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

FORM 10-K

(Mark One)

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended July 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 000-54318

ONCOSEC MEDICAL INCORPORATED
(Exact name of registrant as specified in its charter)

Nevada (State or other jurisdiction of incorporation or organization)	**98-0573252** (I.R.S. Employer Identification Number)
24 North Main Street **Pennington, NJ**	**08534**
3565 General Atomics Court, Suite 100 **San Diego, CA** (Address of principal executive offices)	**92121** (Zip Code)

(855) 662-6732
(Registrant's telephone number, including area code)

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

Title of Class	Trading Symbol	Name of Exchange on which Registered:
Common Stock, par value $0.0001 per share	**ONCS**	**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 [X]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes [ ] No [X]

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 [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically, if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [X] No [ ]

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

Large accelerated filer [ ]	Accelerated filer [ ]
Non-accelerated filer [X]	Smaller reporting company [X]
	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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes [ ] No [X]

The aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant as of January 31, 2020, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $17,729,615, computed by reference to the price at which the registrant's common stock was last sold on such date, as reported by the Nasdaq Capital Market. Shares of common stock held by the registrant's officers and directors and holders of 10% or more of the outstanding shares of the registrant's common stock have been excluded from this calculation because such persons may be deemed to be affiliates of the registrant; however, this determination of affiliate status is not, and shall not be considered, a determination of affiliate status for any other purpose.

As of October 28, 2020, there were 27,688,354 outstanding shares of the Company's common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the 2020 Annual Meeting of Stockholders, which is expected to be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended July 31, 2020, are incorporated by reference in Part III of this Annual Report on Form 10-K to the extent stated herein.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS AND OTHER MATTERS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act. Forward-looking statements relate to future events or circumstances or our future performance and are based on our current assumptions, expectations and beliefs about future developments and their potential effect on our business. All statements in this report that are not statements of historical fact could be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "should," "expects," "plans," "intends," "anticipates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other comparable terminology. The forward-looking statements in this report include statements about, among other things: the status, progress and results of our clinical programs; our ability to obtain regulatory approvals for, and the level of market opportunity for, our product candidates; our business plans, strategies and objectives, including plans to pursue collaboration, licensing or other similar arrangements or transactions; our expectations regarding our liquidity and performance, including our expense levels, sources of capital and ability to maintain our operations as a going concern; the competitive landscape of our industry; and general market, economic and political conditions.

Some of the factors that we believe could cause actual results to differ from those anticipated or predicted include:

- the success and timing of our clinical trials, including safety and efficacy of our product candidates, patient accrual, unexpected or expected safety events, and the usability of data generated from our trials;
- the ability to achieve the clinical and operational objectives set by management and the board;
- our ability to successfully file and obtain timely marketing approval from the U.S. Food and Drug Administration, or FDA, or comparable foreign regulatory agency for one or more Biologics License Applications, or BLAs, or New Drug Applications, or NDAs;
- our ability to obtain and maintain marketing approval from regulatory agencies for our products in the U.S. and foreign countries;
- our ability to adhere to ongoing compliance requirements of all health authorities, in the U.S. and foreign countries;
- our ability to obtain and maintain adequate reimbursement for our products;
- our ability to obtain the desired labeling of our products under any regulatory approval we might receive;
- our plans to develop and commercialize our products;
- the successful development and implementation of sales and marketing campaigns;
- the loss of key scientific or management personnel;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- our ability to successfully compete in the potential markets for our product candidates, if commercialized;
- regulatory developments in the United States and foreign countries;
- the rate and degree of market acceptance of any of our product candidates;

- new products, product candidates or new uses for existing products or technologies introduced or announced by our competitors and the timing of these introductions or announcements;
- market conditions in the pharmaceutical and biotechnology sectors;
- our available cash and investments;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- our ability to obtain additional funding;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- our ability to maintain license agreements for our licensed product candidates;
- the success and timing of our preclinical studies, including those intended to support an Investigational New Drug, or IND, application;
- the ability of our product candidates to successfully perform and advance in clinical trials;
- our continued compliance with the listing requirements of the Nasdaq Capital Market;
- our ability to obtain and maintain authorization from regulatory authorities for use of our product candidates for initiation and conduct of clinical trials;
- our ability to manufacture and supply our products, gain access to products we plan to use in combination studies and the performance of and reliance on third-party manufacturers and suppliers;
- the performance of our clinical research organizations, clinical trial sponsors, and clinical trial investigators; and
- our ability to successfully implement our strategy.

Forward-looking statements are only predictions and are not guarantees of future performance, and they are subject to known and unknown risks, uncertainties and other factors, including the risks described under “Risk Factors” in Part I, Item IA of this report and similar discussions contained in the other documents we file from time to time with the Securities and Exchange Commission, or the “SEC.” Moreover, we operate in a rapidly evolving industry in which new risks and uncertainties continuously emerge, and it is not possible for us to predict all of the risks we may face or assess the impact of all uncertainties or other factors on our business or the extent to which any factor or combination of factors could cause actual results to differ from our current expectations, assumptions or beliefs. In light of these risks, uncertainties and other factors, the forward-looking events and circumstances described in this report may not occur and our results, levels of activity, performance or achievements could differ materially from those expressed in or implied by any forward-looking statements we make. As a result, you should not place undue reliance on any of our forward-looking statements. Forward-looking statements speak only as of the date they are made, and unless required to by law, we undertake no obligation to update or revise any forward-looking statement for any reason, including to reflect new information, future developments, actual results or changes in our expectations.

We qualify all of our forward-looking statements by this cautionary note.

* * * * *

Unless the context indicates otherwise, all references to OncoSec, our Company, we, us and our in this report refer to OncoSec Medical Incorporated and its subsidiary.

We own registered trademark rights in the United States to ImmunoPulse®, and we have filed applications in the United States and in certain foreign jurisdictions to register trademark rights to ImmunoPulse and OncoSec. Other service marks, trademarks or trade names used in this report are the property of their respective owners. We do not use the ® or ™ symbol in each instance in which one of our registered or common law trademarks appears in this report, but this should not be construed as any indication that we will not assert our rights thereto to the fullest extent permissible under applicable law.

We make available, free of charge, on our website, www.oncosec.com, our reports on Forms 10-K, 10-Q, 8-K and amendments thereto, as soon as reasonably practical after we file such materials with the SEC. Any information that we include on or link to our website is not, and should not be considered, part of this report.

PART I

ITEM 1. BUSINESS

Overview

We are a late-stage biotechnology company focused on designing, developing and commercializing innovative therapies and proprietary medical approaches to stimulate and to guide an anti-tumor immune response for the treatment of cancer. Our core technology platform ImmunoPulse®is a drug-device therapeutic modality platform comprised of proprietary intratumoral electroporation ("EP") delivery devices (the "OncoSec Medical System (OMS) Electroporation Device" or "OMS EP Device"). The OMS EP Device is designed to deliver plasmid DNA-encoded drugs directly into a solid tumor and promote an immunological response against cancer. The OMS EP Device can be adapted to treat different tumor types, and consists of an electrical pulse generator, a reusable handle and disposable applicators. Our lead product candidate is a DNA-encoded interleukin-12 ("IL-12") called tavokinogene telseplasmid ("TAVO"). The OMS EP Device is used to deliver TAVO intratumorally, with the aim of reversing the immunosuppressive microenvironment in the treated tumor. The activation of the appropriate inflammatory response can drive a systemic anti-tumor response against untreated tumors in other parts of the body. In 2017, we received Fast Track Designation and Orphan Drug Designation from the U.S. Food and Drug Administration ("FDA") for TAVO in metastatic melanoma, which could qualify TAVO for expedited FDA review, a rolling Biologics License Application review and certain other benefits.

Our current focus is to pursue our study of TAVO in combination with Merck & Co., Inc. ("Merck") KEYTRUDA® (pembrolizumab) in melanoma and triple negative breast cancer ("TNBC").

Our KEYNOTE-695 study targets melanoma patients who are definitive anti-PD-1 non-responders. In May 2017, we entered into a clinical trial collaboration and supply agreement with a subsidiary of Merck in connection with the KEYNOTE-695 study. Pursuant to the terms of the agreement, both companies will bear their own costs related to manufacturing and supply of their product, as well as be responsible for their own internal costs. We are the study sponsor and are responsible for external costs. The KEYNOTE-695 study is currently enrolling and treating patients and we plan to complete or nearly complete enrollment in the second half of 2020. This study is a registration-directed, Phase 2b open-label, single-arm, multicenter study in the United States, Canada, Australia and Europe.

In May 2018, we entered into a second clinical trial collaboration and supply agreement with Merck with respect to a Phase 2 study of TAVO in combination with KEYTRUDA® to evaluate the safety and efficacy of the combination in patients with inoperable locally advanced or metastatic TNBC, who have previously failed at least one systemic chemotherapy or immunotherapy. This study is referred to as KEYNOTE-890, Cohort 1. Pursuant to the terms of the agreement, both companies will bear their own costs related to manufacturing and supply of their product, as well as be responsible for their own internal costs. We are the study sponsor and are responsible for external costs. The KEYNOTE-890 study, Cohort 1 is currently treating patients. We completed enrollment in fourth quarter 2019 and provided interim preliminary data from this study at the San Antonio Breast Cancer Symposium ("SABCS") in December 2019. The study is a Phase 2 open-label, single-arm, multicenter study in the United States and Australia.

In June 2020, we amended our second clinical trial collaboration and supply agreement with Merck to include another Phase 2 study of TAVO in combination with KEYTRUDA® plus chemotherapy to evaluate the safety and efficacy of the combination in patients with inoperable locally advanced or metastatic triple negative breast cancer ("mTNBC"). This study is referred to as KEYNOTE-890, Cohort 2. Pursuant to the terms of the amended agreement, both companies will bear their own costs related to the manufacture and supply of their product, as well as be responsible for their own internal costs. We are the study sponsor and are responsible for external costs. The KEYNOTE-890, Cohort 2 study is currently expected to begin enrolling patients towards the end of calendar year 2020 or the beginning of calendar year 2021. We expect to complete enrollment within fifteen months and provide interim preliminary data from this study at a future medical conference. The study is a Phase 2 open-label, single arm, multicenter study in the United States and Australia.

In August 2020, we commenced an Investigator-Initiated Phase 2 study conducted by the H. Lee Moffitt Cancer Center and Research Institute and the University of South Florida Morsani College of Medicine to evaluate TAVO™ as neoadjuvant treatment (administered before surgery) in combination with intravenous OPDIVO® (nivolumab) in up to 33 patients with operable locally/regionally advanced melanoma. This Investigator-Initiated Phase 2 study has been designed to evaluate whether the addition of TAVO can increase the published anti-tumor response observed with monotherapy OPDIVO®, an anti-PD-1 checkpoint inhibitor, in patients with locally/regionally advanced melanoma prior to surgical resection of tumors. This study is currently enrolling and expected to complete enrollment within eighteen months. In April 2020, we announced that Providence Cancer Institute, a part of Providence St. Joseph Health ("Providence"), is pursuing a first-in-human Phase 1 clinical trial of OncoSec's novel DNA-encodable, investigational vaccine, CORVax12, which is designed to act as a prophylactic vaccine to prevent COVID-19. CORVax12 consists of OncoSec's existing product candidate, TAVO™ (interleukin-12 or "IL-12" plasmid), in combination with an immunogenic component of the SARS-CoV-2 virus recently developed by researchers at NIH's National Institute of Allergy and Infectious Diseases ("NIAID") and licensed to OncoSec on a non-exclusive basis.

Providence investigators have filed an Investigator-Initiated Investigational New Drug Application ("IND") with the United States Food and Drug Administration ("FDA") and have designed a clinical trial protocol that will evaluate the vaccination of healthy adult volunteers utilizing CORVax12 and an investigational low voltage generator technology if the FDA approves the IND. The trial will also include extensive immune monitoring.

