
Less accumulated depreciation	(1,387)	(1,021)
	$ 1,820	$ 2,179

Depreciation expense totaled $0.4 million and $0.9 million for the years ended December 31, 2020 and 2019, respectively.

Intangible Assets, net

As of December 31, 2020, intangible assets included the net book value of costs incurred for software upgrades.

Accounts Payable and Accrued Expenses

As of December 31, 2020 and 2019, accounts payable and accrued expenses were comprised of the following (in thousands):

	December 31,	
	2020	2019
Accounts payable	$ 789	$ 327
Accrued payroll and bonus	738	679
Accrued professional fees	276	332
Accrued vacation and compensation	245	166
Finance lease obligation - current	10	120
Other current liabilities	23	6
Accrued expenses	—	791
Accrued R&D studies	—	858
	$ 2,081	$ 3,279

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.

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. Right-of-use assets for financing leases are recorded within property and equipment, net in the Balance Sheet. Leases with an initial term of 12 months or less are not recorded on the Balance Sheet. Instead, the Company recognizes lease expense for these leases on a straight-line basis over the lease term. In connection with certain operating leases, the Company has security deposits recorded and maintained as restricted cash totaling $40 thousand as of December 31, 2019. There was no security deposit as of December 31, 2020.

The Company leases laboratory, office and storage facilities in San Antonio, Texas, under operating lease agreements that expire in 2028. The Company also leases certain office space in Austin, Texas under a month-to-month operating lease agreement. In addition, the Company leases certain equipment under various operating and finance leases. The 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.

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 table below summarizes the Company's lease liabilities and corresponding right-of-use assets (in thousands, except years and rates):

	2020	2019
Assets		
Operating	$ 636	$ 781
Financing	7	134
Total leased assets	$ 643	$ 915
Liabilities		
Current:		
Operating	$ 123	$ 147
Financing	10	120
Noncurrent:		
Operating	528	646
Financing	—	8
Total lease liabilities	$ 661	$ 921
Weighted-average remaining lease term (years) - operating leases	6.57	6.89
Weighted-average remaining lease term (years) - finance leases	0.42	1.08
Weighted-average discount rate - operating leases	7.79%	7.93%
Weighted-average discount rate - finance leases	5.00%	5.00%

The table below summarizes the Company's lease costs from its consolidated statements of operations, and cash payments from its consolidated statements of cash flows.

	Year Ended December 31,	
	2020	2019
Lease expense:		
Operating lease expense	$ 210	$ 225
Finance lease expense:		
Depreciation of right-of-use assets	127	116
Interest expense on lease liabilities	4	9
Total lease expense	$ 341	$ 350
Cash payment information:		
Operating cash used for operating leases	$ 204	$ 213
Financing cash used for financing leases	117	131
Total cash paid for amounts included in the measurement of lease liabilities	$ 321	$ 344

Total rent expenses for the years ended December 31, 2020 and 2019 was $0.2 million and $0.7 million, respectively, 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 and financing leases at December 31, 2020 are as follows (in thousands):

	Financing Leases	Operating Leases
2021	$ 10	$ 183
2022	—	123
2023	—	100
2024	—	106
2025	—	108
Thereafter	—	233
Total minimum lease payments	$ 10	$ 853
Less: amount representing interest	—	(202)
Present value of obligations under leases	10	651
Less: current portion	$ 10	$ (123)
Noncurrent lease obligations	—	528

Other commitments

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, 2020, the Company did not have any clinical research study obligations.

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.

The Company is currently engaged in a dispute with a third party arising out of its sale of certain assets pursuant to an asset and equity purchase agreement entered into in 2019 (the "APA"). In October 2020, the Company received correspondence from such third party informing it of an alleged breach of certain representations and warranties in the APA and asserting indemnification claims. In December 2020, the Company responded to the third party and asserted that its improper use of the Company's intellectual property constituted a breach of the APA and further asserted an indemnification claim against the third party for the Company's losses in connection therewith. While management believe the claims asserted against the Company to be spurious and without merit, this dispute remains ongoing and there can be no assurance that it will not result in litigation. Resolution of this matter or any resulting litigation would be expensive and time-consuming and the outcome is uncertain. It is not possible to predict with certainty the outcome of these unresolved legal actions or the range of possible loss.

8. Term Loan Obligations

On May 29, 2015, the Company entered into the Loan and Security Agreement, pursuant to which 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. The Term Loan accrues interest at a floating rate of at least 8.95% per annum, comprised of a three-month LIBOR rate with a floor of 1.00% plus 7.95%. Pursuant to the Loan and Security Agreement, as amended, the Company is required to make interest only payments through May 1, 2021 and thereafter it is required to make payments of principal and accrued interest in equal monthly installments sufficient to amortize the Term Loan through September 1, 2024, the maturity date. At maturity of the Term Loan, or earlier repayment in full following voluntary prepayment or upon acceleration, the Company is required to make a final payment in an aggregate amount equal to approximately $3.2 million. In connection with the Term Loan, on May 29, 2015, the Company issued to Oxford warrants to purchase an aggregate of 188 shares of the Company's common stock at an exercise price of $5,175 per share. These warrants became exercisable as of November 30, 2015 and will expire on May 29, 2025 and, following the authoritative accounting guidance, are equity classified and its respective fair value was recorded as a discount to the debt.

From September 2017 to March 2019, the Company entered into a total of seven amendments to the Term Loan which, amongst other things, extended the interest only period, required repayment of $3.1 million using the proceeds received from sale of the Company's former UK and Japan subsidiaries as described in Note 1, increased the final payment, increased the final payment fee upon maturity or early repayment of the Term Loan, and increased the minimum liquidity covenant level to $2.0 million.

On March 29, 2020, the Company entered into the Ninth Amendment of the Loan and Security Agreement ("Ninth Amendment"), pursuant to which Oxford agreed to defer the start date of principal repayment from May 1, 2020 to May 1, 2021 and extended the term of the Term loan from September 1, 2021 to September 1, 2024. In addition, pursuant to the Ninth Amendment, on April 1, 2020, the Company made a $5.0 million paydown of principal upon execution of the Ninth Amendment and $0.3 million of related final payment. After giving effect to this payment, $4.3 million of principal remains outstanding under the Loan Agreement. In addition, an amendment fee of $1.0 million will be payable in connection with the Amendment at the earlier of the maturity date, acceleration of the loans and the making of certain prepayments. All other major terms remained consistent.

Under authoritative guidance, the Ninth Amendment does not meet the criteria to be accounted for as a troubled debt restructuring. In addition, the Company performed a quantitative analysis and determined that the terms of the new debt and original debt instrument are not substantially different. Accordingly, the Ninth Amendment is accounted for as debt modification. A new effective interest rate that equates the revised cash flows to the carrying amount of the original debt is computed and applied prospectively.

The Term Loan, as amended, is collateralized by a security interest in substantially all of the Company's existing and subsequently acquired assets, including its intellectual property assets, subject to certain exceptions set forth in the Loan and Security Agreement, as amended. The intellectual property asset collateral will be released upon the Company achieving a certain liquidity level when the total principal outstanding under the Loan and Security Agreement is less than $3 million. As of December 31, 2020, there was $4.3 million principal amount outstanding under the Term Loan, excluding the $3.2 million final payment fee, and the Company was in compliance with all of the debt covenants under the Loan and Security Agreement.

The Company's interest expense for the years ended December 31, 2020 and 2019 was $1.1 million and $1.9 million, respectively. Interest expense is calculated using the effective interest method, therefore it is inclusive of non-cash amortization in the amount of $0.6 million and $0.5 million for the year ended December 31, 2020 and 2019, respectively, related to the amortization of the debt discount, capitalized loan costs, and accretion of final payment.

The Loan and Security Agreement, as amended, contains customary indemnification obligations and customary events of default, including, among other things, the Company's failure to fulfill certain obligations under the Term Loan, as amended, and the occurrence of a material adverse change, which is defined as a material adverse change in the Company's business, operations, or condition (financial or otherwise), a material impairment of the prospect of repayment of any portion of the loan. In the event of default by the Company or a declaration of material adverse change by its lender, under the Term Loan, the lender would be entitled to exercise its remedies thereunder, including the right to accelerate the debt, upon which the Company may be required to repay all amounts then outstanding under the Term Loan, which could materially harm the Company's financial condition. As of December 31, 2020, the Company has not received any notification or indication from Oxford to invoke the material adverse change clause. However, due to the Company's current cash flow position and the substantial doubt about its ability to continue as a going concern, the entire principal amount of the Term Loan is presented as short-term. The Company will continue to evaluate the debt classification on a quarterly basis and evaluate for reclassification in the future should its financial condition improve.

Additional details relating to the outstanding Term Loan as of December 31, 2020 and 2019 are presented in the following table (in thousands):

Year ended December 31, 2020

Origination Date	Original Loan Amount	Interest Rate**	Current Monthly Payment***	Amended expiration date	Remaining Principal (Face Value)
May 2015	$ 17,700	8.95%	$ 32	May 31, 2024	$ 4,289

Year ended December 31, 2019

Origination Date	Original Loan Amount	Interest Rate**	Current Monthly Payment*	Original Term	Remaining Principal (Face Value)
May 2015	$ 17,700	8.95%	$ 72	48 Months	$ 9,288

* *Monthly payment as of December 2019, which reflects interest only*
** *3 month LIBOR rate with a floor of 1% plus 7.95%*
*** *Monthly payment as of December 2020, which reflects interest only*

As of December 31, 2020, the future contractual principal and final fee payments on all of our debt obligations are as follows (as thousands):

Years Ending December 31,	
2021	$ 1,016
2022	1,354
2023	1,354
2024	3,757
Total	$ 7,481

Reconciliation of Face Value to Book Value as of December 31, 2019	
Total debt obligations, including final payment fee (Face Value)	$ 7,481
Less: Debt discount	(1,146)
Total obligation	$ 6,335

9. Income Taxes

The Company has recorded a full valuation allowance against deferred tax assets and due to our net losses for the years ended December 31, 2020 and 2019, there was no provision or benefit for income taxes recorded.

The components of income/(loss) from continuing operations before income tax provision (benefit) as of December 31, 2020 and 2019 are as follows (in thousands):

	2020	2019
U.S.	$ (8,241)	$ (3,439)
Foreign	—	403
	$ (8,241)	$ (3,036)

A reconciliation of the total income tax provision tax rate to the statutory federal income tax rates of 21% for the years ended December 31, 2020 and 2019, respectively, is as follows:

	2020	2019
Income tax expense (benefit) at federal statutory rate	(21.0)%	(21.0)%
Change in valuation allowance	23.6%	23.0%
Income tax expense (benefit) at state statutory rate	(8.9)%	(12.2)%
Stock compensation	6.9%	13.7%
Mark to market adjustment	(6.1)%	(24.0)%
NOLs expiring and adjustments to NOL	6.0%	19.2%
Research credit	(1.1)%	(1.8)%
Return to provision	1.0%	3.1%
Change in state rate	(0.5)%	(1.3)%
Permanent interest adjustments	—	1.1%
Other, net	0.1%	0.2%
	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, 2020 and 2019 are as follows (in thousands):

	2020	2019
Deferred tax assets:		
Allowances and reserves	$ —	$ 6
Accrued expenses	128	283
Stock based compensation	168	657
Net operating loss carryforwards	95,114	92,659
Income tax credit carryforwards	8,756	8,749
Property and equipment, principally due to differences in depreciation	16	95
Intangible assets	556	370
Other, net	182	217
	104,920	103,036
Valuation allowance	(104,742)	(102,822)
Total deferred tax assets, net of allowance	178	214
Deferred tax liabilities:		
Other	(178)	(214)
Total deferred tax liability	(178)	(214)
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 assets are realizable, the valuation allowance will be reduced. The Company has recorded a full valuation allowance of $104.8 million as of December 31, 2020 as it does not believe it is more likely than not our net deferred tax assets will be realized. The Company increased its valuation allowance by approximately $1.9 million during the year ended December 31, 2020.

At December 31, 2020, we had federal, and state tax loss carry forwards of approximately $396.2 million, and $173.7 million, respectively. The federal and state net operating loss carry forwards begin to expire in 2021 and 2028, respectively, if unused. The federal net operating loss carryover includes $33.6 million of net operating losses generated in 2019. 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, 2020, we had federal and state tax credit carry forwards of approximately $6.4 million and $5.5 million, respectively, after reduction for uncertain tax positions. The Company has not performed a formal research and development credit study with respect to these credits. The federal credits will begin to expire in 2021, if unused, and the state credits carry forward indefinitely.

Pursuant to the Internal Revenue Code ("IRC") of 1986, as amended, specifically IRC §382 and IRC §383, The Company's ability to use net operating loss and R&D tax credit carry forwards ("tax attribute carry forwards") to offset future taxable income is limited if we experience a cumulative change in ownership of more than 50% within a three-year testing period. The Company has not completed an ownership change analysis pursuant to IRC Section 382 for taxable years ended after December 31, 2007. If ownership changes within the meaning of IRC Section 382 are identified as having occurred subsequent to 2007, the amount of remaining tax attribute carry forwards available to offset future taxable income and income tax expense in future years may be significantly restricted or eliminated. Further, the Company's deferred tax assets associated with such tax attributes could be significantly reduced upon realization of an ownership change within the meaning of IRC §382.

The 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, 2020 and 2019.

Following is a tabular reconciliation of the unrecognized tax benefits activity during the years ended December 31, 2020 and 2019 (in thousands):

	2020	2019
Unrecognized Tax Benefits – Beginning	$ 2,234	$ 2,216
Gross decreases – tax positions in prior period	(44)	(18)
Gross increase – current-period tax positions	33	36
Unrecognized Tax Benefits – Ending	$ 2,223	$ 2,234

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 as of December 31, 2020.

The Company's material tax jurisdictions are the United States and California. To its knowledge, the Company is currently not under examination by the Internal Revenue Service or any other taxing authority.

The Company's tax years for 2016 (federal) and 2015 (CA) remain open to examination by the taxing authority. While not open to examination, the tax attributes generated in tax years 1998 (federal) and 1997 (CA) and forward are subject to adjustment by the taxing authorities if utilized in tax years which are still open to examination.

10. Employee Benefit Plan

We implemented a 401(k) retirement savings and profit sharing plan (the "Plan") effective January 1, 1999. We may make discretionary annual contributions to the Plan, which is allocated to the profit sharing accounts based on the number of years of employee service and compensation. At the sole discretion of the Board of Directors, we may also match the participants' contributions to the Plan. We made no discretionary or matching contributions to the Plan in 2020 or 2019.

11. 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.

On May 7, 2020, all closing conditions under the NanoTx License Agreement were satisfied and the Company paid an upfront payment of $400,000 in cash and issued 230,769 shares of its common stock to NanoTx. Cash and the fair value of common stock issued totaled $781,000 and is recorded as in-process research and development expenses, pursuant to authoritative literature for asset acquisition, in the consolidated statement of operations and comprehensive loss for the year ended December 31, 2020, . Pursuant to the terms of the NanoTx License Agreement, the Company may be required to pay up to $136.5 million in development and sales milestone payments and a tiered single-digit royalty on U.S. and European sales.

12. Stockholders' Equity

Preferred Stock

The Company has authorized 5,000,000 shares of preferred stock, par value $0.001 per share. The Company's Board of Directors is authorized to designate the terms and conditions of any preferred stock the Company issues without further action by the common stockholders. There were no shares of Series A 3.6% Convertible Preferred Stock outstanding as of December 31, 2020 and 2019. There were 1,016 and 1,021 shares of Series B Convertible Preferred Stock outstanding as of each of

December 31, 2020 and December 31, 2019, respectively. There were 938 shares of Series C Preferred Stock outstanding as of December 31, 2020 and December 31, 2019.

As of December 31, 2020, there were 938 outstanding shares of Series C Preferred Stock that can be converted into an aggregate of 416,889 shares of common stock, and 1,016 shares of Series B Convertible Preferred Stock that can be converted into an aggregate of 6,096 shares of common stock. On September 25, 2019, in connection with the September 2019 Offering, the conversion price of the Series C Preferred Stock was reduced from $7.50 to $3.2132. In April 2020, in connection with the Warrant Amendments (defined below), the conversion price of the Series C Preferred Stock was reduced from $3.2132 per share to $2.25 per share.

Warrants

On April 27, 2018, the Company registered and distributed to holders of its common stock and Series B Convertible Preferred Stock, at no charge, non-transferable subscription rights to purchase up to an aggregate of 20,000 units for $1,000 a unit. Each unit consisted of one share of Series C Preferred Stock and 1,050 warrants ("Series T Warrants"). Pursuant to the rights offering the 2018 Rights Offering, the Company sold an aggregate of 6,723 units, resulting in total net proceeds to the Company of approximately $5.7 million. In April 2020, in connection with Warrant Amendments (defined below), the exercise price of the Series T Warrants was further adjusted such that every 50 warrants can be exercised into one share of common stock for $2.25.

As of December 31, 2020, there were 3,787,350 outstanding Series T Warrants which can be exercised into in aggregate 75,747 shares of common stock. All Series T Warrants expired unexercised in January 2021.

On September 25, 2019, the Company completed an underwritten public offering. The Company issued 289,000 shares of its common stock, along with pre-funded warrants to purchase 2,711,000 shares of its common stock and Series U Warrants to purchase 3,450,000 shares of its common stock at $5.00 per share. The Series U Warrants have a term of five years from the issuance date. In addition, the Company issued warrants to H.C. Wainwright & Co., LLC, as representatives of the underwriters, to purchase 75,000 shares of its common stock at $6.25 per share with a term of 5 years from the issuance date, in the form of Series U Warrants (the "Representative Warrants").

In accordance with authoritative guidance, the pre-funded warrants are classified as equity. The Series U Warrants and the Representative Warrants are classified at issuance as liabilities due to a contingent obligation for the Company to settle the Series U Warrants with cash upon certain change in control events.

Between April and September 2020, the Company entered into revised warrant agreements with the holders of 3,447,500 Series U Warrants ("Warrant Amendments"). In return for reducing the strike price of the warrants to $2.25 per share, the warrant holders agreed to amend the settlement provisions upon a fundamental transaction such that the warrants would meet the requirements to be classified within stockholders' equity. In September 2020, the Company entered into revised warrant agreements for the Representative Warrants that reduced the strike price of the warrants to $2.81 per share, and the warrant holders agreed to amend the settlement provisions upon a fundamental transaction such that the Representative Warrants would meet the requirements to be classified within stockholders' equity. Accordingly, approximately $4.5 million of warrant liability was reclassified to stockholders' equity on the respective effective date of the Warrant Amendments. In addition, approximately $0.7 million of other income representing change in the fair value of amended warrants from April 1, 2020 to the respective effective date of the Warrant Amendments is recorded in the consolidated statement of operations and comprehensive loss for the year ended December 31, 2020.

As of December 31, 2020, there were 3,037,500 outstanding Series U Warrants which can be exercised into an aggregate of 3,037,500 shares of common stock.

Common Stock

Lincoln Park Purchase Agreements

On September 21, 2018, the Company entered into a purchase agreement (the "2018 Purchase Agreement") with Lincoln Park pursuant to which the Company had the right to sell to Lincoln Park and Lincoln Park was obligated to purchase up to $5.0 million of shares of the Company's common stock over the 24-month period following October 15, 2018. Through December 31, 2018, the Company sold a total of 12,802 shares for proceeds of approximately $0.3 million through the 2018 Purchase Agreement. During the year ended December 31, 2019, the Company sold a total of 32,170 shares for proceeds of approximately $0.3 million. There was no amount remaining available under this financing facility as of December 31, 2020.

On September 30, 2020, the Company entered into a new purchase agreement (the "2020 Purchase Agreement") and registration rights agreement pursuant to which Lincoln Park has committed to purchase up to $25.0 million of the Company's common stock. Under the terms and subject to the conditions of the 2020 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 $25.0 million of the Company's common

stock. Such sales of common stock by the Company, if any, will be subject to certain limitations, and may occur from time to time, at the Company's sole discretion, over the 36-month period commencing on November 6, 2020, subject to the satisfaction of certain conditions.

The 2020 Purchase Agreement provides that the number of shares the Company may sell to Lincoln Park on any single business day in a regular purchase is 50,000, but that amount may be increased up to 100,000 shares, depending upon the market price of the Company's common stock at the time of sale and subject to a maximum limit of $500,000 per regular purchase. The purchase price per share for each such regular purchase will be based on prevailing market prices of the Company's common stock immediately preceding the time of sale as computed under the 2020 Purchase Agreement. In addition to regular purchases, the Company may also direct Lincoln Park to purchase other amounts as accelerated purchases or as additional accelerated purchases if the closing sale price of the common stock exceeds certain threshold prices as set forth in the 2020 Purchase Agreement. There are no trading volume requirements or restrictions under the Lincoln Park Purchase Agreement. There is no upper limit on the price per share that Lincoln Park must pay for common stock under a regular purchase or an accelerated purchase and in no event will shares be sold to Lincoln Park on a day when the Company's common stock closing sale price is less than $0.25 per share.