OncoSec will supply TAVO and the low voltage electroporation device to Providence as part of this effort and does not anticipate any additional capital commitment at this time. Additionally, OncoSec will contribute manufacturing, preclinical, and prior clinical information and data for TAVO, along with manufacturing data with respect to the generator, to support the FDA's allowance of the IND. Providence will hold the IND, if approved by FDA, and perform the preclinical and clinical development work. The anticipated work and clinical trials outlined above are subject to FDA allowance of the Investigator-Initiated IND filed by Providence.

In May 2019, we commenced an Investigator-Initiated Phase 1 clinical trial conducted by the University of California San Francisco Helen Diller Family Comprehensive Cancer Center ("OMS-131"). This study targets patients with SCCHN and is a single-arm open-label clinical trial in which 35 evaluable patients will receive TAVO, KEYTRUDA® and epacadostat. OMS-131 is currently enrolling and treating patients and is expected to complete enrollment within eighteen months.

We intend to continue to pursue other ongoing or potential new trials and studies related to TAVO, in various tumor types. In addition, we are also developing our next-generation EP device and applicator, including advancements toward prototypes, pursuing discovery research to identify other product candidates that, in addition to IL-12, can be encoded into propriety plasmid-DNA and delivered intratumorally using EP. Specifically, we are developing a new, propriety technology to potentially treat liver, lung, bladder, pancreatic and other difficult to treat visceral lesions through the direct delivery of plasmid-based IL-12 with a new Visceral Lesions Applicator ("VLA").

The VLA has been designed to work with low voltage EP generators, including but not limited to our proprietary APOLLO™ EP generator to leverage plasmid-optimized EP and enhance the depth of transfection of immunologically relevant genes into cells located in visceral organs. In early 2020, the Company had two poster presentations, one at the Society for Interventional Oncology ("SIO") and one at the Society for Interventional Radiology ("SIR"), where it presented preclinical data on both the VLA and APOLLO generator. The poster at SIO was awarded "Best Technology Scientific Abstract". Additionally, we have successfully completed several large animal studies and aim to use the VLA in our clinical trials in the second half of 2021. By using our next-generation technology with the VLA, our goal is to reverse the immunosuppressive mechanisms of a tumor, as well as to expand our pipeline. We believe that the flexibility of our propriety plasmid-DNA technology allows us to deliver other immunologically relevant molecules into the tumor microenvironment in addition to the delivery of plasmid-DNA encoding for IL-12. In June 2020, the Company had two poster presentations at the 2020 America Association for Cancer Research ("AACR") where it presented pre-clinical data regarding its new anti-tumor product candidate, which will amplify the power of intratumoral IL-12 through the addition of both CXCL9, a critical T cell chemokine, and anti-CD3, a membrane bound pan T cell stimulator. These other immunologically relevant molecules may complement IL-12's activity by limiting or enhancing key pathways associated with tumor immune subversion.

We have established a collaboration with Emerge Health Pty ("Emerge"), the leading Australian company providing full registration, reimbursement, sales, marketing and distribution services of therapeutic products in Australia and New Zealand, to commercialize TAVO and have made it available under Australia's Special Access Scheme ("SAS") as of early 2020. As a specialized Australian pharmaceutical company focused on the marketing and sales of high-quality medicines to the hospital sector, Emerge has previously made numerous other products successfully available under Australia's SAS.

Cancer Immunotherapy Treatments: Background

Many traditional modalities for treating cancer have limited clinical efficacy and are frequently associated with significant negative side effects. Immunotherapy, which has received significant attention in recent years, focuses on modulating the immune system to treat cancer rather than directly killing the cancer cells. Systemic delivery of immune-modulating proteins, such as interleukin-2, interleukin-10, interleukin-12 or IL-2, IL-10 and IL-12, has shown early indications of efficacy, but with significant mechanism-based toxicity.

Recent attention has also focused on the development of monoclonal antibody drugs, which target critical "immune checkpoint" proteins and augment anti-tumor immunity. Therapies using monoclonal antibodies, such as anti-CTLA-4 (cytotoxic T-lymphocyte-associated protein-4), anti-PD-1 (program cell-death-1) and anti-PD-L1 (programmed death-ligand-1), are being developed for the treatment of several cancers and have been approved for the treatment of multiple sold tumor cancers. Although these new immuno-oncology agents have shown clinical benefit for patients with late-stage cancer across multiple tumor types, only a small subset of the overall patient population responds to these therapies. Certain tumors are able to evade the immune system. We believe that when tumors do not have any immune cells inside (immune desert) or surrounding the tumor (immune excluded), immune checkpoint therapies are less effective or ineffective. These tumors are sometimes referred to as "cold" tumors.

We believe that if we can convert an inactive, or "cold," tumor with a low frequency of tumor infiltrating lymphocytes, or TILs, that limit the anti-tumor response and remove the interferon signature, into an active, or "hot," tumor that can activate the anti-PD-1 or anti-PD-L1 pathway, then we can potentially increase the number of patients who respond to these therapies. We believe our TAVO platform addresses this objective, as it has the potential to reshape the tumor microenvironment in patients with an immunologically cold tumor into a highly-inflamed tumor with a fully engaged PD-1 / PD-L1 axis. The immunological components that enable this conversion relates to the intratumoral delivery of TAVO, which increases the density of TILs, and in the presence of an anti-PD-1 antibody, adaptive resistance can be neutralized allowing for the maximal T cell cytotoxicity.

There is a significant unmet medical need for patients who may not respond well to these therapies on their own. In particular, for patients who have "cold" tumors and would be unlikely to respond to an immune checkpoint therapy alone, our focus is to develop a therapeutic that has the ability to directly modulate the microenvironment of the tumor by stimulating a local immune reaction through the intratumoral delivery of IL-12 or other immune-modulating molecules. This immune cascade allows anti-tumor immune cells to infiltrate the lesion, turning the tumor "hot" and ultimately generates a productive systemic immune response. In doing so, we believe intratumoral delivery of immune-modulating molecules, such as IL-12, provides a strong biological rationale for treatment in combination with immune checkpoint inhibitors, such as anti-PD-1 or anti-CTLA-4.

CLINICAL PROGRAMS

Our Lead Product Candidate: TAVO

Our lead product candidate, TAVO, is a drug-device combination. The drug consists of a plasmid construct called tavokinogene telseplasmid, or TAVO, with plasmid DNA-encoded, IL-12, and is delivered into a tumor using our proprietary electroporation device. Our clinical data indicates that the in vivo gene transfer of plasmid DNA-encoded IL-12 using EP is well-tolerated and anti-tumor activity has been observed after a single cycle of treatment. Importantly, regression in distant, non-injected/non-electroporated lesions has also been observed ("abscopal effect") in different solid cancers.

Our Clinical Pipeline

MELANOMA

Melanoma is a deadly form of skin cancer with rapidly rising incidences both in the U.S. and internationally. The National Cancer Institute ("NCI") Surveillance, Epidemiology and End Results ("SEER") Program estimates that 96,480 new melanoma cases were diagnosed in 2019, representing 5.5% of all new cancer cases in the U.S. Overall, the five-year survival rate for melanoma, regardless of disease stage, is high (92.2%); however, according to SEER 2019, for patients who present with metastatic disease and receive systemic treatment, the five-year survival rate is considerably lower at less than 25%. Despite recent advances in therapy, advanced metastatic melanoma continues to present a major and increasing burden with significant morbidity and mortality.

KEYNOTE-695 Study (ongoing)

The KEYNOTE-695 study is a Phase 2b, open-label, single-arm, multi-center study of TAVO in combination with an intravenous anti-PD-1 antibody, Merck's KEYTRUDA®, in patients with histological diagnosis of melanoma with progressive locally advanced or metastatic disease defined as stage III/IV. KEYNOTE-695 study is evaluating approximately 100 patients and is currently enrolling and treating patients in the United States, Canada, and Australia across approximately 30 sites, and we plan to treat patients in Europe.

KEYNOTE-695 enrollment criteria with respect to anti-PD-1 checkpoint failure is highly restrictive. In order to be considered an anti-PD-1 checkpoint failure, all patients must have histological or cytological confirmed diagnosis of unresectable melanoma (Stage III or IV) with progressive locally advanced or metastatic diseases, be refractory to anti-PD-1 monoclonal antibodies, namely KEYTRUDA® (pembrolizumab) or OPDIVO® (nivolumab), as either monotherapy or in combination with other approved checkpoint inhibitors or targeted therapies according to their approved label, and must have relapsed as documented disease progression within 12 weeks of the last dose of anti-PD-1 monoclonal antibodies according to RECIST v1.1, measured by radiologic assessment. Patients can have no intervening therapies between failure of anti-PD-1 therapy and the TAVO / KEYTRUDA® combination treatment with the exception of approved BRAF/MEK inhibitor combinations. Patients that are BRAF eligible must receive and progress following BRAF treatment. The primary endpoint of the study, by blinded independent central review, is to assess the objective response rate ("ORR") based on RECIST v1.1.

KEYNOTE-695 is a registration directed clinical trial. In order to be eligible for accelerated approval, the TAVO / KEYTRUDA® combination must treat a serious condition and provide a meaningful advantage over available therapies. Prior to the commencement of the study, within the context of the Fast Track Designation request, the Company reviewed the patient inclusion and progression criteria, and other study requirements with FDA. In light of this review, we strictly defined the patient population to be enrolled in KEYNOTE-695 to include only those patients who have definitively failed prior anti-PD-1 checkpoint therapy, as determined by the above-described rigor, and who have exhausted all available FDA approved treatment options.

We previously provided preliminary data updates at The Society for Immunotherapy of Cancer ("SITC") Annual Meeting in November of 2018, at our Business Outlook in February 2019, and at several Company investor presentations in 2019 and 2020, which were made publicly available on the Company's website. Further, interim data regarding the investigator assessment of tumor responses for over 50 patients from this trial is planned to be presented at the Society for Cancer Immunotherapy (SITC) on and during the week of November 9, 2020. We plan to complete or nearly complete enrollment in the KEYNOTE-695 study in the second half of 2020. We are working on the commercial version of the OMS Electroporation Device currently being used in this trial so that it complies with current regulatory standards, a prerequisite for FDA clearance. We anticipate using this version of the OMS Electroporation Device in this study in an expansion cohort of approximately 25 patients to enable our plan to file for accelerated approval. We are currently seeking FDA concurrence to use this updated version in the ongoing trial. Lastly, based on the outcome of the study and feedback from FDA, we plan to file for accelerated approval with the FDA for this patient population in late 2021 / early 2022.

OMS-102 (completed)

OMS-102 was an open-label, multi-center, Phase 2 trial of TAVO and KEYTRUDA® (pembrolizumab) in patients with advanced, metastatic melanoma. In August 2015, we enrolled the first patient in our Phase 2 investigator-sponsored clinical trial led by the clinicians at the University of California, San Francisco, or UCSF. Huntsman Cancer Institute in Utah was the second clinical site. The primary endpoint of this study was to assess the anti-tumor efficacy of the combination of TAVO and KEYTRUDA® in patients with stage III/IV metastatic melanoma whose tumors are characterized by low frequency of $CD8^+$/$PD\text{-}1^+$/$CTLA\text{-}4^+$ TILs (tumor infiltrating lymphocytes). The primary endpoint of the study was best overall response rate by RECIST of the combination regimen. Recent data suggests that patients whose tumors are lacking TILs or $CD8^+$ T-cells at the tumor margin or generally have a low frequency of $CD8^+$/$PD\text{-}L1^+$/$CTLA\text{-}4^+$ TILs are unlikely to respond to anti-PD-1 therapies such as KEYTRUDA®, while tumors with a frequency of $CTLA\text{-}4^+$/$PD\text{-}L1^+$/$CD8^+$ >20% in the tumor are likely to have a clinical benefit. Therapies, such as TAVO, that promote TIL generation and PD-L1 positivity play an important role in augmenting the clinical efficacy of the anti-PD1/PD-L1 agents.