On June 16, 2020, the Company received stockholder approval to permit issuances of the Company's common stock (including the issuance of more than 19.99% of the Company's common stock) to Lincoln Park pursuant to the 2020 Purchase Agreement. Based on the closing price of the Company's common stock of $1.05 per share on March 16, 2020, the maximum number of shares the Company could issue and sell under the 2020 Purchase Agreement is approximately 23.8 million shares. Accordingly, the Company requested and received stockholder approval for the issuance of up to 23.8 million shares of the Company's common stock under the 2020 Purchase Agreement. The Company would seek additional stockholder approval before issuing more than 23.8 million shares.

Lincoln Park has no right to require the Company to sell any shares of common stock to Lincoln Park, but Lincoln Park is obligated to make purchases as the Company directs, subject to certain conditions.

Actual sales of shares of common stock to Lincoln Park under the 2020 Purchase Agreement will 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. During the year ended December 31, 2020, the Company issued 353,113 shares, excluding 180,701 shares issued as commitment fee, of common stock under the 2020 Purchase Agreement for total net proceeds of approximately $0.7 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 985,186 shares of its common stock under the 2020 Purchase Agreement for total proceeds of $2.9 million.

The net proceeds under the 2020 Purchase Agreement to the Company will depend on the frequency and prices at which the Company sells shares of its stock to Lincoln Park. On October 2, 2020, the Company issued 180,701 shares of common stock, with the fair value of $0.5 million, to Lincoln Park as a commitment fee in connection with entering into the 2020 Purchase Agreement, which was recorded as cost of capital in stockholders' equity.

At-the-market Issuances

On October 23, 2020, the Company entered into an Equity Distribution Agreement (the "Distribution Agreement") with Canaccord Genuity LLC ("Canaccord"), pursuant to which the Company may issue and sell, from time to time, shares of its common stock having an aggregate offering price of up to $10,000,000 (the "ATM Shares"), depending on market demand, with Canaccord acting as an agent for sales. The Company has no obligation to sell any of the ATM Shares. The Company may instruct Canaccord not to sell the ATM Shares if the sales cannot be effected at or above the price the Company designates from time to time and the Company may at any time suspend sales pursuant to the Distribution Agreement. During the year ended December 31, 2020, the Company issued 1,616,331 shares under the Distribution Agreement for net proceeds of approximately $3.2 million. During 2021 and through the date of filing of this Form 10-K, the Company issued 536,070 shares under the Distribution Agreement for net proceeds of $1.5 million.

13. Stock-based Compensation

On February 6, 2020, the Company amended the Company's 2015 New Employee Incentive Plan (the "2015 Plan") to increase the total number of shares of common stock reserved for issuance under the plan by 250,000 shares. Awards may only be granted under the 2015 Plan 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, 2020 there were 210,389 shares of common stock remaining and available for future issuances under the 2015 Plan.

On June 16, 2020, the stockholders of the Company approved the Company's 2020 Stock Incentive Plan ("2020 Plan"), which replaced the Company's 2014 Equity Incentive Plan. The 2020 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. The 2020 Plan provides for the issuance of up to 550,000 shares of common stock, and the number of shares available for issuance will be 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, 2020, there were 159,939 shares of common stock remaining and available for future issuances under the 2020 Plan.

Stock Options

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

A summary of activity for the year ended December 31, 2020 is as follows:

	Options	Weighted Average Exercise Price
Balance as of December 31, 2019	1,865	$ 2,968.22
Granted	530,000	$ 2.12
Cancelled/forfeited	(529)	$ 2,486.82
Balance as of December 31, 2020	531,336	$ 10.01

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Balance as of December 31, 2020	531,336	$ 10.01	9.41	$ -
Vested and expected to vest at December 31, 2020	490,008	$ 10.52	9.41	$ -
Exercisable at December 31, 2020	75,028	$ 56.84	9.43	$ -

The Company settles exercises of stock options with newly issued shares of its common stock. There were no stock options exercised in 2020 or 2019.

The fair value of each option awarded during the years ended December 31, 2020 and 2019 was estimated on the date of grant using the Black-Scholes-Merton option valuation model based on the following weighted-average assumptions:

	December 31, 2020	December 31, 2019
Expected term	5.8 years	7.0 years
Risk-free interest rate	0.58%	2.41%
Expected volatility	128.6%	96.5%
Dividends	0%	0%
Resulting fair value	$ 1.87	$ 0.26

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, we use 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, 2020 and 2019 in the statement of operations and comprehensive loss:

	Years ended December 31,	
	2020	2019
Research and development	$ 32	$ 40
General and administrative	215	87
Total share-based compensation	$ 247	$ 127

As of December 31, 2020, the total compensation cost related to non-vested stock options and stock awards not yet recognized for all our plans is approximately $704,000, which is expected to be recognized as a result of vesting under service conditions over a weighted average period of 2.81 years.

14. COVID-19 Pandemic and CARES Act

A novel strain of coronavirus (COVID-19) was declared a global pandemic by the World Health Organization in March 2020. COVID-19 has presented substantial public health and economic challenges and is affecting economies, financial markets and business operations around the world. International and U.S. governmental authorities in impacted regions have taken action in an effort to slow the spread of COVID-19, including issuing varying forms of "stay-at-home" orders, and restricting business functions outside of one's home. In response, the Company put restrictions on employee travel and working from its executive offices with many employees continuing their work remotely. While the Company has implemented additional health and safety precautions and protocols in response to the pandemic and government guidelines, the Company has not experienced a significant impact on its business and operations. However, the Company may experience disruptions that could adversely impact its business operations as well as its preclinical studies and clinical trials. The Company is currently continuing the clinical trials it has underway in sites across the U.S., and, although there has been no significant impact to date, the Company expects that COVID-19 precautions may directly or indirectly impact the timeline for some of its clinical trials. Some of the Company's clinical trial sites, including those located in areas severely impacted by the pandemic, have placed new patient enrollment into clinical trials on hold or, for patients traveling from out-of-state, have implemented a 14-day self-quarantine before appointments. In addition, some clinical trial sites have imposed limited accessibility to conduct clinical monitoring and training on-site. Although there are vaccines available, the ability to obtain a vaccine or know when herd immunity will be met, is difficult to anticipate. The Company considered the impacts of COVID-19 on the assumptions and estimates used to prepare its consolidated financial statements and determined that there were no material adverse impacts on the Company's results of operations and financial position at December 31, 2020. The full extent to which the COVID-19 pandemic will directly or indirectly impact its business, results of operations and financial condition, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat it, as well as the economic impact on local, regional, national and international markets.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law on March 27, 2020. The CARES Act, among other things, includes tax provisions relating to refundable payroll tax credits, deferment of employer's social security payments, net operating loss utilization and carryback periods, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property (QIP). The CARES Act had no material impact on the Company's income tax provision for the year ended December 31, 2020. The Company continues to evaluate the impact of the CARES Act on its financial position, results of operations and cash flows.

15. Subsequent Events

Piramal Master Services Agreement

On January 8, 2021, the Company entered into a Master Services Agreement (the "MSA") with Piramal Pharma Solutions, Inc. ("Piramal"), for Piramal to perform certain services related to the development, manufacture, and supply of our RNL-Liposome Intermediate Drug Product. The MSA includes the transfer of analytical methods, development of microbiological methods, process transfer and optimization, intermediate drug product manufacturing, and stability studies for the Company. The transfer

will be performed at Piramal's facility located in Lexington, Kentucky. The parties contemplate that the MSA will lead to clinical and commercial supply agreements between the Company and Piramal.

The MSA has a term of five years and will automatically renew for successive one-year terms unless either party notifies the other no later than six months prior to the original term or any additional terms of its intention to not renew the MSA. The Company has the right to terminate the MSA for convenience upon thirty days' prior written notice. Either party may terminate the MSA upon an uncured material breach by the other party or upon the bankruptcy or insolvency of the other party.

Issuance of common stocks

During 2021 and through the date of filing of this Form 10-K, the Company issued 985,186 shares of its common stock under the 2020 Purchase Agreement for net proceeds of $2.9 million, and issued 536,070 shares under the Distribution Agreement for net proceeds of $1.5 million.

In February 2021, certain warrant holders exercised warrants to purchase 896,500 shares of the Company's common stock for total exercise proceeds of $2.0 million.

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

Not applicable.

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 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 Securities Exchange Act of 1934, as amended, 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 Securities Exchange Act of 1934 as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of 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 of Directors; 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, 2020 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 since 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, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be set forth under the captions "Election of Directors – Directors and Nominees," "Executive Officers," "Certain Relationships and Related Transactions – Section 16(a) Beneficial Ownership Reporting Compliance," "Code of Business Conduct and Ethics" and "Corporate Governance – Board Committees" in our definitive proxy statement to be filed with the SEC, in connection with our 2021 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, 2020, and is incorporated in this report 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" and "Corporate Governance — Non-Employee Director Compensation" 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 captions "Certain Relationships and Related Person Transactions" and "Corporate Governance — Board Independence" 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 — Principal Accounting Fees and Services" 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.

(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 Incorporate		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 Designation of Preferences, Rights and Limitations of Series A 3.6% Convertible Preferred Stock		8-K	001-34375 Exhibit 3.1	10/08/2014
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 3.2	07/29/2019
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 Series T Warrant.		POS AM	333-224502 Exhibit 4.28	07/09/2018
4.4	Form of Series T Warrant Agreement between Plus Therapeutics, Inc. and Broadridge Corporation Issuer Solutions, Inc. T Warrant Agreement between Plus Therapeutics, Inc.		POS AM	333-224502 Exhibit 4.36	07/09/2018
4.5	Form of Series U Warrant.		S-1/A	333-229485 Exhibit 4.37	09/16/2019
4.6	Form of Warrant Amendment Agreement.		8-K	011-34375 Exhibit 4.1	04/23/2020
4.7	Form of Underwriters' Warrant Amendment Agreement.		8-K	011-34375 Exhibit 4.1	10/05/2020
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	Registration Rights Agreement between Plus Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated September 30, 2020.		8-K	001-34375 Exhibit 10.2	10/06/2020
10.3+	Asset Purchase Agreement by and between Plus Therapeutics, Inc. and Azaya Therapeutics, Inc., effective January 16, 2017.		10-K	001-34375 Exhibit 10.40	03/24/2017
10.4	Loan and Security Agreement, dated May 29, 2015, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.4	08/10/2015
10.5	First Amendment to Loan and Security Agreement, dated September 20, 2017, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		S-1/A	333-219967 Exhibit 10.45	10/03/2017