Initial data were presented in February 2017 at ASCO-SITC and the trial stopped enrolling patients in September 2017, allowing the Company to progress on KEYNOTE-695. The final data was selected for prominence at SITC 2017 and was presented during the oral poster session. The overall response rate in the 22-patient population was 43% by RECIST v1.1. at week 24 (best overall response rate was 50% by clinical assessment), with one Grade-3 adverse event of cellulitis that resolved with antibiotics. Based on these results, we believe the combination of TAVO and KEYTRUDA® demonstrated efficacy in this low TIL metastatic melanoma patient population and was well-tolerated. Further, long-term follow up has shown responses with significant durability, with all patients who experienced a response remaining in responding status. To date only one patient has required additional surgery to maintain remission. Data from this study was published in the Clinical Cancer Research journal in May 2020.

OMS-100 (completed)

OMS-100 was an open-label Phase 2 trial of TAVO monotherapy in patients with metastatic melanoma. On December 5, 2014, we released top-line six-month data from a Phase 2 repeat dose trial of TAVO in patients with stage III/IV metastatic melanoma. We presented final data at the Melanoma Bridge Conference in 2018. This study is now locked with the data collected at 6 clinical centers. Thirty (30) patients with stage III/IV melanoma received up to four cycles of TAVO delivered by EP on days one, five and eight of each 12-week cycle. Of the 28 patients in the study who were evaluable, an objective response rate of 35.7% (10/28 patients) was observed. Five patients (17.9%) had a CR, 5 patients (17.9%) had a PR, 12 patients (42.9%) had SD. Of the distant untreated and assessed lesions that decreased in longest dimension by ≥ 30%, 17.4% (20/115) were assessed. Of the 26 patients with ≥ 1 assessed lesion, 12 patients (46.2%) had ≥ 1 assessed distant lesion with major regression (≥ 30%). Two patients were not evaluated due to not having evaluable distant untreated lesions. Other clinical endpoints included objective response rate, local and distant lesion regression, duration of response, overall survival and safety. The results of this study demonstrated that multiple treatment cycles of TAVO were well-tolerated, with no treatment-limiting toxicities. The majority of adverse events were localized to the treatment site and were Grade-1 or -2 in severity.

In order to continue to acquire clinical and immune correlational data on melanoma patients treated with TAVO, the protocol of the OMS-I100 study was amended in February 2014 to enroll up to an additional 30 patients. Enrollment in OMS-I100 Addendum was completed in March 2016. The study is now completed and the Company presented final data at the Melanoma Bridge Conference held on November 29 – December 1, 2018. The data was selected for an oral presentation and included new data demonstrating that local treatment with TAVO alone led to whole-body immune responses associated with regression of untreated lesions in almost half of the 50 patients treated on the study. Final data from this study was published in the Annals of Oncology in March 2020.

Following this trial, a retrospective analysis of the patients who went on to receive an anti-PD-1/PD-L1 therapy was conducted. Results from this retrospective analysis suggested that TAVO primes and enhances response rates to PD-1/PD-L1 blockade. Specifically, of the 29 patients who completed TAVO, 14 subsequently received an anti-PD-1/PD-L1 treatment. Overall, five of these 14 patients (36%) experienced a complete response and four patients experienced a partial response (29%), for an overall response rate of 65% (75% without intervening therapies). Two patients experienced stable disease (14%) and three patients experienced progressive disease (21%). We believe this retrospective sequential data could suggest combinatorial potential of an immune-priming effect with TAVO prior to anti-PD-1/PD-L1 therapy. Data from this retrospective analysis formed the clinical rationale for conducting OMS-I102.

PHASE 2 INVESTIGATOR-INITIATED NEOADJUVANT STUDY

In August 2020, we commenced an investigator-initiated Phase 2 study conducted by the H. Lee Moffitt Cancer Center and Research Institute and the University of South Florida Morsani College of Medicine to evaluate TAVO™ as neoadjuvant treatment (administered before surgery) in combination with intravenous OPDIVO®(nivolumab) in up to 33 patients with operable locally/regionally advanced melanoma. This investigator-initiated Phase 2 study has been designed to evaluate whether the addition of TAVO can increase the published anti-tumor response observed with monotherapy OPDIVO®, an anti-PD-1 checkpoint inhibitor, in patients with locally/regionally advanced melanoma prior to surgical resection of tumors. This study is currently enrolling and expected to complete enrollment within eighteen months.

TRIPLE NEGATIVE BREAST CANCER (TNBC)

Breast cancer is the most common cancer diagnosed among U.S. women and is the second leading cause of cancer-related deaths. Worldwide, approximately 170,000 new cases of TNBC are diagnosed each year, with TNBC representing one of the four main molecular subtypes of invasive breast cancer, accounting for approximately 10 -20% of all breast cancer, according to breastcancer.org. According to the American Cancer Society, for patients who present with Stage 4 metastatic disease, the five-year survival rate is considerably lower at approximately 22%.

TNBC frequently affects younger women (less than 40 years old) and is characterized by higher relapse rates than estrogen receptor positive breast cancers. TNBC is also associated with an increased risk of recurrence, both locally and in distant sites including the lungs and brain. Advanced TNBC remains a significant area of unmet medical need and there is no established standard-of-care. Chemotherapy is the current standard-of-care treatment in the adjuvant, neoadjuvant, and metastatic settings. Due to the loss of the tumor cell receptors, patients with TNBC do not benefit from hormonal therapy or treatments targeting the oncogenic HER2 pathway. The standard of care for patients with recurrent and/or metastatic disease is cytotoxic chemotherapy, leading to a median survival of approximately 13 months from the time of recurrence or diagnosis of distant metastases. Importantly, for patients with metastatic TNBC, the traditional chemotherapeutic treatment approach has undergone limited advance in the last decades, and no regimen is specifically indicated in this unique patient population.

KEYNOTE-890 study (ongoing)

KEYNOTE-890 is a Phase 2, open-label, single-arm, multi-center study of TAVO in combination with an intravenous anti-PD-1 antibody, Merck's KEYTRUDA®, in patients with histologically confirmed diagnosis of inoperable locally advanced or metastatic TNBC who have received at least one prior line of approved systemic chemotherapy or immunotherapy.

In collaboration with Merck, we plan to complete treatment in KEYNOTE-890, Cohort 1 in 2020. We also plan to begin enrollment in Cohort 2 in the fourth quarter of calendar year 2020. We previously provided interim data from Cohort 1 in December, 2019 on the first group of patients enrolled from this study at the San Antonio Breast Cancer Symposium ("SABCS"). Based on the outcome of the study and feedback from FDA, we amended the KEYNOTE-890 clinical protocol to include TAVO in combination with KEYTRUDA® plus chemotherapy to evaluate the safety and efficacy of the combination in patients with inoperable locally advanced or metastatic triple negative breast cancer ("mTNBC"). The study is a Phase 2 open-label, single-arm, multicenter study in the United States and Australia.

OMS-140 (completed)

OMS-140 is a Phase 2, monotherapy biomarker study in patients with advanced or metastatic TNBC. The study is being conducted at Stanford University and is designed to assess whether TAVO increases TNBC tumor immunogenicity by driving a pro-inflammatory cascade that leads to increases in cytotoxic TILs. The presence and number of TILs is thought to be a key requirement for promoting the anti-tumor activity of anti-PD-1. By driving cytotoxic immune cells into the tumor, TAVO could be used in combination with checkpoint blockade therapies, which have reported some, but limited, activity in TNBC.

The primary objective of the study is to evaluate the potential of TAVO to promote a pro-inflammatory molecular and histological signature, and the secondary objectives include the evaluation of safety and tolerability, evaluation of local ablation effect (% of necrosis), and description of other evidence of anti-tumor activity. The study has been subsequently amended to capture the post-TAVO treatments and outcomes.

Preliminary data was presented at the SABCS annual meeting in 2018 and enrollment in this trial (n=10) is now complete. The clinical observations from this study prompted the Company to conduct KEYNOTE-890, which is currently underway.

SQUAMOUS CELL CARCINOMA HEAD & NECK CANCER (SCCHN)

Head and neck cancer represent approximately 4% of all cancers in the U.S., and it is estimated over 65,000 patients will develop head and neck cancer this year with over 14,000 deaths.

OMS-131 (ongoing)

OMS-131 is an investigator-initiated Phase 2 clinical trial conducted by the University of California San Francisco Helen Diller Family Comprehensive Cancer Center. This study targets patients with SCCHN and is a single-arm open-label clinical trial in which 35 evaluable patients will receive TAVO, KEYTRUDA® and epacadostat. OMS-131 is currently enrolling and treating patients.

OMS-131, also referred to as the "TRIFECTA" study, was formed from the clinical observations from a 2017 pilot study of TAVO in head and neck cancer patients, which demonstrated clinical and biological results including evidence of synergy between TAVO and PD-1 antibodies in the disease.

ROSEWELL PARK COMPREHENSIVE CANCER CENTER

The Company has an ongoing research collaboration with Roswell Park Comprehensive Cancer Center ("Roswell Park") to evaluate the use of Roswell Park's intravital microscopy ("IVM") and TAVO ^{PLUS} (enhanced IL-12 DNA-plasmid), in combination with our APOLLO™ EP generator in preclinical studies. The collaboration is led by Joseph Skitzki, MD, FACS, Associate Professor of Immunology, Associate Professor of Surgery and Chair of the Melanoma/Sarcoma Disease Site Research Group at Roswell Park.

DUKE UNIVERSITY

The Company has an ongoing research collaboration with Duke University's Center for Applied Therapeutics ("Duke University") to evaluate TAVO^{PLUS} in combination or sequenced with a HER2-plasmid vaccine administered our APOLLO™ EP generator in preclinical studies. The research is led by Herbert Kim Lyerly, M.D., George Barth Geller Professor, Professor of Immunology, Surgery and Pathology at Duke University School of Medicine and a director on our board of directors. We plan to present data from the pre-clinical trials completed in collaboration at SABCS and SITC in 2020.

Other Trials and Studies

In addition to the trials and studies described above, we have also pursued and closed Phase 2 clinical trials in patients with Merkel cell carcinoma and cutaneous T-cell lymphoma, although we do not have any active clinical programs related to these indicators at this time.

In April 2020, we announced that Providence Cancer Institute, a part of Providence St. Joseph Health ("Providence"), is pursuing a first-in-human Phase 1 clinical trial of OncoSec's novel DNA-encodable, investigational vaccine, CORVax12, which is designed to act as a prophylactic vaccine to prevent COVID-19. CORVax12 consists of OncoSec's existing product candidate, TAVO™ (interleukin-12 or "IL-12" plasmid), in combination with an immunogenic component of the SARS-CoV-2 virus recently developed by researchers at NIH's National Institute of Allergy and Infectious Diseases ("NIAID") and non-exclusively licensed to OncoSec on a non-commercial basis.

Providence investigators have filed an Investigator-Initiated Investigational New Drug Application ("IND") with the United States Food and Drug Administration ("FDA") and have designed a clinical trial protocol that will evaluate the vaccination of healthy adult volunteers utilizing CORVax12 and an investigational low voltage generator technology if FDA clears the IND. The trial will also include extensive immune monitoring.

OncoSec will supply TAVO and a low voltage electroporation device to Providence as part of this effort and does not anticipate any additional capital commitment at this time. Additionally, OncoSec will contribute manufacturing, preclinical, and prior clinical information and data for TAVO, along with manufacturing data with respect to the generator, to support FDA's allowance of the Providence IND. Providence will hold the IND, if cleared by FDA, and perform the preclinical and clinical development work. The anticipated work and clinical trials outlined above are subject to FDA allowance of the Investigator-Initiated IND filed by Providence.

Visceral Lesion Applicator

We are developing our next-generation EP device and applicators, including advancements toward prototypes, pursuing discovery research to identify other product candidates that, in addition to IL-12, can be encoded into propriety plasmid-DNA, delivered intratumorally using EP. Specifically, we are developing a new, propriety technology to potentially treat liver, lung, bladder, pancreatic and other difficult to treat visceral lesions through the direct delivery of plasmid-based IL-12 with a new Visceral Lesions Applicator ("VLA").

The VLA has been designed to work with low voltage EP generators including our new, APOLLO^{TM} EP generator, which optimizes the balance of lower voltage and longer pulse duration to significantly increase DNA-plasmid cellular transfection rates. Moving forward, we see significant opportunity to leverage this innovative technology to secure new partnerships that may allow us to expand our capabilities and drive shareholder value.

Throughout 2019 and 2020, we have successfully completed five large animal studies and aim to bring the VLA into the clinic during 2021. Preclinical data was presented in posters at the 2020 Society for Interventional Oncology ("SIO") meeting, where it was awarded "Best Technology Scientific Abstract", and the 2020 Society for Interventional Radiology ("SIR") meeting.

Emerge Health Pty

We have established a collaboration with Emerge Health Pty ("Emerge"), the leading Australian company providing full registration, reimbursement, sales, marketing and distribution services of therapeutic products in Australia and New Zealand, to commercialize TAVO and made it available under Australia's Special Access Scheme ("SAS") in early 2020. As a specialized Australian pharmaceutical company focused on the marketing and sales of high-quality medicines to the hospital sector, Emerge has previously made numerous other products successfully available under Australia's SAS.

Our OMS Electroporation Device

The effectiveness of many drugs and DNA-based therapeutics is dependent upon their crossing the cell membrane. In the 1970s, it was discovered that the brief application of high-intensity, pulsed electric fields to the cell resulted in a temporary and reversible increase in the permeability of the cell membrane, a mechanism known as "electroporation."

The transient, reversible nature of the electrical permeabilization of cell membranes and the resulting increase in intracellular delivery of therapeutic agents is the underlying basis of our electroporation facilitated therapeutic approach. Our EP delivery system consists of an electrical generator, a reusable applicator handle and disposable tips. While the extent of membrane permeabilization depends on various electrical, physical, chemical, and biological parameters, research with EP delivery has demonstrated an improvement in cellular uptake of chemical molecules such as chemotherapeutic agents (e.g., bleomycin and cisplatin), and nucleic acids (e.g., DNA and RNA).

Multiple viral and non-viral delivery modalities have been developed to deliver nucleic acids into cells, however, many of these methods have faced challenges related to the safe and efficient expression of the DNA-encoded biologic into the intended target cells. For example, viral mediated delivery technologies appear to be efficient at transfecting cells, but they have suffered from significant safety issues related to the immunogenicity of the viral vector, shedding of the virus, and potential integration of the viral DNA into the host genome. Other non-viral delivery methods have employed the use of nanotechnology to coat the DNA with fat molecules, called lipids. Although these lipid nanoparticle technologies have been used extensively in the clinic to deliver DNA-encoded biologic agents, few particles have been developed with the ability to specifically target cancer cells; instead, many of these particles naturally target the liver, which can lead to potential liver toxicities.

Like viral vectors and lipid nanoparticle technologies, EP has been used extensively in the clinic to deliver multiple therapeutic agents, including DNA. However, unlike these other technologies, EP has not seen the same safety concerns. In fact, the use of EP to deliver bleomycin intratumorally has been approved for use in Europe for cancers, such as basal cell carcinoma, and has been accepted across many European countries, including the United Kingdom.

Our OMS EP devices are designed to create favorable conditions to deliver plasmid DNA encoding immunotherapeutic cytokines directly into cells of the tumor microenvironment. The cytokine-encoding plasmid is first injected into the tumor. A needle-electrode array then delivers the electrical pulses produced in the pulse generator.

Our lead product candidate, TAVO, consists of a plasmid construct encoding the proinflammatory cytokine IL-12 that is injected into the tumor and delivered into the tumor cells through in vivo electroporation using our OMS EP device. We are also researching other DNA-encoded, immunologically-active molecules, with an aim of developing additional immunotherapeutic drugs that, when delivered using our OMS EP device, may be capable of breaking the immune system's tolerance to cancer.

Commercialization

Strategy

Our primary focus is to continue our clinical development strategy for TAVO, including our planned and ongoing clinical trials discussed under "Clinical Programs" above and potentially other trials we may pursue in the future.

As a part of our commercialization strategy, we also regularly investigate and evaluate potential collaboration opportunities to identify rational combinations with existing and emerging monoclonal antibody therapies and other drugs. For instance, we may seek to collaborate with pharmaceutical or biotechnology companies to provide us with access to complementary technologies and/or greater resources. In addition, we may seek to expand the applications of our technologies through strategic collaborations or other opportunities, such as in-licensing or strategic acquisitions, and we may seek to out-license our intellectual property to other companies to leverage our technologies for applications that we may not choose to internally and independently develop.

Manufacturing and Supply

Currently, we assemble and store certain components of our OMS Electroporation System, which is our proprietary delivery mechanism for our TAVO product candidate, and we utilize the services of qualified contract manufacturers to make the remaining components of this system and for the manufacturing, testing, packaging and storage of our plasmid product candidate for clinical trials or other studies. The manufacture of our systems and product supplies requires significant expertise and capital investment, including the use of advanced manufacturing techniques and process controls. We do not own and have no plans to build our own clinical or commercial Good Manufacturing Practices ("GMP") manufacturing capabilities for any device, drug substance or drug product. We expect to increase our reliance on third-party manufacturers.

We rely upon a small number of suppliers and manufacturers for our clinical activities. For manufacturing and distributing we use Cryosite, PCI, Richter-Helm Biologics, VGXI, Baxter Oncology GmbH, SGS, Minnetronix and EG Medacys, which collectively account for approximately 90% of clinical materials and EP systems support and materials. We believe there are alternate sources of raw material supply and finished goods manufacturing to satisfy our requirements, although transitioning to other vendors, if necessary, could result in significant delay or material additional costs. In addition, for combination trials, we typically rely exclusively on one supplier of the non-company-owned product used in the trial, such as our reliance upon Merck for the supply of KEYTRUDA® in the KEYNOTE-695 and KEYNOTE-890 studies.

We are ISO 13485:2016 certified and comply with all appropriate standards and authorities for the assembly, manufacturing and activities we conduct, and we have established an audited quality management system for these activities. In addition, all contract manufacturers that we use must comply with various requirements enforced by the FDA through its facilities inspection programs. See "Regulation" below for more information.

Competition

The biotechnology industry is intensely competitive. This competitive environment stimulates an ongoing and extensive search for technological innovation and necessitates effective and targeted marketing strategies to communicate the effectiveness, safety and value of products to healthcare professionals in private practice and group practices and payors in managed care organizations, group purchasing organizations, and Medicare and Medicaid services.

We face competition from a number of sources, including large pharmaceutical companies, biotechnology companies, academic institutions, government agencies and private and public research institutions. We compete against all other developers of cancer treatments, including other immunotherapy treatments as well as other types of treatments for the cancer indications on which we are focused. In particular, a number of companies, some of which are large, well-established pharmaceutical companies, have development strategies similar to our current focus. These companies could include, among others, Bristol Myers-Squibb, Iovance Therapeutics, Syndax, Dynavax Technologies, Checkmate, Immunomedics and Idera Pharmaceuticals. In addition, we also compete with other clinical-stage biotechnology companies for funding and support from healthcare and other investors and potential collaboration relationships with larger pharmaceutical or other companies, as well as for personnel with expertise in our industry. We are smaller and less well-funded than many of our competitors, and we have a shorter and less proven operating history and a less recognizable and established brand name than many of our competitors. In addition, some of our competitors have commercially available products, which provide them with operating revenue and other competitive advantages.

Our competitors may obtain regulatory approval of their product candidates more rapidly than we can or may obtain more robust patent protection or other intellectual property rights to protect their product candidates and technologies, which could limit or prevent us from developing or commercializing our product candidates. If we are able to obtain regulatory approval of one or more of our product candidates, we will face competition from approved products or products under development by larger companies that may address our targeted indications. If we directly compete with these very large entities for the same markets and/or customers, their greater resources, brand recognition, sales and marketing experience and financial strength could prevent us from capturing a share of these markets or customers. 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, less costly or more widely accepted for other reasons than any of our products that obtain regulatory approvals, and our competitors may also be more successful than us in manufacturing, distributing and otherwise marketing their products.

We expect our product candidates, if approved and commercialized, to compete on the basis of, among other things, product efficacy and safety, time to market, price, coverage and reimbursement by third-party payors, extent of adverse side effects and convenience of treatment procedures. We may not be able to effectively compete in any of these areas. Presently, we compete with other biotechnology companies for funding and support on the basis of our technology platforms and the potential value of our product candidates based on the factors described above.

Intellectual Property

We believe our success and ability to compete depends in large part on our ability to protect our proprietary rights and technologies, including obtaining and maintaining patent, trademark and trade secret protection of our product candidates and their respective components and underlying technologies, including devices, formulations, manufacturing methods and methods of treatment, and appropriately safeguarding unpatented proprietary rights, including trade secrets and know-how. As of October 2020, we owned 14 issued patents (3 U.S. and 11 foreign) and 58 pending patent applications (18 U.S. and 40 foreign). We are currently prosecuting pending patent applications in various jurisdictions. One of our patent applications in the US, with claims directed to cytokine-based intratumoral immunotherapies in combination with a checkpoint inhibitor, was issued on October 1, 2019. In April 2020, we received a decision to grant for a European patent application with claims directed to an electroporation device having a central probe for administering a therapeutic. Also in April 2020, we received a decision to grant for a European patent application with claims directed to electroporation of TAVO (IL-12)_in combination with a plasmid encoding an immune co-stimulator for use in the treatment of cancer. In addition, we have licensed intellectual property rights that allow us to use certain EP technology to deliver DNA-based cytokines as an immunotherapy, as well as catheter-based delivery devices. From these in-licensed portfolios, we have access to 78 issued U.S. and foreign issued patents (6 from USF, 14 from Gaeta Therapeutics, and 58 from Inovio Pharmaceuticals, Inc. (Inovio)) and 14 U.S. and foreign pending patent applications (2 from USF, 4 from Gaeta Therapeutics, and 8 from Inovio). We expect to continue to file additional patent applications, if and when appropriate, as our research and development efforts continue. The majority of the patents in our portfolio, including owned and in-licensed patents and fundamental patents directed toward our proprietary technology, expire between 2021 and 2040. We have previously obtained patent protection through an asset purchase agreement with Inovio covering our original clinical electroporation device. The primary patents providing protection of this original device have expired. However, the Company has recently filed applications, in 2019 and 2020, on our next generation electroporation devices and applicator handles and our next generation DNA-based cancer immunotherapeutics and will continue to file patent applications this year.

In addition, we have entered into a cross-license agreement for certain electroporation technology with Inovio, including patent protection for some of our clinical electroporation devices (some of which, as noted above, have recently expired or will soon expire). Under the terms of the agreement, Inovio has granted us a non-exclusive, worldwide license under certain of its electroporation patents, and in exchange, we have granted to Inovio an exclusive license to certain of our purchased technology in a limited field of use.

Regulation

Commercialization Approval for our Product Candidates

Biotechnology companies are subject to extensive, complex, costly and evolving government regulation relating to the ability to market and sell any therapeutic or medical device. In the United States, these regulations are principally enforced by the FDA and state government agencies. Outside the United States, these regulations are typically administered by various health authorities comparable to the FDA in countries where products or product candidates are researched, tested, manufactured and/or marketed.

United States

General

In the United States, the federal Food, Drug and Cosmetic Act, or FDCA, other state statutes and regulations, many of which are administered and enforced by the FDA, govern or influence, among other things, the research, development, testing, manufacturing, storage, record-keeping, approval, labeling, promotion, marketing, distribution, post-approval monitoring and reporting, sampling, import and export of product candidates such as ours. Under these regulations, we and our contract manufacturers may be subject to periodic inspection of our facilities, quality control and other procedures, and operations and/or the testing of our product candidates during and after the approval process for a product candidate, to confirm compliance with all applicable regulations, including current good manufacturing practices and other applicable requirements.