10.6	Second Amendment to Loan and Security Agreement, dated June 19, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.3	08/14/2018
10.7	Third Amendment to Loan and Security Agreement, dated August 31, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		S-1	333-227485 Exhibit 10.51	09/21/2018
10.8	Fourth Amendment to Loan and Security Agreement dated December 31, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		S-1	333-229485 Exhibit 10.52	02/01/2019
10.9	Fifth Amendment to Loan and Security Agreement dated February 13, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-K	001-34375 Exhibit 10.55	03/29/2019
10.10	Sixth Amendment to Loan and Security Agreement dated March 4, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-K	001-34375 Exhibit 10.56	03/29/2019
10.11	Seventh Amendment to Loan and Security Agreement dated April 24, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.3	05/14/2019
10.12	Eight Amendment to Loan and Security Agreement dated July 15, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.2	08/15/2019
10.13+	Ninth Amendment to Loan and Security Agreement, dated March 29, 2020 by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		8-K	011-34375 Exhibit 10.2	3/30/2020
10.14#	Amended and Restated Employment Agreement between Marc Hedrick and Plus Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.6	5/16/2020
10.15#	Amended and Restated Employment Agreement between Andrew Sims and Plus Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.7	5/16/2020
10.16#	2014 Equity Incentive Plan of Plus Therapeutics, Inc., as amended and restated.		10-Q	001-34375 Exhibit 10.3	08/15/2019
10.17#	2015 New Employee Incentive Plan.		8-K	001-34375 Exhibit 10.1	01/05/2016
10.18#	First Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated Jan. 26, 2017.		10-K	001-34375 Exhibit 10.42	03/24/2017
10.19#	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
10.20+	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
10.21#	Form of Stock Option Agreement under the 2015 New Employee Incentive Plan.		S-8	333-210211 Exhibit 99.4	03/15/2016
10.22#	2020 Stock Incentive Plan		S-8	001-34375 Exhibit 99.1	06/30/2020
10.23#	Purchase Agreement between Lincoln Park Capital Fund, LLC and Plus Therapeutics, Inc.		8-K	001-34375 Exhibit 10.1	10/06/2020
10.24+	Master Services Agreement between Piramal Pharma Solutions, Inc. and Plus Therapeutics, Inc.	X			
10.25#	Form Indemnification Agreement		8-K	001-34375 Exhibit 10.1	02/06/2020
10.26#	Form of Agreement for Acceleration and/or Severance.		10-K	001-34375 Exhibit 10.113	03/11/2016

23.1	Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.	X
24.1	Power of Attorney (see signature page).	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
101.INS	XBRL Instance Document	X
101.SCH	XBRL Schema Document	X
101.CAL	XBRL Calculation Linkbase Document	X
101.DEF	XBRL Definition Linkbase Document	X
101.LAB	XBRL Label Linkbase Document	X
101.PRE	XBRL Presentation Linkbase Document	X

Indicates management contract or compensatory plan or arrangement.
\+ *Portions of this exhibit have been excluded pursuant to Item 601(b)(1)(iv).*

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

February 22, 2021

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Andrew Sims and Desiree Smith, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place, or stead, in any and all capacities, to sign any and all amendments to this Report, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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*	February 22, 2021
/s/ Marc H. Hedrick, MD Marc H. Hedrick, MD	*President & Chief Executive Officer (Principal Executive Officer)*	February 22, 2021
/s/ Andrew Sims Andrew Sims	*Chief Financial Officer and VP of Finance (Principal Financial and Accounting Officer)*	February 22, 2021
/s/ An van Es-Johansson, MD An van Es-Johansson, MD	*Director*	February 22, 2021
/s/ Greg Petersen Greg Petersen	*Director*	February 22, 2021
/s/ Howard Clowes Howard Clowes	*Director*	February 22, 2021
/s/ Robert Lenk Robert Lenk	*Director*	February 22, 2021

Exhibit 10.24

MASTER SERVICES AGREEMENT

THIS MASTER SERVICES AGREEMENT (together with all signed Project Proposal and signed Change Orders, the "Agreement") is made and entered into as of this January 4th, 2021 (the "Effective Date") by and between

PLUS THERAPEUTICS, INC., a Delaware Corporation, having its offices at 4200 Marathon Blvd., Suite 200, Austin, Texas 78756 ("PLUS THERAPEUTICS")

And

PIRAMAL PHARMA SOLUTIONS, INC., (together with its Affiliates "Piramal"), having its principal place of business at 1500 Bull Lea Road, Lexington, KY 40511, USA.

Within this Agreement, PLUS THERAPEUTICS and Piramal hereinafter may be referred individually as a "Party" or collectively as the "Parties".

WHEREAS:

A. PLUS THERAPEUTICS is engaged in the discovery, clinical development and manufacture of pharmaceutical products;

B. Piramal is engaged in the business of Developing, Manufacturing, and supplying pharmaceutical products and/or providing pharmaceutical related services;

C. PLUS THERAPEUTICS desires to engage Piramal to perform certain Services related to the Development, Manufacture and supply of the Product(s), pursuant to the terms and conditions set forth herein and in Project Proposals; and Piramal desires, subject to the terms and conditions in this Agreement and the Project Proposals, to perform such Services for PLUS THERAPEUTICS; and

D. The Parties contemplate that this Agreement will lead to clinical and commercial supply agreements for PLUS THERAPEUTICS Products ("**Supply Agreements**"). Therefore, the Parties intend to negotiate in good faith and execute Supply Agreements (or an amendment hereto) that provide for the manufacture of future clinical and commercial supply needs for PLUS THERAPEUTICS.

NOW, THEREFORE, FOR GOOD AND VALUABLE CONSIDERATION CONTAINED HEREIN, THE EXCHANGE, RECEIPT AND SUFFICIENCY OF WHICH ARE ACKNOWLEDGED, THE PARTIES AGREE AS FOLLOWS:

1. AGREEMENT STRUCTURE

1.1 From time to time, PLUS THERAPEUTICS may want Piramal to provide certain Development or Manufacturing Services (as defined below). This Agreement contains general terms and conditions under which PLUS THERAPEUTICS would engage Piramal and under which Piramal would provide Services. PLUS THERAPEUTICS and Piramal must complete and execute a "Project Proposal" before any Services are provided.

2. DEFINITIONS

Unless this Agreement expressly provides otherwise, the following terms herein, whether used in the singular or plural, will have the meanings set forth below:

2.1 "**Additional Equipment**" means the Equipment, if any, identified in a Project Proposal as to be provided by PLUS THERAPEUTICS or purchased or otherwise acquired by Piramal at PLUS THERAPEUTICS's expense.

2.2 "**Affiliate**" means, with respect to a Party, any corporation, company, partnership, joint venture and/or firm which controls, is controlled by or is under common control with such Party. As used in this Agreement, "control" means (a) in the case of corporate entities, direct or indirect ownership of at least fifty percent (50%) of the stock or shares having the right to vote for the election of directors, and (b) in the case of non-corporate entities, the direct or indirect power to manage, direct or cause the direction of the management and policies of the non-corporate entity or the power to elect at least fifty percent (50%) of the members of the governing body of such non-corporate entity.

2.3 "**API/Drug Substance**" means the active pharmaceutical ingredient or any intermediate thereof identified in a Project Proposal.

2.4 "**Applicable Law**" means all applicable ordinances, rules, regulations, laws, guidelines, guidance, and requirements of any Authority, and any other applicable laws and regulations, as amended from time to time.

2.5 "**Authority**" means any government regulatory authority with jurisdiction over the Manufacture of Product or use of Product in the intended country of use, including, without limitation, the FDA, PMDA and the EMEA.

2.6 "**Batch**" means a specific quantity of Product that is intended to be of uniform character and quality and is produced during the same cycle of Manufacture as defined by the applicable Batch record.

2.7 "**Batch Documentation**" means the documents and other records that are produced in connection with the Manufacture of a particular Batch and/or lot. Batch Documentation includes master manufacturing formula, a listing of raw materials and corresponding specifications, packaging and storage instructions, testing requirements and exception documentation, such as deviations, failures, out-of-specification investigation reports, non-conforming material reports and additional documentation which may have been generated and/or processed as part of the production record of the Batch.

2.8 "**Certificate of Analysis**" or "**CoA**" means a document, signed by an authorized representative of Piramal, describing Specifications for, and testing methods applied to, Product, and the results thereof.

2.9 "**Certificate of Compliance**" or "**CoC**" means a document, signed by an authorized representative of Piramal, attesting that a particular Batch was Manufactured in accordance with cGMP, Applicable Law, and the Specifications.

2.10 "**cGMP**" means the current good manufacturing practices applicable to the Manufacture of Product pursuant to Applicable Law in effect as of the date of Manufacture of a particular Batch of Product.

2.11 "**Change Order**" means a document mutually approved in writing by both Parties in accordance with the procedures set forth in Section 5.2, substantially in the form attached hereto as **Exhibit 2**.

2.12 "**Commercially Reasonable Efforts**" with respect to the Services pursuant to this Agreement or any Project Proposal, the reasonable efforts and resources used by a reputable biopharmaceutical contract manufacturing organization for Products of similar nature, complexity, and developmental stage in the same or similar circumstances;

2.13 "**Confidential Information**" has the meaning set forth in Section 12.

2.14 "**Development**" or "**Developed**" means any and all activities relating to research, non-clinical, preclinical and clinical trials, toxicology testing, statistical analysis, publication and presentation of research and study results and reporting, preparation and submission of applications (including any CMC-related information) for regulatory approval of a product, necessary or reasonably useful or otherwise requested or required by a regulatory authority as a condition or in support of obtaining or maintaining all regulatory approvals for such product. For clarity, "Development" shall not include any activities included within the Manufacturing of a product.

2.15 "**EMEA**" means the European Medicines Evaluation Agency and any successor agency having substantially the same functions.

2.16 "**Equipment**" means any current operating equipment or machinery owned and maintained by Piramal, required specifically for the purpose of providing Services herein, used by Piramal in the Development and/or Manufacture of Product.

2.17 "**Facility**" or "**Facilities**" [***]

2.18 "**FDA**" means the United States Food and Drug Administration, and any successor agency having substantially the same functions.

2.19 "**FDCA**" means the United States Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§321 et seq., as amended from time to time.

2.20 "**Force Majeure**" has the meaning set forth in Section 16.7.

2.21 "**Invention**" means any intellectual property developed by either Party in connection with the Product or Services expressly covered under this Agreement, including (but not limited to) relating to the Development,

formulation, Manufacturing, filling, processing, packaging, analyzing or testing the Product expressly covered under this Agreement.

2.22 "**Manufacture**" and "**Manufacturing**" means any steps, processes and activities necessary to produce Product, including without limitation, the manufacturing, processing, quality control testing, release or storage of Product.

2.23 "**Manufacturing Process**" means any and all processes (or any step in any process) used or planned to be used by Piramal to Manufacture Product in its final form, as evidenced in the Batch records and/or Development reports.

2.24 "**Piramal Indemnitee**" has the meaning set forth in Section 13.2.