Possible penalties or other consequences for failure to comply with these regulatory requirements include, among others, observations, notices, citations and/or warning letters that could force us to modify our clinical programs or other activities; clinical holds on our ongoing clinical programs; adverse publicity from the FDA or others; the FDA's suspension of its review of pending applications; fines; product recalls or seizures; total or partial suspension of production and/or distribution; labeling changes; withdrawal of previously granted product approvals; enforcement actions; injunctions and civil or criminal prosecution. Any such sanctions, if imposed, could have a material adverse effect on our business, operating results and financial condition.

Approval Process

Before any new drug, device or dosage form, including a new use of a previously approved drug or biologic, can be marketed in the United States, FDA approval is required. The process required by the FDA before a product may be marketed in the United States generally involves, among other things:

- completion of non-clinical testing;
- completion of chemistry, manufacturing, and control testing, commonly known as CMC;
- submission to the FDA of an investigational new drug application ("IND") for human clinical testing, which must be accepted and effective before human clinical trials may begin in the United States;
- performance of adequate human clinical trials in accordance with good clinical practices to establish the safety and efficacy of the proposed product for each intended use;

- for a stand-alone medical device, submission to the FDA of a premarket approval application ("PMA") or 510(k) premarket notification, which the FDA must review and approve; and

- for a therapeutic, submission to the FDA of a NDA or BLA which the FDA must review and approve.

The pre-clinical and clinical testing and approval process can take many years and requires substantial company time, effort and financial resources. The receipt and timing of approval, if any, is uncertain. The results of pre-clinical tests, together with certain manufacturing information, analytical data and a proposed clinical trial protocol and other information, are submitted as part of an IND to the FDA. Once an IND is in effect, the protocol for each clinical trial to be conducted under the IND must be submitted to the FDA, which may or may not allow the trial to proceed. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Clinical trials involve the administration of the investigational new drugs or biologics to human subjects under the supervision of qualified investigators in accordance with good clinical practice requirements. For purposes of an NDA or BLA submission and approval, human clinical trials are typically conducted in the following sequential phases, which may overlap or be combined:

- *Phase 1*: The product candidate is initially introduced to healthy human subjects or patients and tested for safety, dose tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain an early indication of its safety, tolerability and effectiveness.

- *Phase 2*: The product candidate is administered to a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted indications, and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted.

- *Phase 3*: The product candidate is administered in an expanded patient population at multiple, geographically-dispersed clinical trial sites, to obtain additional evidence of clinical efficacy and safety and to establish the overall risk-benefit relationship of the product candidate.

- *Phase 4*: In some cases, the FDA may condition approval of an NDA or BLA for a product candidate on the sponsor's agreement to conduct additional post-approval clinical trials to further assess the safety and efficacy of the drug or biologic.

The results of product development, pre-clinical studies and clinical trials are submitted to the FDA as part of an NDA or BLA requesting approval to market the product. NDAs or BLAs must also contain extensive information relating to the product's pharmacology, chemistry, manufacture, controls, and proposed labeling, among other things.

Once the NDA or BLA submission has been accepted, the FDA begins an in-depth substantive review. Pursuant to the FDA's performance goals, NDA and BLA standard reviews are to be completed within 10 months, subject to extensions by the FDA. Before approving an NDA or BLA, the FDA often inspects the facility or facilities where the product is manufactured and will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with good manufacturing practices. Additionally, the FDA will typically inspect one or more clinical sites to assure compliance with good clinical practices before approving an NDA or BLA. If the FDA determines that an NDA or BLA is not approvable, then the FDA may outline the deficiencies and often will request that additional information be provided or additional clinical trials be completed. Notwithstanding the submission of any requested additional testing or information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

Further, even if regulatory approval of a product candidate is obtained, such approval would specify the indicated uses for which the product may be marketed. Additionally, we would be subject to pervasive and continuing regulation by the FDA with respect to any approved product, including requirements related to, among other things, drug or device listing, record-keeping, periodic reporting, product sampling and distribution, manufacturing practices, labeling, advertising, promotion, and reporting of adverse events associated with any approved products. Moreover, we could be required to conduct post-approval studies, such as Phase 4 clinical trials, or surveillance programs to monitor the safety of any approved products. FDA has the authority to stop or limit further marketing of a product or impose more stringent labeling restrictions based on the results of these post-approval programs or in the event of any unexpected or serious health or safety concern regarding any approved product.

Non-U.S. Regulation

If we pursue research and/or commercialization activities for our product candidates outside the United States, we would need to obtain necessary approvals from the regulatory authorities comparable to the FDA in applicable jurisdictions before we could commence clinical trials or marketing of our product candidates in these jurisdictions. In addition, we would become subject to a variety of foreign regulations regarding safety and efficacy of our product candidates and governing, among other things, clinical trials, commercial activities, manufacture and distribution of our product candidates. The requirements to obtain product approvals vary widely from country to country, and the FDA's approval requirements, review procedures and timelines may not be the same as or even similar to the requirements or a comparable foreign regulator. As a result, even if we obtain regulatory approval for a product candidate in one country, we may be required to undertake additional clinical trials or studies, submit additional information, wait for longer review periods or make other efforts in order to obtain regulatory approvals in other desirable geographic markets.

Healthcare Laws and Regulations

The healthcare industry is heavily regulated, constantly evolving and subject to significant change and fluctuation. The U.S. federal and state healthcare laws and regulations that currently impact our business include, among others:

- the laws and regulations administered and enforced by the FDA, including the FDCA, and other federal statutes and regulations, discussed above;
- the federal Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act, referred to collectively as the Affordable Care Act, which, in general and among other things, expands the government's investigative and enforcement authority, including requiring pharmaceutical companies to record and disclose to government agencies any transfers of value to doctors and teaching hospitals, and increases the penalties for fraud and abuse, including amendments to the federal False Claims Act and the Anti-Kickback Statute to make it easier to bring suits under these statutes;
- the federal Anti-Kickback Statute, which generally prohibits, among other things, soliciting, receiving or providing remuneration to induce the referral of an individual for an item or service or the purchasing or ordering of an item or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;
- the federal false claims laws, which generally prohibit, among other things, knowingly presenting or causing to be presented claims for payment from Medicare, Medicaid or other third-party payors that are false or fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1986, or HIPAA, as amended by the federal Health Information Technology for Economic and Clinical Health Act, or HITECH, which, in general and among other things, establish comprehensive federal standards with respect to the privacy, security and transmission of individually identifiable health information and impose requirements for the use of standardized electronic transactions with respect to transmission of such information; and
- analogous state and foreign laws and regulations, such as anti-kickback and false claims laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not be preempted by applicable federal laws, thus complicating compliance efforts.

Additionally, the healthcare compliance environment is continuously changing, with proposed revisions to or replacement of the Affordable Care Act at the federal level and with some states mandating implementation of compliance programs, compliance with industry ethics codes, spending limits and reporting to state governments of gifts, compensation and other remuneration to physicians. Further, to the extent we continue to pursue operations in foreign countries, such as our clinical activities in Australia, or in Canada, or if we seek to sell any product that obtains regulatory approval in a foreign country, we would be subject to different reporting and other compliance requirements in multiple jurisdictions, including foreign laws and regulations comparable to the U.S. laws and regulations described above.

All of these laws impose penalties for non-compliance, some of which may be severe. If we or our operations are found to be in violation of any of these laws or any other governmental regulations that apply to us, we may be subject to civil or criminal penalties, fines or other monetary damages or orders forcing us to curtail or restructure our operations.

Other Regulatory Requirements and Environmental Matters

We are or may become subject to various laws and regulations regarding laboratory practices and the experimental use of animals, as well as environmental laws and regulations governing, among other things, any use and disposal by us of hazardous or potentially hazardous substances in connection with our research. In each of these areas, the FDA and other government agencies have broad regulatory and enforcement powers, including, among other things, the ability to levy fines and civil penalties, suspend or delay issuance of approvals, seize or recall products and withdraw approvals.

In addition, to the extent we continue to pursue operations in foreign jurisdictions, we will be subject to anti-bribery laws in the United States and applicable foreign jurisdictions, including the U.S. Foreign Corrupt Practices Act, or FCPA, and comparable foreign laws. Further, we are subject to a variety of laws and regulations relating to other matters, including workplace health and safety, labor and employment, public reporting and taxation, among others, and our failure to comply with these laws and regulations may result in a variety of administrative, civil and criminal enforcement measures, including monetary penalties or imposition of sanctions or other corrective requirements.

Recent Events

On August 16, 2020, we completed a registered direct offering for the issuance and sale of 4,608,589 shares of our common stock, at an offering price of $3.25 per share. Aggregate gross proceeds from the offering were approximately $15 million, and net proceeds received after deducting placement agent fees and offering expenses were approximately $13.7 million.

Our Team

Our senior management team and board of directors have decades of experience, each demonstrating a strong track record of success in the biotechnology and pharmaceutical industries, including in research and development, commercialization and financing activities. In addition, we have assembled a clinical and regulatory team experienced in developing and advancing novel therapeutic approaches through clinical testing and regulatory approvals, including extensive technical, manufacturing, analytical and quality experience to oversee our clinical, manufacturing and testing activities. Our team consists of a relatively small number of employees, as well as consultants and advisors regarding research and development, regulatory, compliance, healthcare and investor and public relations matters. We also expect to engage experts in healthcare and in general business to advise us in various capacities. For instance, we have in the past consulted with various oncology researchers and clinicians to provide counsel as part of our advisory panels for our clinical programs, and we expect to continue to establish consulting and advisory relationships with scientific, clinical and medical experts in academia and industry to assist us with FDA submissions, clinical testing and identification and development of new product candidates.

As of July 31, 2020, we had a total of 46 employees, including 42 full-time employees and four part-time employees. None of our employees are represented by a labor union or covered by a collective bargaining agreement, and we believe that our relations with our employees are good.

Corporate Information

We were incorporated under the laws of the State of Nevada in February 2008 under the name Netventory Solutions Inc. to pursue the business of inventory management solutions. In March 2011, we completed a merger with our subsidiary to change our name to "OncoSec Medical Incorporated," and we commenced operations as a biotechnology company upon our acquisition of assets from Inovio related to the use of drug-medical device combination products for the treatment of various cancers. Our principal executive offices are located at 24 North Main Street, Pennington, NJ 08534 and 3565 General Atomics Court, Suite 100, San Diego, California 92121. The telephone number for our principal executive offices is (855) 662-6732. Our website address is www.oncosec.com. Information contained on our website is not, and should not be considered, part of this report. We will make available free of charge through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and any amendments to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission, or SEC. We are not including the information on our website as a part of, nor incorporating it by reference into, this report. Additionally, the SEC maintains a website that contains annual, quarterly, and current reports, proxy statements, and other information that issuers (including us) file electronically with the SEC. The SEC's website address is http://www.sec.gov/.

In addition, we intend to use our media and investor relations website, SEC filings press releases, public conference calls and webcasts as wells as social media to communicate with our subscribers and the public about the Company, its services and other issues. It is possible that the information we post on social media could be deemed to be material information. Therefore, in light of the SEC's guidance, we encourage investors, the media and others interested in the Company to review the information we post on the U.S. social media channels listed on our website.

ITEM 1A. RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider each of the following risks, together with the other information contained in this report and the other documents we file with the SEC before making any investment decision with respect to our securities. If any of the risks described below materialize, our business, financial condition, prospects and/or operating results could be materially and adversely affected. These factors could cause the trading price of our common stock to decline, and you could lose all or a substantial part of your investment. The risks described below are not the only risks we face. Additional risks and uncertainties not currently known to us may also materially and adversely affect our business operations and financial condition or the price of our common stock.

Risks Related to Our Business

Our majority stockholder may have significant influence over the outcome of matters submitted to our stockholders for approval, which may prevent us from engaging in certain transactions.

As the date hereof, one shareholder owns approximately 43% of the Company's common stock. As a result, this stockholder may exercise significant influence over all matters requiring stockholder approval, including the appointment of our directors and the approval of significant corporate transactions. This ownership and control may also have the effect of delaying or preventing a future change in control, impeding a merger, consolidation, takeover or other business combination that may be in the best interest of the Company and any other stockholders.