2.25 "**Piramal Technology**" means all intellectual property and embodiments thereof owned by or licensed to Piramal as of the date hereof or developed by Piramal other than in connection with the Product or Services expressly covered under this Agreement.

2.26 "**PLUS THERAPEUTICS Indemnitee**" has the meaning set forth in Section 13.1.

2.27 "**PLUS THERAPEUTICS Materials**" means the materials identified in a Project Proposal as being provided by PLUS THERAPEUTICS.

2.28 "**PLUS THERAPEUTICS Technology**" means all intellectual property and embodiments thereof, including, without limitation, all rights throughout the world to any copyright, patent, trademark, or other right to all ideas, inventions, products, programs, procedures, process, formats, and other materials of any kind, owned by or licensed to PLUS THERAPEUTICS prior to or as of the date hereof or developed solely by PLUS THERAPEUTICS or jointly with Piramal in connection with the Developing, formulating, Manufacturing, filling, processing, packaging, analyzing or testing of the Product or directly related to the Services to be rendered by Piramal or its subcontractors pursuant to this Agreement.

2.29 "**Process Inventions**" means any Invention that relates exclusively to the Piramal Technology or relates to developing, formulating, manufacturing, filling, processing, packaging, analyzing or testing pharmaceutical products generally.

2.30 "**Product**" means any (a) API/Drug Substance, or (b) drug product comprised of API/Drug Substance, or (c) intermediate(s) of (a) or (b), in each case as specified in the applicable Project Proposal.

2.31 "**Project Proposal**" means a written work order for the performance of Services by Piramal under this Agreement which is attached hereto as **Exhibit 1**.

2.32 "**Quality Technical Agreement**" or "**QTA**" means the quality assurance provisions to be signed by both Parties in connection with Services rendered pursuant to cGMP.

2.33 "**Records**" has the meaning set forth in Section 5.5.

2.34 "**Retention Period**" has the meaning set forth in Section 5.5.

2.35 "**Services**" means the Development, Manufacturing and/or other services to be performed by or on behalf of Piramal, as described in a Project Proposal and initiated by PLUS THERAPEUTICS through issuance of a purchase order.

2.36 "**Specifications**" means a set of criteria that are provided by or approved by PLUS THERAPEUTICS to which Product should be considered acceptable by PLUS THERAPEUTICS in fulfillment of Piramal's obligations under this Agreement, as such criteria are amended or supplemented from time to time by PLUS THERAPEUTICS in writing and agreed upon by Piramal.

2.37 "**Technology**" means all methods, techniques, trade secrets, copyrights, know-how, data, documentation, regulatory submissions, specifications and other intellectual property of any kind (whether or not protectable under patent, trademark, copyright or similar laws).

3. SERVICE PERFORMANCE

3.1 Piramal will perform the Services in strict accordance with the terms and conditions of this Agreement. Piramal will use its best efforts to provide the Facilities, supplies and staff necessary to perform the Services in accordance with the timetable(s) specified in a Project Proposal. Piramal agrees to use Commercially Reasonable Efforts to perform the Services.

3.2 Upon the Effective Date of this Agreement, the Parties shall commence with implementation of the Project Proposal attached here to as **Exhibit 1** (as the same may be amended or modified pursuant hereto, the "**Scope of Work**") for the performance of the Services described therein. As may be necessary from time to time. additional Services may be included and made part of the Project Proposal provided that any such additional activities are (1) included in a written supplemental exhibit that is sequentially numbered (*e.g.*, Exhibit 1-A, 1-B, etc.), (2) specifically makes reference to this Agreement, (3) incorporates the terms and conditions hereof by reference, and (4) includes a detailed description of the additional Services to be performed, the pricing, and a signature block for both Parties. Once executed by the Parties, each additional exhibit shall be deemed part of, subject to and governed by the Agreement. In the event of any conflict between the Project Proposal and this Agreement, the terms of this Agreement shall prevail.

3.3 [***]. All Project Proposals under this Agreement are provided with the following key assumptions:

(i) PLUS THERAPEUTICS will provide the API and reference standards to support all activities.

(ii) The process can be accommodated in Piramal's facility without any serious health, safety or environmental concerns. If new information surfaces during the course of the project signals a concern, the Parties will promptly discuss and mutually agree on a path forward.

(iii) Should any out-of-scope activities arise during the project, separate proposals will be prepared for PLUS THERAPEUTICS's approval. No activities will be carried out without PLUS THERAPEUTICS's written authorization.

(iv) the exchange of information for approval of documents will take not more than forty-eight (48) hours following receipt (e.g. MBR, BPR, specifications, etc.).

(v) [***].

(vi) [***].

(vii) [***].

3.4 Each Party will appoint a "**Technical Contact**" or number of "**Technical Contacts**" having primary responsibility for day-to-day interactions with the other Party for the Services under each Project Proposal. The Technical Contacts shall be identified at the start of each Project Proposals. Any change to a Technical Contact will be identified in writing to the other Party. Each Party will use reasonable efforts to provide the other Party with at least thirty (30) days prior written notice of any change in that Party's Technical Contact. Except for notices or communications required or permitted under this Agreement, which shall be subject to Section 16.10 below, all communications between Piramal and PLUS THERAPEUTICS regarding the conduct of the Services under a Project Proposal will be addressed to the Party's relevant Technical Contact.

3.5 The Parties will hold project team meetings via teleconference, videoconference or in person, on a periodic basis as agreed by the Technical Contacts.

3.6 With PLUS THERAPEUTICS's prior written consent, Piramal may subcontract the performance of certain of its obligations under this Agreement to qualified third parties, provided that (a) the third parties perform the activities in a manner consistent with this Agreement and the applicable Project Proposal, (b) Piramal remains liable and solely responsible for the permitted subcontractor's performance, and (c) Piramal causes any such permitted subcontractor to be bound in writing by, and to comply with, all confidentiality, intellectual property, quality assurance, regulatory and other obligations and requirements of Piramal set forth in this Agreement.

3.7 Piramal will promptly notify PLUS THERAPEUTICS if Piramal has reason to believe that it will be unable to perform or complete the Services under a Project Proposal.

3.8 [***].

4. MATERIALS AND EQUIPMENT

4.1 Unless otherwise agreed in a Project Proposal, Piramal will procure all materials to be used by Piramal in the performance of Services under any given Project Proposal other than the PLUS THERAPEUTICS Materials indicated in such Project Proposal. PLUS THERAPEUTICS or its designees will provide Piramal with the PLUS THERAPEUTICS Materials. Piramal agrees (a) to account for all PLUS THERAPEUTICS Materials, (b) not to provide PLUS THERAPEUTICS Materials to any third party (including permitted subcontractors) without the express prior written consent of PLUS THERAPEUTICS, (c) not to use PLUS THERAPEUTICS Materials for any purpose other than conducting the Services under the applicable Project Proposal, and (d) to destroy or return

to PLUS THERAPEUTICS all unused quantities of PLUS THERAPEUTICS Materials according to PLUS THERAPEUTICS's written directions. Any cost related to such destruction shall be borne by PLUS THERAPEUTICS. Further, Piramal agrees not to analyze, characterize, modify or reverse engineer any PLUS THERAPEUTICS Materials or take any action to determine the structure or composition of any PLUS THERAPEUTICS Materials unless and to the extent required under the applicable Project Proposal.

4.2 PLUS THERAPEUTICS will at all times retain title to and ownership of the PLUS THERAPEUTICS Materials, Product and any work in process at each and every stage of the Manufacturing Process. Piramal will at all times exercise due care and take such measures as are required to protect the PLUS THERAPEUTICS Materials, Product and any work in process from risk of loss or damage at all stages of the Manufacturing Process. Piramal will ensure that PLUS THERAPEUTICS Materials, Product and any work in process remain free and clear of any liens or encumbrances. Piramal will promptly notify PLUS THERAPEUTICS if at any time it believes any PLUS THERAPEUTICS Materials or Product have been damaged, lost or stolen. [***].

4.3 Unless otherwise specified in a Project Proposal, Piramal will procure all Equipment necessary to perform the Services, except in such cases where the PLUS THERAPEUTICS will supply the Equipment, if any. The cost of the Equipment to be purchased by Piramal shall be paid by PLUS THERAPEUTICS to Piramal, before such purchase, or as stated in the Project Proposals. [***]. Title to the Equipment will remain with PLUS THERAPEUTICS and Piramal will ensure that the Equipment is properly labeled and remains free and clear of any liens or encumbrances. At PLUS THERAPEUTICS's request, the Equipment will be returned to PLUS THERAPEUTICS, or to its designee. Any maintenance costs for the Equipment shall be the responsibility of the PLUS THERAPEUTICS. Piramal shall provide invoices or other relevant documents substantiating any maintenance expense incurred at the request of the PLUS THERAPEUTICS. Piramal will promptly notify PLUS THERAPEUTICS if at any time it believes any Additional Equipment has been damaged, lost or stolen. [***].

4.4 All materials and consumables procured by Piramal for the purpose of Manufacturing the Product will be charged at actual invoice cost plus a [***] procurement fee.

5. DEVELOPMENT AND MANUFACTURE OF PRODUCT

5.1 Piramal will perform all Services at the Facility, and will hold at the Facility all Equipment, PLUS THERAPEUTICS Materials and other items used in the Services. Piramal may change the location of the Facility or use any additional facility for the performance of Services providing PLUS THERAPEUTICS is given at least [***] prior written notice, and receiving PLUS THERAPEUTICS's prior written consent, which consent will not be unreasonably withheld or delayed. The Parties agree that it will be reasonable for PLUS THERAPEUTICS to withhold such consent pending satisfactory completion of a quality assurance audit and/or regulatory impact assessment of the new location or additional facility, as the case may be. Piramal will maintain the Facility and all Equipment required for the Manufacture of Product in a state of repair and operating efficiency consistent with the requirements of cGMP and Applicable Law.

5.2 The scope of Services under a Project Proposal may be changed only through a written change order signed by both Parties ("**Change Order**") in substantially the form attached hereto as Exhibit 2. If a change to a Project Proposal is identified by a Party, that Party will notify the other Party as soon as is reasonably possible. Piramal will provide PLUS THERAPEUTICS with a Change Order containing a description of the required modifications and their effect on the scope, fees and timelines specified in the Project Proposal within approximately ten (10) business days of receiving or providing such notice. If the Change Order is not acceptable to PLUS THERAPEUTICS, the Parties will use reasonable efforts to agree on a Change Order that is mutually acceptable. [***]

5.3 Any change or modification to the Manufacturing Process or Specifications for any Product must be approved in writing in advance by PLUS THERAPEUTICS and will be made in accordance with the provisions of the relevant QTA (if applicable).