We have never generated, and may never generate, revenue from our operations.

We have not generated any revenue from our operations since our inception, and we do not anticipate generating meaningful revenue in the near term. During our fiscal year ended July 31, 2020, we incurred a net loss of approximately $42.3 million, and from inception through July 31, 2020, we have incurred an aggregate net loss of approximately $207 million. We will need significant additional funding to continue our operations and pursue our strategic plans, including continued development of our ImmunoPulse® IL-12. Although we have been and expect to continue to tightly manage our operating expenses, we expect our operating expenses will continue to increase as we further our development activities and pursue FDA approval for one or more of our product candidates.

Because of the numerous risks and uncertainties associated with our product development and planned commercialization efforts, many of which are discussed in these risk factors, we are unable to predict the extent of our future losses or when or if we will generate meaningful revenue or become profitable, and it is possible we will never achieve these goals. Our failure to develop our investments in our proprietary technologies and product candidates into revenue-generating operations would have a material adverse effect on our business, results of operations, financial condition, and prospects and could result in our inability to continue operations.

We have limited working capital and a history of losses, which raises substantial doubt as to whether we will be able to continue as a going concern.

Our auditor's report on our financial statements for the year ended July 31, 2020 includes a going concern paragraph. The Company has never generated any cash from its operations and does not expect to generate such cash in the near term. As a result, the Company has suffered recurring losses and requires significant cash resources to execute its business plans. These losses are expected to continue for an extended period of time. The aforementioned factors raise substantial doubt about the Company's ability to continue as a going concern within one year from the date of filing. The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The financial statements do not include any adjustments relating to the recoverability and classification of asset amounts or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern within one year after the date the financial statements are issued.

Our ability to obtain additional financing will depend on a number of factors, including, among others, our ability to generate positive data from our clinical and pre-clinical studies, the condition of the capital markets and the other risks described in these risk factors. If any one of these factors is unfavorable, we may not be able to obtain additional funding, in which case, our business could be jeopardized and we may not be able to continue our operations or pursue our strategic plans. If we are forced to scale down, limit or cease operations, our stockholders could lose all of their investment in our Company.

We will need to raise additional capital to continue operating our business, and additional funds may not be available when needed, on acceptable terms or at all.

As of July 31, 2020, we had cash and cash equivalents of approximately $20.4 million and, as of that date, we estimated our cash requirements for the following 12 months to be approximately $28 million. We do not generate any cash from our operations.

Historically, we have raised the majority of the funding for our business through offerings of our common stock and warrants to purchase our common stock. We are exploring other ways of funding our operations that involve less dilution to our existing stockholders, including, among others, technology licensing or other collaboration arrangements, debt financings or grants. We may need to continue to seek funding for our operations through additional dilutive public or private equity financings.

If we issue equity or convertible debt securities to raise additional funds, our existing stockholders would experience further dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. If we incur debt, our fixed payment obligations, liabilities and leverage relative to our equity capitalization would increase, which could increase the cost of future capital. Further, the terms of any debt securities we issue or borrowings we incur, if available, could impose significant restrictions on our operations, such as limitations on our ability to incur additional debt or issue additional equity or other operating restrictions that could adversely affect our ability to conduct our business, and any such debt could be secured by any or all of our assets pledged as collateral. Additionally, we may incur substantial costs in pursuing future capital, including investment banking, legal and accounting fees, printing and distribution expenses and other costs.

Moreover, equity or debt financings or any other source of capital may not be available to us when needed or at all, or, if available, may not be available on commercially reasonable terms. Weak economic and capital market conditions generally or uncertain conditions in our industry could increase the challenges we face in raising capital for our operations. In recent periods, the capital and financial markets for early and development-stage biotechnology and life science company stocks have been volatile and uncertain. If we cannot raise the funds that we need, we could be forced to delay or scale down some or all of our development activities or cease all operations, and our stockholders could lose all of their investment in our Company.

We are a clinical-stage company with a limited operating history and no approved products, which makes assessment of our future viability difficult and which may hinder our ability to generate revenue and meet our other objectives.

We are a clinical-stage, pre-commercial company with only a limited operating history upon which to base an evaluation of our current business and future prospects and how we will respond to competitive, financial or technological challenges. Excluding the SAS program under the Emerge agreement, none of our product candidates are commercially available. Additionally, although we are investigating licensing and partnering opportunities, no such opportunities have been finalized and, even if completed, we do not expect that these potential opportunities would generate any significant near-term revenue. Our operations to date have been limited to organizing, staffing and financing, applying for patent rights, undertaking clinical trials of TAVO-EP and engaging in other research and development activities, including pre-clinical and other clinical studies of our other product candidates. We have not demonstrated an ability to obtain regulatory approval of a product candidate, or conduct the sales and marketing activities necessary for successful product commercialization. Consequently, the revenue-generating potential of our business is unproven and uncertain.

In addition, we have limited insight into trends that may emerge and affect our business or our industry. We will be subject to the risks, uncertainties and difficulties frequently encountered by clinical-stage companies in evolving markets, and we may not be able to successfully address any or all of these risks and uncertainties. Further, errors may be made in predicting and reacting to relevant business or industry trends. The occurrence of any of these risks could cause our business, results of operations, and financial condition to suffer or fail.

We are significantly dependent on the success of our ImmunoPulse® technology platform and our product candidates based on this platform, including our lead product candidate TAVO.

We have invested, and we expect to continue to invest, significant efforts and financial resources in the development of product candidates based on our electroporation technology, including primarily our lead product candidate TAVO. Our ability to generate meaningful revenue, which may not occur for the foreseeable future, if ever, will depend heavily on the successful development, regulatory approval and commercialization of one or more of these product candidates, and such regulatory approval and commercialization may never occur. We are working on the commercial version of the OMS Electroporation Device which is currently being used in the KEYNOTE-695 trial so that it complies with current regulatory standards as a prerequisite for FDA clearance. We anticipate using this version of the OMS Electroporation Device in KEYNOTE-695 or in an expansion cohort of approximately 25 patients to enable our plan to file for accelerated approval. We are currently seeking FDA concurrence to use this updated version in the ongoing trial. We anticipate that we will also need to have clinical experience with this device before we seek regulatory approval for our product candidate. If we experience delays in completion of this work or FDA approval in using the modernized OMS Electroporation Device in our ongoing clinical trials, it could delay our clinical programs, necessitate enrolling more patients in our ongoing clinical trials, the commercialization our product candidate and have a material adverse effect on our business, results of operations, financial condition and prospects.

The success of TAVO our OMS Electroporation Devices or any other product candidates based on our electroporation technology will depend on a number of factors, including, among others:

- our ability to conduct and complete pre-clinical and clinical studies and trials, including the time, costs and uncertainties associated with all aspects of these trials;
- the data we obtain from pre-clinical and clinical testing of the product candidates, including data demonstrating the required level of safety and efficacy of the product candidates (for example, a key factor in determining whether we are able to successfully develop and commercialize TAVO in melanoma will be the data we obtain from our KEYNOTE-695 study, which is our ongoing study of TAVO in combination with Merck's approved therapy for melanoma in patients who have shown resistance to or relapse from certain other cancer therapies);
- the regulatory approval pathway we choose to pursue for our product candidates in the United States of America or any other jurisdiction;
- our ability to obtain required regulatory approvals for one or more of our product candidates in the United States and in other jurisdictions, and the time required to obtain these approvals, if they are ever obtained;
- the manufacturing arrangements we are able to establish with third-party manufacturers, both for the manufacture of the product candidates for clinical trial use and for the potential commercial manufacture of products, if and when approved;
- our ability to build an infrastructure capable of supporting product sales, marketing and distribution of any approved products in territories where we pursue commercialization directly;
- our ability to establish commercial distribution agreements with third-party distributors for any approved products in territories where we do not pursue commercialization directly;
- the labeling requirements for any product candidates that are approved, including obtaining sufficiently broad labels that would not unduly restrict our ability to market the product;

- acceptance of our products, if and when approved, by patients and the medical community;
- the ability of our products, if and when approved, to effectively compete with other cancer treatments;
- a continued acceptable safety profile for any product candidates that are approved following such approval;
- our level of success in obtaining and maintaining patent and trade secret protection and otherwise protecting our rights in our intellectual property portfolio;
- the levels of coverage and reimbursement we are able to secure for any product candidates that receive regulatory approval;
- our ability to establish a commercially viable price for our products, if and when approved; and
- delays or unanticipated costs, including those related to any of the foregoing.

If one or more of these factors is unfavorable, we could experience significant delays or we may not be able to successfully commercialize TAVO or any of our other product candidates, which would materially harm our business.

We may not be successful in our efforts to identify or discover additional product candidates and may fail to capitalize on programs or product candidates that may present a greater commercial opportunity or for which there is a greater likelihood of success.

The success of our business depends upon our ability to identify, develop and commercialize product candidates based on our programs. If we do not successfully develop and eventually commercialize products, we will face difficulty in obtaining product revenue in future periods, or may never obtain such revenue, resulting in significant harm to our financial position and adversely affecting our share price. Research programs to identify new product candidates require substantial technical, financial and human resources.

Additionally, because we have limited resources, we may forego or delay pursuit of opportunities with certain programs or product candidates or for indications that later prove to have greater commercial potential. Our estimates regarding the potential market for a product candidate could be inaccurate, and our spending on current and future research and development programs may not yield any commercially viable products. If we do not accurately evaluate the commercial potential for a particular product candidate, we may relinquish valuable rights to that product candidate through strategic collaboration, licensing or other arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. Alternatively, we may allocate internal resources to a product candidate in a therapeutic area in which it would have been more advantageous to enter into a partnering arrangement.

If any of these events occur, we may be forced to abandon or delay our development efforts with respect to a particular product candidate or fail to develop a potentially successful product candidate, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

It may be difficult to identify and enroll patients due to clinical trial inclusion-exclusion criteria or other factors, which has in the past, and may in the future, lead to delays in enrollment and in generating clinical data for our trials.

Our clinical trials have had, and may have in the future, strict inclusion criteria for patient enrollment. These criteria could present significant obstacles to the timely recruitment and enrollment of a sufficient number of eligible patients into our trials. We may experience slower than expected patient enrollment in our existing or future clinical trials. Any inability to successfully enroll the number of patients meeting the criteria for any of our clinical trials could cause significant delays in the trial and increase the costs associated with the trial, which could materially harm our business and prospects.

Patient enrollment in a clinical trial may be affected by many factors, including:

- the severity of the disease under investigation;
- the design of the study protocol;
- the eligibility criteria for the study;
- the perceived risks, benefits and convenience of administration of the product candidate being studied;
- the novel 2019 coronavirus ("COVID-19");
- the competitive disease space with many trials for patients to select from; and
- the proximity and availability of clinical trial sites to prospective patients.

Business or economic disruptions or global health concerns could seriously harm our development efforts and increase our costs and expenses.

Broad-based business or economic disruptions could adversely affect our ongoing or planned research and development or clinical activities. For example, in December 2019 an outbreak of a novel strain of coronavirus originated in Wuhan, China, and has since spread to a number of other countries, including the United States. To date, this outbreak has already resulted in extended shutdowns of certain businesses in the Wuhan region and has had ripple effects to businesses around the world. The outbreak may result in additional or more extensive travel restrictions, closures, disruptions of businesses or facilities in China or other affected regions around the world or lead to social, economic, political or labor instability in the affected areas may impact our suppliers' or our customers' operations.

Global epidemics, such as the coronavirus, could also negatively affect the hospitals and clinical sites in which we conduct any of our clinical trials, which could have a material adverse effect on our business and our results of operations and financial condition. We cannot presently predict the scope and severity of any potential business shutdowns or disruptions, but if we or any of the third parties with whom we engage, including the suppliers, clinical trial sites, regulators and other third parties with whom we conduct business, were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted.

Certain characteristics of our ImmunoPulse® platform may negatively impact market acceptance of the platform.