5.4 If provided for in the Project Proposal, Piramal may take and retain, for such period and in such quantities as may be required by cGMP and the relevant QTA, samples of Product from the Manufacturing Process produced under this Agreement. Further, Piramal will submit such samples to PLUS THERAPEUTICS, upon PLUS THERAPEUTICS's written request and at PLUS THERAPEUTICS's sole cost and expense.

5.5 Piramal will keep complete and accurate records, including, without limitation, reports, accounts, notes, data, and records of all information and results obtained from performance of Services (collectively, the "**Records**"). All Records will be the sole property of PLUS THERAPEUTICS. Upon PLUS THERAPEUTICS's written request, Piramal will promptly provide PLUS THERAPEUTICS with copies of such Records. Piramal will not transfer,

deliver or otherwise provide any such Records to any third party, without the prior written approval of PLUS THERAPEUTICS. While in the possession or control of Piramal, Records will be made available for inspection, examination and copying by or on behalf of PLUS THERAPEUTICS. All original Records of the Development and Manufacture of Product hereunder will be retained and archived by Piramal in accordance with the QTA between PLUS THERAPEUTICS and Piramal or in accordance with Applicable Laws, whichever period is greater (the "**Retention Period**"). Following the Retention Period, Piramal will not destroy the Records without first giving PLUS THERAPEUTICS written notice and the opportunity to further store the Records at PLUS THERAPEUTICS's expense.

5.6 Should the PLUS THERAPEUTICS wish to cancel or reschedule any Services, then PLUS THERAPEUTICS and Piramal shall meet to discuss the financial impact of the cancelled or rescheduled services and any associated non-cancellable expenses that Piramal may need to charge PLUS THERAPEUTICS. If the cancelled or rescheduled services include cancellation of cGMP manufacturing slots then PLUS THERAPEUTICS will reimburse Piramal for the per batch costs as follows:

Notification Prior to Date of Manufacture	Cancellation Fee Payable (% of Total Batch Cost)	Reschedule Fee Payable (% of Total Batch Cost)
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]
[***]	[***]	[***]

6. PRODUCT AND PROCESS ACCEPTANCE

6.1 Any Product to be Manufactured hereunder will be Manufactured in accordance with the Manufacturing Process approved by PLUS THERAPEUTICS and, unless otherwise stated in the applicable Project Proposal, cGMP. Each Batch of Product will be sampled and tested by Piramal against the Specifications. The quality assurance department of Piramal will review the Batch Documentation for such Batch and will assess if the Manufacture has taken place in compliance with cGMP (if applicable) and the Manufacturing Process.

6.2 If, based upon such tests, a Batch of Product conforms to the Specifications and was Manufactured according to cGMP (if applicable as specified under a Project Proposal) and the Manufacturing Process, then a CoC will be completed and approved by the quality assurance department of Piramal. Complete and accurate Batch Documentation for each Batch of Product will be delivered to PLUS THERAPEUTICS.

6.3 If the Parties disagree as to whether a Batch of Product conforms to the applicable Specifications, the respective Technical Contact of the Parties will attempt to resolve any such disagreement in good faith and PLUS THERAPEUTICS and Piramal will follow their respective standard operating procedures to determine the conformity of the Batch of Product to cGMP (if applicable), the Manufacturing Process and to the Specifications.

6.4 A Batch of Product that fails to conform to the Specifications is a defective product ("**Defective Product**"). Each Defective Product will be subject of an investigation to be performed in accordance with the Quality Agreement ("**Batch Investigation**"). The responsibility for the costs associated with each Batch Investigation will be determined based on the outcome of the investigation conducted by the Parties' respective quality professionals in accordance with the Quality Agreement. The Batch Investigation will endeavor to determine the root cause of the failure to meet the Specifications and the corrective measures to be taken in the Manufacture of future Batches of Product, as appropriate, to minimize of chances of or prevent the same type of root cause from happening again. [***]:

(a) [***]; or

(b) [***]; or

(c) [***].

6.5 To the extent the cause of the Defective Product is not attributable to Piramal's negligent act or omission or Piramal's willful misconduct, then all such rework or re-manufacture of Product shall be performed at PLUS THERAPEUTICS cost and expense, including the costs of PLUS THERAPEUTIC Materials. If the Defective Product

is attributable to an act or omission of Piramal, then such rework or re-manufacture of Product, shall be performed at Piramal's cost and expense, including the cost of replacing the PLUS THERAPEUTICS Materials. For the avoidance of doubt, the original Manufactured Product shall be paid in full by PLUS THERAPEUTICS to Piramal. In the event of re-manufacture, PLUS THERAPEUTICS may use the Defective Product for research and development purposes only. [***]

7. SHIPPING AND DELIVERY

7.1 Piramal agrees not to ship Product to PLUS THERAPEUTICS or its designee until it has received a written approval to release and ship from PLUS THERAPEUTICS. Shipping will be in accordance with the instructions for shipping and packaging specified by PLUS THERAPEUTICS in writing in the applicable Project Proposal or as otherwise agreed to in writing by the Parties. Delivery terms are FCA (Incoterms 2017) [***]. A bill of lading will be furnished to PLUS THERAPEUTICS with respect to each shipment.

Unless otherwise agreed to in writing by the Parties hereto, Piramal shall provide Product to a common carrier designated in writing by PLUS THERAPEUTICS. Product shall be prepared for shipment by Piramal in a manner designated in writing by PLUS THERAPEUTICS. [***]

7.2 PLUS THERAPEUTICS will promptly notify Piramal in writing of loss, damage, defects or non-delivery of any part of a Product shipment after delivery of such shipment to PLUS THERAPEUTICS, or its designee, and if any loss, damage, defects or partial non-delivery are not evident to PLUS THERAPEUTICS at the time of delivery, such notification by PLUS THERAPEUTICS to Piramal will be made no later than [***] days after delivery.

8. PRICE AND PAYMENTS

8.1 The currency and price of Product and/or the fees for the performance of Services will be set forth in the applicable Project Proposal.

8.2 Piramal will invoice PLUS THERAPEUTICS according to the payment schedule in the applicable Project Proposal. Each invoice will include the information contained in the compensation section of the Project Proposal. Payment of undisputed invoices will be due thirty (30) days after receipt of the invoice by the relevant PLUS THERAPEUTICS contact specified in the applicable Project Proposal. For undisputed invoices if payment is not made within [***] calendar days after the due date, Piramal shall have the right to charge interest at [***] percent per calendar month or part thereof, until payment is received.

8.3 Piramal will keep accurate financial records of all Services performed and invoice calculations, and, upon the request of PLUS THERAPEUTICS, will permit PLUS THERAPEUTICS or its duly authorized agents to examine such records during normal business hours for the purpose of verifying the accuracy of all such calculations.

8.4 Duty, sales, use or excise taxes imposed by any governmental entity that apply to the provision of Services hereunder (other than any taxes based upon the income of Piramal) will be borne by PLUS THERAPEUTICS.

9. REPRESENTATIONS AND WARRANTIES

9.1 Piramal represents and warrants that:

(a) Piramal is and will remain a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of organization.

(b) The execution and delivery of this Agreement has been authorized by all requisite corporate action. This Agreement is and will remain a valid and binding obligation of Piramal, enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors.

(c) Piramal is under no contractual or other obligation or restriction that is inconsistent with Piramal's execution or performance of this Agreement. Piramal will not enter into any agreement, either written or oral, that would conflict with Piramal's responsibilities or that would otherwise prevent Piramal from performing its obligations under this Agreement or a Project Proposal.

(d) The Services will be performed with requisite care, skill and diligence, in accordance with Applicable Law, industry standards and this Agreement, and by individuals who are appropriately trained and qualified.

(e) To the best of Piramal's knowledge, the Services will not infringe the intellectual property rights of any third party and Piramal will promptly notify PLUS THERAPEUTICS in writing should it become aware of any claims asserting such infringement.

(f) At the time of delivery to PLUS THERAPEUTICS, the Product Manufactured under this Agreement (i) will have been Manufactured in accordance with cGMP (if applicable) and Applicable Law, the Manufacturing Process, and Specifications, and (ii) will not be adulterated or misbranded under the FDCA or other Applicable Law, unless PLUS THERAPEUTICS requests delivery to occur ahead of the results of product testing are available

(g) Neither Piramal, its officers nor any person used by Piramal to perform Services (i) has been debarred, or convicted, or is subject to a pending debarment or conviction, pursuant to section 306 of the FDCA, 21 U.S.C. § 335a or (ii) has been listed by any federal or state agencies, excluded, debarred, suspended or otherwise been made ineligible to participate in federal and/or state healthcare programs or federal procurement or non-procurement programs (as that term is defined in 42 U.S.C. 1320a-7b(f)) or (iii) has been convicted of a criminal offense related to the provision of healthcare items or services, or is subject to any such pending action. Piramal agrees to inform PLUS THERAPEUTICS in writing promptly if Piramal or any person who is performing Services is subject to the foregoing, or if any action, suit, claim, investigation, or proceeding relating to the foregoing is pending, or to the best of Piramal's knowledge, is threatened.

9.2 PLUS THERAPEUTICS represents and warrants that:

(a) PLUS THERAPEUTICS is and will remain a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of organization.

(b) The execution and delivery of this Agreement has been authorized by all requisite corporate action. This Agreement is and will remain a valid and binding obligation of PLUS THERAPEUTICS, enforceable in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors.

(c) PLUS THERAPEUTICS is under no contractual or other obligation or restriction that is inconsistent with PLUS THERAPEUTICS's execution or performance of this Agreement. PLUS THERAPEUTICS will not enter into any agreement, either written or oral, that would conflict with PLUS THERAPEUTICS's responsibilities or that would otherwise prevent PLUS THERAPEUTICS from performing its obligations under this Agreement or a Project Proposal.

(d) To the best of PLUS THERAPEUTICS's knowledge, the use of PLUS THERAPEUTICS Technology as contemplated in the Services will not infringe the intellectual property rights of any third party and PLUS THERAPEUTICS will promptly notify Piramal in writing should it become aware of any claims asserting such infringement.

(e) Neither PLUS THERAPEUTICS, its officers nor any person used by PLUS THERAPEUTICS to exercise rights or discharge obligations hereunder (i) has been debarred, or convicted, or is subject to a pending debarment or conviction, pursuant to section 306 of the FDCA, 21 U.S.C. § 335a or (ii) has been listed by any federal or state agencies, excluded, debarred, suspended or otherwise been made ineligible to participate in federal and/or state healthcare programs or federal procurement or non-procurement programs (as that term is defined in 42 U.S.C. 1320a-7b(f)) or (iii) has been convicted of a criminal offense related to healthcare items or services, or is subject to any such pending action. PLUS THERAPEUTICS agrees to inform Piramal in writing promptly if PLUS THERAPEUTICS or any person who is exercising rights or discharging obligations hereunder is subject to the foregoing, or if any action, suit, claim, investigation, or proceeding relating to the foregoing is pending, or to the best of PLUS THERAPEUTICS's knowledge, is threatened.

9.3 EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT.

9.4 **Limitation of Liability**. EXCEPT FOR DAMAGES RESULTING FROM (1) A PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, (2) BREACHES BY A PARTY OF ITS DUTY OF CONFIDENTIALITY AND NON-USE IMPOSED UNDER SECTION 12; (3) INFRINGEMENT OF EITHER PARTY'S INTELLECTUAL PROPERTY RIGHTS, OR (4) EITHER PARTY'S INDEMNIFICATION OBLIGATIONS, NOTWITHSTANDING THE FOREGOING, PIRAMAL'S TOTAL LIABILITY UNDER THIS AGREEMENT, INCLUDING IN CONNECTION WITH THE PERFORMANCE OF ANY SERVICES OR PROVISION OF ANY PRODUCT, SHALL IN NO EVENT EXCEED [***]. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR INDIRECT, INCIDENTAL, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, INCLUDING WITHOUT LIMITATION LOSS OF

REVENUES, PROFITS OR DATA, WHETHER IN CONTRACT OR IN TORT,EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. [***].

10. COMPLIANCE WITH GOVERNMENT REGULATIONS; REGULATORY MATTERS; QUALITY AGREEMENT

10.1 Each Party will comply with all applicable governmental laws, ordinances, rules and regulations in the performance of its respective obligations in connection with this Agreement. Piramal shall obtain and maintain all permits and licenses with respect to general facility operations in the jurisdiction in which Piramal performs the services. PLUS THERAPEUTICS shall be responsible at its cost to obtain and maintain all other regulatory approvals, authorizations, certifications and permits relating to PLUS THERAPEUTICS Materials and the Product, including without limitation those relating to the import, export, use, distribution and sale of PLUS THERAPEUTICS Materials and the Product. PLUS THERAPEUTICS shall reimburse Piramal for any payments Piramal is required to make to any regulatory authority resulting directly from Piramal's formulation, Development, Manufacturing, processing, filling, packaging, storing or testing of the Product or PLUS THERAPEUTICS Materials (including without limitation any payments or fees Piramal is required to make pursuant to the PDUFA or GDUFA). Piramal shall not be obligated to perform any services which would involve any countries that are targeted by the comprehensive sanctions, restrictions or embargoes administered by the United Nations, European Union, United Kingdom or United States. Piramal will perform the Services or Manufacture the Product in accordance with the written Specifications and instructions expressly set forth or referenced in this Agreement, cGMP or current Good Laboratory Practices, as applicable.

10.3 Piramal will permit PLUS THERAPEUTICS or its representatives to be present on site during any visit or inspection by any Authority of the Facility (to the extent it relates to any Product or to the Manufacturing Process). Piramal will give as much advance notice as possible to PLUS THERAPEUTICS of any such visit or inspection. Piramal will provide to PLUS THERAPEUTICS a copy of any report or other written communication received from any Authority within twenty-four (24) hours after receipt thereof, and will consult with and require approval from, PLUS THERAPEUTICS before responding to each such communication. Piramal will provide PLUS THERAPEUTICS with a copy of its final responses within [***] business days after submission thereof.

10.4 Promptly following the execution of this Agreement, and in any event no later than [***] days following the Effective Date, the Parties shall agree upon a quality agreement containing, among other provisions, quality assurance provisions for the Manufacture of Product, the respective roles of PLUS THERAPEUTICS and Piramal in these processes, the standards and procedures for the handling of any deviations from the usual quality standards or release requirements, the allocation of responsibilities for reporting these matters, regulatory matters (i.e., regulatory authority communications, regulatory compliance, adverse event reporting, etc), PLUS THERAPEUTICS' right to perform inspections and audits, and related subjects ("**Quality Agreement**").

11. TERM AND TERMINATION

11.1 This Agreement will take effect as of the Effective Date and, unless earlier terminated pursuant to this Section, will remain in effect for five years (5) years. Thereafter, this Agreement will automatically renew for successive [***] terms unless either Party notifies the other Party not later than [***] months in advance of the original term or any additional renewed term the intention to terminate this Agreement; provided, however that any such non-renewal will not affect any valid Project Proposal until the expiration or termination of such Project Proposal.

11.2 PLUS THERAPEUTICS may terminate this Agreement at any time and for any reason upon thirty (30) days' prior written notice, or

11.3 Either Party may terminate this Agreement upon thirty (30) days' prior written notice if there has been a material breach of this Agreement and this breach is not cured during the notice period; or either Party files for bankruptcy, insolvency, or proceedings for liquidation has commenced against it.

11.4 Upon termination or expiration of this Agreement or any Project Proposal, or at any time upon PLUS THERAPEUTICS' written request:

(a) Piramal and PLUS THERAPEUTICS will meet promptly to develop a plan for closing down the services being performed pursuant to any applicable Project Proposal, which may include transferring any remaining tasks, responsibilities, or Technology to another contract manufacturing organization in accordance with Section 11.4(b); and

(b) [***]; and

(c) PLUS THERAPEUTICS (i) will purchase from Piramal any existing inventories of Product conforming to the Specifications and Manufactured, in accordance with cGMP (if applicable) and the Manufacturing Process, at the price for such Product set forth in the applicable Project Proposal, and (ii) [***], or (y) direct Piramal to dispose of such material at PLUS THERAPEUTICS's cost; and

(d) Within thirty (30) days after the termination of any Project Proposal, Piramal will provide to PLUS THERAPEUTICS a written itemized statement of all work performed by it in connection with the terminated Project Proposal, an itemized breakdown of the costs associated with that work, and a final invoice for such Project Proposal [***]; and

(e) Each Party will promptly return the other Party's Confidential Information upon request; and

(f) Any rights and obligations of the Parties that by their terms survive termination or expiration of this Agreement or of any Project Proposal, including, without limitation, the Record retention (Section 5.4), representations and warranties (Section 9), confidentiality (Section 12), indemnification (Section 13), and intellectual property rights (Section 15) provisions of this Agreement, will survive termination or expiration.

12. CONFIDENTIALITY

12.1 "**Confidential Information**" means any and all information and data including (but not limited to) scientific, technical, trade or business information which is disclosed by one Party ("Disclosing Party) to the other ("Receiving Party") and which is treated by the Disclosing Party as confidential or proprietary. Confidential Information does not include information that (a) is in possession of the Receiving Party at the time of disclosure, as reasonably demonstrated by written records and without obligation of confidentiality, (b) is or later becomes part of the public domain through no fault of the Receiving Party, (c) is received by the Receiving Party from a third party without an obligation of confidentiality to the Disclosing Party, or (d) is developed independently by or on behalf of the Receiving Party without use of, reference to, or reliance upon the Disclosing Party's Confidential Information. The Disclosing Party will, to the extent practical, use reasonable efforts to label or identify as confidential, at the time of disclosure all such Confidential Information that is disclosed in writing or other tangible form; provided, however, that Disclosing Party's failure to label or identify any information as "confidential" will not excuse the Receiving Party's performance of its obligations hereunder. Confidential Information of Piramal includes, but is not limited to, Piramal Technology, whether or not labeled confidential. Confidential Information of PLUS THERAPEUTICS includes, but is not limited to, any information or documentation developed for PLUS THERAPEUTICS by Piramal under any Project Proposal and PLUS THERAPEUTICS Technology, whether or not labeled confidential.

12.2 Each Receiving Party agrees (a) to keep confidential the Confidential Information of the Disclosing Party and the terms of this Agreement, (b) not to disclose the Disclosing Party's Confidential Information to any third party without the prior written consent of such Disclosing Party, and (c) to use such Confidential Information only as necessary to fulfill its obligations or in the reasonable exercise of rights granted to it hereunder. A Receiving Party, however, may disclose (i) Confidential Information of the disclosing Party to its Affiliates, and to its and their directors, employees, consultants, and agents in each case who have a specific need to know such Confidential Information and who are bound by the same obligation of confidentiality and restriction on use hereunder, (ii) Inventions to the extent required to exploit its rights under Section 15 of this Agreement, and (iii) Confidential Information of the Disclosing Party to the extent such disclosure is required to comply with Applicable Law or to defend or prosecute litigation; provided, however, that in the case of (iii) only, the Receiving Party provides prior written notice of such disclosure to the Disclosing Party and takes reasonable and lawful actions to avoid or minimize the degree of such disclosure. [***].

12.3 Except to the extent required by Applicable Law, neither Party will make any public statements or releases concerning this Agreement or the transactions contemplated by this Agreement without obtaining the prior written consent of the other Party, which consent will not be unreasonably withheld or delayed.

13. INDEMNIFICATION

13.1 Piramal will indemnify and hold harmless PLUS THERAPEUTICS, its Affiliates and their respective officers, directors, employees and agents (each a "**PLUS THERAPEUTICS Indemnitee**") from and against any and all losses, damages, liabilities or expenses (including reasonable attorney's fees and other costs of defense) (collectively, "**Losses**") in connection with any and all actions, suits, claims or demands that may be brought or

instituted against any PLUS THERAPEUTICS Indemnitee by any third party based on, arising out of, or resulting from, any (a) breach by Piramal of its representations, warranties or covenants hereunder; or (b) negligent act or omission or the willful misconduct of any Piramal Indemnitees (as defined in Section 13.2 below) in performing obligations under this Agreement (which includes a resulting third party personal injury, illness, or death, or loss or damage to third party property); or (d) infringement of any third party intellectual property arising from or in connection with the use of Piramal's intellectual property pursuant to this Agreement; except to the extent in each case that the Loss in question resulted from the gross negligence or willful misconduct of, or material breach of this Agreement by, a PLUS THERAPEUTICS Indemnitee or any of its or their representatives.

13.2 PLUS THERAPEUTICS will indemnify and hold harmless Piramal, its Affiliates and their respective officers, directors, employees and agents (each a "**Piramal Indemnitee**") from and against any and all Losses in connection with any and all actions, suits, claims or demands that may be brought or instituted against any Piramal Indemnitee by any third party based on, or arising out of, or resulting from (a) the use of the Product, except to the extent that such damages are within the scope of the indemnification obligation of Piramal under Section 13.1, (b) breach by PLUS THERAPEUTICS of its representations, warranties or covenants hereunder, or (c) or any intellectual property, materials or other information provided by PLUS THERAPEUTICS to Piramal, or in connection with any Product or Service provided by Piramal to PLUS THERAPEUTICS pursuant to this Agreement, except in connection with any Piramal Technology, (d) any negligent act or omission or the willful misconduct of any PLUS THERAPEUTICS Indemnitees in performing obligations under this Agreement; except to the extent in each case that the Loss in question resulted from the gross negligence or willful misconduct of, or material breach of this Agreement by, a Piramal Indemnitee or any of its or their representatives.