Physicians, patients, and third-party payors may be less accepting of product candidates based on our ImmunoPulse® technology platform due to certain characteristics of this platform. For example, these parties may have concerns about the complexity inherent in a combination therapy approach or the clinical application of electroporation technology, which is less prevalent in the United States than in certain foreign markets. Moreover, our efforts to educate the medical community and third-party payors about the benefits of any of our technologies and product candidates may require significant resources and may never be successful. As a result, even if any of our product candidates achieve regulatory approval, a lack of acceptance by physicians, third-party payors and patients of the products or underlying technologies could prevent their successful commercialization and could materially limit our revenue potential.

Our business and operations could be adversely affected by the effects of health epidemics, including the ongoing COVID-19 pandemic.

Our operational and financial performance have already been affected by the impact of the COVID-19 pandemic. Our clinical trials have experienced delays in patient enrollment, potentially due to prioritization of hospital resources toward the COVID-19 pandemic, or concerns among patients about participating in clinical trials during a public health emergency. The COVID-19 pandemic is also affecting the operations of government entities, such as the FDA, as well as contract research organizations, third-party manufacturers, and other third-parties upon whom we rely. As a result of "shelter-in-place" orders, quarantines or similar orders or restrictions to control the spread of COVID-19, many companies, including our own, have implemented work-from-home policies for their employees. The effects of these stay at home orders and work-from-home policies may be negatively impacting productivity, resulting in delays in our clinical programs and timelines. The extent of the impact on our operations depends in part on the time these restrictions remain in place, and whether restrictions are reinstated as a result of a rising surge in COVID-19 cases. These and similar disruptions in our operations could negatively impact our business, operating results and financial condition.

The spread of COVID-19 has also led to disruption and volatility in the global capital markets, which increases the cost of, and adversely impacts access to, capital and increases economic uncertainty. To the extent the COVID-19 pandemic adversely affects our business, financial results and value of our common stock, it may also affect our ability to access capital and obtain financing, which could in the future negatively affect our liquidity and ability to continue as a going concern.

The global pandemic of COVID-19 continues to evolve rapidly, and the ultimate impact of the COVID-19 pandemic or a similar health epidemic is highly uncertain and subject to change. We do not yet know the full impact of potential delays or effects on our business, our clinical trials, our ability to access the capital markets, or supply chains or on the global economy as a whole. However, these effects could have a material impact on our operations, and we will continue to monitor the COVID-19 situation closely.

If the commencement or completion of clinical testing for our product candidates is delayed or prevented, we could experience significantly increased costs and our ability to pursue regulatory approval or generate revenue could be delayed or limited.

Clinical trials are very expensive, time-consuming, unpredictable and difficult to design and implement. Even if we are able to complete our ongoing and currently proposed clinical trials and assuming the results are favorable, clinical trials for product candidates based on our technology are planned to continue for several years and may take significantly longer than expected to complete. Even with the Fast Track designation we received from the FDA for TAVO in metastatic melanoma in February 2017, additional clinical trials, which can take years to complete, are still required.

Delays in the commencement or completion of clinical testing could significantly affect our product development costs and business plan. We do not know and cannot predict whether any of our ongoing or planned trials or studies will be completed on schedule or at all. We also do not know and cannot predict whether any other pre-clinical or clinical trials, including Phase 3 clinical trials to follow completion of our ongoing or any other Phase 2 clinical trials, will be planned or will begin, and in many cases such future trials would be dependent on obtaining favorable results from preceding studies.

The commencement and completion of clinical trials can be delayed or prevented for many reasons, including due to delays or issues related to:

- obtaining clearance or approval from the FDA or a comparable international regulatory body and other applicable agencies, including the U.S. National Institutes of Health, to commence a clinical trial;

- reaching agreement on acceptable terms with prospective clinical research organizations, or CROs, clinical investigators and trial sites;

- obtaining institutional review board, or IRB, and institutional biological committee, or IBC, approval to initiate and conduct a clinical trial at a prospective site;
- identifying, recruiting and training suitable clinical investigators;
- identifying, recruiting and enrolling subjects to participate in clinical trials, which can pose challenges for a variety of reasons, including competition from other clinical trial programs for similar indications, requirements for larger than anticipated patient populations, slower than expected enrollment, or higher than predicted rates of patient drop-out or withdrawal;
- natural disaster, epidemics, pandemics, political crisis (such as terrorism, war, political instability or other conflict), or other events outside of our control;
- retaining patients who have initiated a clinical trial but who may be prone to withdraw due to side effects from the therapy, lack of efficacy, personal issues, death or for any other reason, or who are lost to further follow-up; and
- identifying and maintaining a sufficient supply of necessary products or product candidates, including those produced by third parties, on commercially reasonable terms.

With respect to any clinical trial we plan, the FDA could determine it is not satisfied with our plan or the details of our clinical trial protocols and designs and could put a clinical hold on the proposed trials, or issue a clinical holder after a trial has commenced. Any such determination could delay the commencement or completion of the trials and would be a setback for the commercialization strategy for the product candidate that is the subject of the trial. Additionally, changes in applicable regulatory requirements and guidance may occur, in which case clinical trial protocols may need to be amended to reflect these changes. Any such amendments could require us to resubmit our clinical trial protocols to IRBs or IBCs for reexamination, which could impact the costs, timing and successful completion of a clinical trial. If we experience delays in completion of, or if we terminate, any of our ongoing, planned or future clinical trials, the commercial prospects for our product candidates could be harmed, which could have a material adverse effect on our business, results of operations, financial condition and prospects.

To the extent we conduct clinical trials of our product candidates in combination with third parties' products, we will face additional risks relating to these products.

To the extent our commercialization strategy includes the combination of our product candidates with third parties' products or product candidates, we will likely be required to conduct clinical studies to evaluate the combinations. We have several ongoing and planned combination trials, and these combination studies involve additional risks due to their reliance on circumstances outside our control, such as those relating to the availability and marketability of the third-party product involved in the study. If the marketability of third-party products such as KEYTRUDA® is impacted, or if we are unable to secure and maintain a sufficient supply of such third-party products when needed on commercially reasonable terms, our clinical studies could be delayed or we could be forced to terminate these studies. Such a delay or termination could have a material negative impact on our development strategy, business, results of operations, financial condition, and prospects.

If serious adverse or unacceptable side effects are identified during the development of one or more of our product candidates or any future product candidate, we may need to address any serious safety concerns as part of ongoing or post-marketing surveillance efforts; otherwise we may need to modify, limit or discontinue development efforts related to some of our product candidates.

Establishing the safety of a new product is one of the principal objectives of any clinical trial. Adverse events, including serious adverse events, suspected adverse reactions, and unexpected adverse events, and their proper reporting, form the basis of the critical risk-benefit analysis of investigational drug therapies. If adverse events are identified during the development of one or more of our product candidates or any future product candidates, we may need to address any serious safety concerns as part of ongoing or post market surveillance efforts. Alternatively, we may need to modify, limit or discontinue the development of these product candidates to more narrow uses or subpopulations in which the adverse events, undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. In the development of new and investigational drug therapies in this industry, many compounds that initially showed promise in early stage testing have later been associated with adverse events, including serious adverse events that have subsequently prevented further development of the compound. It is not uncommon for an adverse event to be encountered during a clinical trial. Upon discovery of an adverse event, sponsors are generally required to investigate this event in order to determine whether there is enough evidence to suggest that there was a reasonable possibility that the drug caused the adverse event.

In the event that adverse events, including serious adverse events, suspected adverse reactions, and unexpected adverse events are identified during any of our clinical trials, these trials could be modified, limited, suspended or terminated. Such adverse events may trigger a notification requirement to the FDA or comparable foreign regulatory authorities, who in turn could order us to cease further development or deny approval of one or more of our product candidates or any future product candidates for any or all targeted indications. The FDA could also issue a letter requesting additional data or information prior to making a final decision regarding whether or not to approve a product candidate. The number of requests for additional data or information issued by the FDA in recent years has increased and has resulted in substantial delays in the approval of several new drugs. Adverse events or undesirable side effects caused by one or more of our product candidates or any future product candidates could also result in the inclusion of unfavorable information in our product labeling, such as a Black Box warning, or denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing and generating market acceptance and revenues from the sale of that product candidate. Adverse events or side effects could affect patient recruitment or the ability of enrolled patients to complete the trial and could result in potential product liability claims.

No matter how extensive clinical trials and premarket studies may be, the safety profile of a new therapeutic product can only be fully characterized by continuing safety surveillance through a spontaneous adverse event monitoring system and a post-marketing surveillance study. FDA may require post-marketing testing, known as Phase 4 testing, risk evaluation and mitigation strategies, and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered. It well understood in the drug development process that drug safety can never be considered an absolute, since the safety profile of a new therapeutic product will continue to evolve as more and more information is generated, gathered, and assessed.

Additionally, if one or more of our product candidates or any future product candidates receive marketing approval and we or others later identify undesirable side effects caused by this product, a number of potentially significant negative consequences could result, including:

- regulatory authorities may require the addition of unfavorable labeling statements, including specific warnings, black box warnings, adverse reactions, precautions, and/or contraindications;
- regulatory authorities may suspend or withdraw their approval of the product, and/or require it to be removed from the market;

- we may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product; or
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of any of our product candidates or any future product candidates, or could substantially increase our commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenues, or any revenues, from its sale.

We rely on third parties to conduct our clinical trials and other studies, and if these third parties do not successfully carry out their duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have entered into, and expect to continue to enter into, agreements with third-party CROs to help us manage critical aspects of the clinical trials we sponsor. We rely on these third parties for the execution of certain of our clinical and pre-clinical studies, and we only control certain aspects of their activities. We and our CROs are required to comply with the FDA's regulations for conducting clinical trials and good clinical practice, as well as the guidelines of the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use. We are also required to harmonize standard operating procedures between companies and conduct periodic internal and vendor audits to ensure compliance. Additionally, the FDA and comparable foreign regulators enforce these good clinical practice regulations through periodic inspections of trial sponsors, principal investigators, trial sites, laboratories and other entities involved in the completion of the study protocol and processing of data.

If we or our CROs fail to comply with applicable good clinical practice or other regulations, the data generated in our clinical trials may be deemed unreliable and/or the FDA or comparable foreign regulators may refuse to accept the data, and these regulators may require us to perform additional or repeat clinical trials, which could significantly increase costs and delay the regulatory approval process. Additionally, repeated compliance failures could prompt the FDA or other regulatory authority to suspend or terminate a clinical trial, which could cause significant approval delays and increased costs. Further, if CROs do not otherwise successfully carry out their contractual duties or obligations or meet expected deadlines or if the quality or accuracy of the clinical data they obtain is compromised for any reason, our clinical trials may need to be extended, delayed or terminated or we may not be able to rely on the data produced by the trials. Moreover, if any of our relationships with third-party CROs terminate before completion of a clinical trial, we may not be able to establish arrangements with alternative CROs on commercially reasonable terms, on a timely basis or at all, which could materially delay or jeopardize the trial. Any such occurrence could delay or prevent us from obtaining regulatory approval for our product candidates or successfully commercializing our product candidates, which could increase our costs, delay or eliminate our prospects for generating revenue, and otherwise materially harm the results of our operations, financial condition and prospects.

We rely on clinical data and results obtained by third parties that could ultimately prove to be inaccurate or unreliable.

As part of the strategy implemented to mitigate development risk, we seek to develop product candidates with well-studied mechanisms of action and we utilize biomarkers to assess potential clinical efficacy early in the development process. This strategy necessarily relies upon clinical data and other results produced or obtained by third parties, which may ultimately prove to be inaccurate or unreliable. If the third party data and results we rely upon prove to be inaccurate, unreliable or not applicable to our product candidates, we could make inaccurate assumptions and conclusions about the product candidates, and our research and development efforts could be compromised and called into question for any marketing applications we submit.

We may be subject to claims that our consultants or independent contractors have wrongfully used or disclosed to us alleged trade secrets of their other clients or former employers.