13.3 Each Party's agreement to indemnify, defend, and hold the other harmless is conditioned on the indemnified Party ("**Indemnitee**"): (a) providing written notice to the indemnifying Party ("**Indemnitor**") of any claim, demand, or action arising out of the indemnified activities as soon as practicable after an officer of the Indemnitee has knowledge of such claim, demand, or action, provided that, failure or delay to provide such notice by the Indemnitee shall not relieve the Indemnitor of its obligations hereunder unless the failure or delay materially impairs the Indemnitor's ability to defend against the Third Party claim or demand; (b) permitting the Indemnitor to assume full responsibility and costs to investigate, prepare for, and defend against any such claim or demand with counsel of the Indemnitor's choice; (c) assisting the Indemnitor, at the Indemnitor's reasonable expense, in the investigation of, preparation for, and defense of any such claim or demand; and (d) not compromising or settling such claim or demand without the Indemnitor's written consent said consent shall not be unreasonably delayed or denied. Indemnitor shall not settle or compromise any claim without the other Party's prior written approval, which will not be unreasonably withheld, delayed or conditioned. The Indemnitee shall have the right to be represented by its own counsel at its own cost in such matters.

14. INSURANCE

14.1 Piramal will secure and maintain in full force and effect throughout the term of this Agreement insurance with coverage and minimum policy limits set forth as follows:

(a) [***] coverage at least [***].

(b) [***], exclusive of the coverage provided by the Comprehensive General Liability policy, with a per occurrence limit of at least [***] and an aggregate limit of at least [***].

(c) [***].

14.2 As specified in 4.2, PLUS THERAPEUTICS shall be responsible for insuring all PLUS THERAPEUTICS Materials or any Product containing PLUS THERAPEUTICS Materials whilst on the premises of any Piramal facility, be they in the form of raw materials, WIP or finished goods and Piramal shall be responsible for insuring all Product whilst on the premises of any Piramal facility, be they in the form of raw materials, WIP or finished goods.

14.3 Piramal will comply, at PLUS THERAPEUTICS's expense, with reasonable requests for information made by PLUS THERAPEUTICS's insurance provider representative(s), including permitting such representative(s) to inspect the Facility during operational hours and upon reasonable notice to Piramal. In regard to such inspections, the representative(s) will adhere to such guidelines and policies pertaining to safety and non-disclosure as Piramal may reasonably require.

15. INTELLECTUAL PROPERTY RIGHTS

15.1 All rights to and interests in PLUS THERAPEUTICS Technology will remain the exclusive property of PLUS THERAPEUTICS. Piramal agrees that its rights to PLUS THERAPEUTICS Technology are for the limited purpose of providing Services.

15.2 Piramal acknowledges and agrees that PLUS THERAPEUTICS shall be entitled to, and will own, all PLUS THERAPEUTICS Technology. Piramal agrees to execute such documents as PLUS THERAPEUTICS may reasonably request and to warrant and confirm PLUS THERAPEUTICS's title to and ownership of all such results and proceeds, and to transfer and assign to PLUS THERAPEUTICS any rights which Piramal may have therein. The Parties shall cooperate to achieve the allocation of rights to Inventions anticipated herein and each Party shall be solely responsible for costs associated with the protection of its intellectual property. Notwithstanding the foregoing, all Piramal Technology and Process Inventions shall be owned solely by Piramal and no right therein is granted to PLUS THERAPEUTICS under a Project Proposal.

15.3 All rights and title in all Piramal Technology shall vest solely with Piramal and PLUS THERAPEUTICS shall not have any claim on any such Piramal Technology used by Piramal in the provision of Services hereunder. In the event the PLUS THERAPEUTICS requires any portion of Piramal Technology for the purpose of using or applying the Product supplied by Piramal to PLUS THERAPEUTICS, then in such cases, Piramal shall provide a non-exclusive, royalty-free, perpetual license to the PLUS THERAPEUTICS for that portion of Piramal Technology that is required by the PLUS THERAPEUTICS to use and apply the Products covered under this Agreement.

16. MISCELLANEOUS

16.1 **Amendment**. This Agreement, including any Project Proposal or purchase order issued hereunder, may only be changed by a writing signed by authorized representatives of both Parties.

16.2 **Assignment**. This Agreement may not be assigned or otherwise transferred by either Party without the prior written consent of the other Party; provided, however, that PLUS THERAPEUTICS may, without such consent, but with notice to the other Party, assign this Agreement, in whole or in part, (a) in connection with the transfer or sale of all or substantially all of the assets of such Party or the line of business or Product to which this Agreement relates, (b) to the successor entity or acquirer in the event of the merger, consolidation or change of control of a Party hereto, or (c) to any Affiliate of PLUS THERAPEUTICS. Any purported assignment in violation of the preceding sentence will be void. Any permitted assignee will assume the rights and obligations of its assignor under this Agreement.

16.3 **Choice of Law and Disputes**. Unless, otherwise expressly agreed in a Project Proposal this Agreement will in all events and for all purposes be governed by, and construed in accordance with, the laws of Delaware, USA without regard to any choice of law principle that would dictate the application of the law of another jurisdiction. Any disputes arising out this Agreement shall be submitted before the exclusive jurisdiction of the courts of Delaware.

16.4 **Conflicts**. If there is any conflict, discrepancy, or inconsistency between the terms of this Agreement and any Project Proposal, purchase order, QTA or other form used by the Parties, the terms of this Agreement will control.

16.5 **Counterparts**. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

16.6 **Entire Agreement; Supply Agreements**. This Agreement constitutes the entire agreement of the Parties with regard to its subject matter, and supersedes all previous written or oral representations, agreements and understandings between Parties. Notwithstanding the foregoing, following the execution of this Agreement, the Parties shall negotiate in good faith Supply Agreements (and/or an amendment hereto) reflecting the Parties understanding as to (i) minimum annual ordering obligations of PLUS THERAPEUTICS for the Manufacture of clinical and/or commercial supply of PLUS THERAPEUTICS Products; (ii) the pricing and payment terms in connection therewith; and (iii) the establishment of procedures for the forecasting of PLUS THERAPEUTICS ordering of its Products, among other things.

16.7 **Force Majeure**. Except as otherwise expressly set forth in this Agreement, neither Party will have breached this Agreement for failure or delay in fulfilling or performing any term of this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, including, without limitation, fire, floods, embargoes, shortages, epidemics, quarantines, war, acts of war (whether war be declared or not), insurrections, riots, civil commotion, strikes, acts of God or acts, omissions, or delays in acting, by any governmental authority ("**force majeure**"). The Party affected by any event of force majeure will promptly notify the other Party, explaining the nature, details and expected duration thereof. Such Party will also notify

the other Party from time to time as to when the affected Party reasonably expects to resume performance in whole or in part of its obligations hereunder, and to notify the other Party of the cessation of any such event. A Party affected by an event of force majeure will use its reasonable efforts to remedy, remove, or mitigate such event and the effects thereof with all reasonable dispatch. If a Party anticipates that an event of force majeure may occur, such Party will notify the other Party of the nature, details and expected duration thereof. Upon termination of the event of force majeure, the performance of any suspended obligation or duty will promptly recommence.

16.8 **Headings; Construction**. The Section headings are intended for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement. Both Parties have participated equally in the formation of this Agreement and the language of this Agreement will not be presumptively construed against either Party.

16.9 **No Partnership or Employment Relationship**. This Agreement does not create a partnership or employment relationship between PLUS THERAPEUTICS and the Piramal.

16.10 **Notices**. All notices or other communications which are required or permitted hereunder will be made in writing and delivered personally, sent by telecopier (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Piramal, to:	If to PLUS THERAPEUTICS to:
Piramal Pharma Solutions, Inc.	Plus Therapeutics, Inc:
1500 Bull Lea Road, Suite 250, Lexington, KY 40511, USA	4200 Marathon Blvd., Suite 200, Austin, Texas 78756
Attn: Site Head	Attn: Chief Executive Officer Telephone
Telecopier No: +1 859 977 8590	Telephone:
Copy of the letter to be sent to: legal.department@piramal.com	Copy of the letter to be sent to:

or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing. Any such communication will be deemed to have been given (a) when delivered, if personally delivered or sent by telecopier on a business day, (b) on the business day after dispatch, if sent by nationally-recognized overnight courier, or (c) on the third business day following the date of mailing, if sent by first class mail.

16.11 **Severability**. If any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement will continue in full force and effect without said provision. If any provision of this Agreement is held to be excessively broad, it will be reformed and construed by limiting and reducing it so as to be enforceable to the maximum extent permitted by law. The Parties will use their reasonable efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s), which, insofar as practical, implement the intent of the Parties. The foregoing will not apply to provisions relating to price and payment hereunder.

16.12 **Waiver**. The waiver by either Party hereto of any right hereunder or the failure to perform or of a breach by the other Party will not be deemed a waiver of any other right hereunder or of any other breach or failure by said other Party whether of a similar nature or otherwise.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

For and on behalf of

PLUS THERAPEUTICS

Signature: /s/ Andrew Sims

Name: Andrew Sims

Designation: Vice President / Chief Financial Officer

For and on behalf of

PIRAMAL PHARMA SOLUTIONS, INC.

Signature: /s/ Robert E. Munday

Name: Robert E.Munday

Designation: Vice President / Site Head

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

Plus Therapeutics, Inc.
Austin, Texas

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-1 (Nos. 333-229485, 333-227485, 333-226205, 333-224502, 333-219967, 333-215365, 333-210628 and 333-249728), Forms S-3 (Nos. 333-217988, 333-172787, 333-169822, 333-157023, 333-140875, 333-134129, 333-153233, 333-159912, 333-192409, 333-200090, 333-195846, 333-216947 and 333-249410) and Forms S-8 (Nos. 333-223566, 333-210211, 333-202858, 333-181764, 333-122691, 333-82074 and 333-239548) of Plus Therapeutics, Inc. (the "Company") of our report dated February 22, 2021, 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, LLP

San Diego, California

February 22, 2021

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: February 22, 2021
/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: February 22, 2021
/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, 2020 as filed with the Securities and Exchange Commission on February 22, 2021, (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.

Dated: February 22, 2021

By: /s/ Marc H. Hedrick, MD
Marc H. Hedrick, MD
President & Chief Executive Officer

Dated: February 22, 2021

By: /s/ Andrew Sims
Andrew Sims
Chief Financial Officer