As is common in the biopharmaceutical industry, we engage the services of consultants to assist in the development of product candidates. Many of these consultants were previously employed at or may have previously been or are currently providing consulting services to, other pharmaceutical companies, including our competitors or potential competitors. We may become subject to claims related to whether these consultants have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers or their former or current customers. Litigation may be necessary to defend against these claims. Even if we are successful in defending these claims, litigation could result in substantial costs and be a distraction to management.

We have participated in, and continue to participate in, clinical trials conducted under an approved investigator-sponsored investigational new drug application, and we have little or no control over the conduct or timing of, or FDA communications regarding, these trials.

We have participated in and continue to participate in clinical trials conducted under an approved investigator-sponsored investigational new drug, (IND), application. We also have plans to participate in future investigator-sponsored trials under both INDs and Investigational Device Exemptions (IDEs), since our product candidates are drug-device combination products. In investigator-initiated trials, the investigator typically designs and implements the study and the investigator or its institution acts as the sponsor of the trial. This trial has control over the design, conduct and timing of the trial, and as a result, we have limited or no control over the commencement, conduct and completion of these investigator-initiated trials. In addition, regulations and guidelines imposed by the FDA with respect to INDs and IDEs include a requirement that the sponsor of a clinical trial perform the study in accordance with an approved investigational plan, and provide ongoing communication with the FDA as it pertains to the safety of the drug, device, or treatment being tested. It is the responsibility of the investigator, as the sponsor of the trial, to be the sole point of contact with the FDA for these communications and to exercise all decision-making authority regarding these or other submissions to the FDA about the trial. Consequently, we may have little or no control over the content or timing of these communications, including whether they are timely, accurate or complete. Any failures by the investigator sponsoring these trials could result in reviews, audits, delays or clinical holds by the FDA that could negatively affect the timelines for these trials or jeopardize their completion. As a result, our lack of control over the conduct and timing of, and communications with the FDA regarding, these investigator-sponsored trials expose us to additional risks, many of which are outside of our control and the occurrence of which could severely harm our performance and the commercial prospects for our product candidates.

Regulatory authorities may not approve our product candidates, or any approvals we achieve may be too limited or too late for us to earn meaningful, or any, revenue.

The research, testing, and possible eventual manufacturing, labeling, approval, selling, marketing and distribution of our product candidates are subject to extensive regulation by the FDA and other regulatory authorities in the United States, as well as comparable regulatory bodies in other countries. These regulatory agencies have the authority to delay approval of or refuse to approve our product candidates for a variety of reasons, including, among others, the occurrence of adverse reactions or a failure to meet safety and efficacy endpoints in our clinical trials or otherwise to the satisfaction of the regulator, disapproval of our or our partners' trial design, or disagreement with our interpretation of data from pre-clinical studies or clinical trials. As a result, even if our product candidates achieve their endpoints in clinical trials, they still may not be approved by any of these regulatory agencies. Moreover, the requirements to obtain product approvals vary widely from country to country, and the FDA's approval requirements, review procedures and timelines may not be the same as or even similar to the requirements of a comparable foreign regulator. As a result, even if we obtain regulatory approval for a product candidate in one country, we may be required to undertake additional clinical trials or studies, submit additional information, wait for longer review periods or make other efforts in order to obtain regulatory approvals in other desirable geographic markets, or may not be able to achieve approval in those other desirable geographic markets.

Although we have seen no systemic drug-related adverse events in our trials and studies to date, if we cannot adequately demonstrate through the clinical trial process that a product candidate we are developing is safe and effective, regulatory approval of that product candidate may never be achieved, which could impair our reputation, increase our costs and delay or prevent us from generating revenue. Importantly, success in pre-clinical testing and early clinical studies does not ensure that later clinical trials will generate adequate data to demonstrate the required level of efficacy and safety of an investigational drug. A number of companies in the pharmaceutical and biotechnology industries, including many with greater resources and experience than we have, have suffered significant setbacks in clinical trials, even after obtaining promising results in Phase 2, and earlier studies. Further, even if a product candidate is approved, it may be approved for fewer or more limited indications than requested, may include substantial safety warnings or the approval may be subject to the performance of significant post-marketing studies. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of our product candidates. Any limitation, condition or denial of approval could have an adverse effect on our business, reputation and results of operations.

Furthermore, because of the substantial competition we face, even if we are ultimately able to achieve regulatory approval for one or more of our product candidates, delays in such regulatory approval could delay, limit or prevent our ability to successfully commercialize our product candidates if competing products obtain approvals before ours and gain market traction against which we are not able to compete. Moreover, we may be forced to reevaluate our development strategies and plans in the face of setbacks or other delays that could jeopardize the value of any regulatory approval that is obtained, which could include abandoning planned clinical trial efforts for a product candidate that we no longer believe has promising value as a commercial product. If we are not able to obtain or maintain required regulatory approvals for our product candidates or if we decide or are forced to abandon our efforts to obtain or maintain these approvals, we would have expended significant costs on assets that may never generate any return. Such an outcome would have a material adverse effect on our business, results of operations and financial condition, as well as on our continued viability as a company.

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

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

Our in-licensed intellectual property may not provide us with sufficient rights and may not prevent competitors from pursuing similar technology.

In addition to our owned proprietary rights, we have also exclusively licensed certain patents and patent applications that cover our current and future clinical platforms. These patents will expire between 2024 and 2032. These method patents protect the use of a product for a specified method under certain defined parameters. This type of patent does not prevent a competitor from making and marketing a product that is identical or similar to the protected product under parameters that are outside the scope of the patented method claims. Moreover, even if competitors do not actively promote such a product for the indications protected by the method patent, physicians could prescribe the products for these methods on an off-label basis. Although such off-label prescriptions may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to detect, prevent or prosecute.

We entered into a cross-license agreement with Inovio in 2011 for certain electroporation technology, which includes among other things, patents protecting our OMS Electroporation Device. Under the terms of the agreement, Inovio granted us a non-exclusive, worldwide license under certain of its electroporation patents, and in exchange, we granted to Inovio an exclusive license to certain aspects of our technology in a limited field of use. However, with the expiration of patents in 2020, no patents acquired by OncoSec under the agreement and licensed to Inovio remain active. Although we do not currently rely on the technology covered by the intellectual property licensed from Inovio, our product candidates could in the future utilize this technology. This license is non-exclusive. As such, Inovio could use the technology to compete with us or other competitors could use the technology that was covered by the intellectual property to compete with us.

We entered into a license agreement with Gaeta Therapuetics in May 2019. Under the license, we obtained exclusive worldwide rights to Gaeta Therapeutics' broad portfolio of patents and applications covering the combination use of IL-12 protein or DNA and various checkpoint inhibitor therapies, including anti-CTLA-4 and anti-PD-1 compounds, in key global markets. Although we do not currently rely on the intellectual property we have licensed from Gaeta, our product candidates could in the future utilize this intellectual property. The in-licensing of this portfolio provides patent protection on our current clinical methods in certain countries until at least 2032 and also gives us the potential to block others utilizing IL-12 in combination with various checkpoint inhibitors, which may not be part of our current clinical platform.

If we are not able to maintain our existing in-licenses or if we are not able to establish new in-licenses for any other third-party rights we need, we could become subject to significant costs or royalty or other fees to establish alternative license arrangements, if such licenses are available when needed, on acceptable terms or at all, or we could be forced to develop modifications to the affected product candidates or technologies to avoid reliance on the third-party rights, if such modifications are possible. If there is any conflict, dispute, disagreement or issue of non-performance between us and the respective licensing partner regarding the rights or obligations under the license agreements, including any conflict, dispute or disagreement arising from a failure to satisfy payment obligations under such agreements, the ability to develop and commercialize the affected product candidate may be adversely affected. Any inability to secure and maintain adequate rights to any third-party technologies necessary for the development of our product candidates could severely limit our continued research and development activities, our efforts to obtain product approvals and, if such approvals are obtained, our ability to commercialize the approved products, any of which would materially adversely impact our business and prospects.

We may become involved in litigation or other proceedings in our efforts to protect our patent and other intellectual property rights, which could require significant time and costs and would be subject to unpredictable outcomes.

We may become aware of activities by third parties, including our competitors, that infringe our issued patents or other intellectual property rights. If we choose to file a lawsuit against a potentially infringing third party to try to enforce our patents or other intellectual property rights, the third party may seek a ruling that the patents are invalid and/or should not be enforced. Such a ruling could severely limit our ability to protect our rights from use by third parties. Further, patent law is a constantly evolving body of law, and changes can affect our rights and our ability to execute on our strategy and our financial results. In the past several years, the U.S. Supreme Court has revised certain tests regarding assessing the validity of patents, which could result in the invalidation of issued patents and/or their claims based on the application of the current patent validity standards. As a result, in the event of any patent infringement litigation or other proceedings involving our patents, our patents could be subject to challenge and subsequent invalidation or significant narrowing of claim scope under the current standards. Moreover, even if the validity of our patents is upheld in a patent infringement lawsuit, a court could refuse to stop a third party's activities on the grounds that the activities do not infringe the specific claims of our patents. Further, even if we were successful in stopping the infringing activity, patent infringement lawsuits are expensive and could consume significant time, management attention, capital and other resources. Any claims we assert against accused infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents; or provoke those parties to petition the United States Patent and Trademark Office, or USPTO, to institute *inter partes* review against the asserted patents, which may lead to a finding that all or some of the claims of the patent are invalid.

These risks of third parties' infringement of our intellectual property rights may increase if we engage in discussions, collaborations or other strategic arrangements with third parties. Also, new challenges could arise if and to the extent we pursue engagements with third parties located outside the United States. These factors could increase the risks and costs associated with building and protecting our intellectual property portfolio and could adversely affect our performance and our business prospects. Despite efforts to protect our proprietary information during such discussions, third parties may unintentionally or willfully disclose or convert our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches.

Third parties may claim that we infringe their proprietary rights, which could prevent us from pursuing our clinical and other studies and other research and development activities.

The validity and infringement of patents or proprietary rights of third parties has been the subject of substantial litigation in the biotechnology industry. In the course of our research and development activities, we could become subject to legal claims that we, our activities or our product candidates or technologies infringe the rights of others. This type of patent infringement litigation is costly and time-consuming and diverts the attention of management and technical personnel. In addition, if we or our product candidates or technologies are found to infringe the rights of others, we could lose our ability to continue our development programs or could be forced to pay monetary damages. Although the parties to patent and intellectual property disputes in the biotechnology industry have often settled their disputes by establishing licenses or similar arrangements, the costs associated with these arrangements may be substantial and could include ongoing royalties. Furthermore, any such licenses may not be available when needed, on commercially reasonable terms or at all. These risks may be amplified due to our small size and limited experience and resources relative to many of our competitors. As a result, any claims of infringement against us, adverse determination in a judicial or administrative proceeding or failure to obtain necessary licenses could materially delay, hinder or restrict our development efforts or prevent us from continuing to pursue our operational and strategic plans, which could have a material adverse effect on our business, prospects and results of operations.

Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U.S. and other jurisdictions are typically not published until 18 months after a first filing, or in some cases not at all. Therefore, we cannot know with certainty whether we or our licensors were the first to make the inventions claimed in patents or pending patent applications that we own or licensed, or that we or our licensors were the first to file for patent protection of such inventions. In the event that a third party has also filed a U.S. patent application relating to our product candidates or a similar invention, depending upon the priority dates claimed by the competing parties, we may have to participate in interference proceedings declared by the PTO to determine priority of invention in the U.S. The costs of these proceedings could be substantial, and it is possible that our efforts to establish priority of invention would be unsuccessful, resulting in a material adverse effect on our U.S. patent position. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business; even if we comply with such laws and regulations, they may result in higher costs for us in the form of higher raw material, energy, freight and compliance costs.

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

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

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions. Increased environmental legislation or regulation could also result in higher costs for us in the form of higher raw materials, as well as energy and freight costs. It is possible that certain materials might cease to be permitted to be used in our processes. We could also incur additional compliance costs for monitoring and reporting emissions and for maintaining permits.

The biotechnology industry is highly competitive, and many of our competitors are significantly larger and more experienced than we are.

The biotechnology industry is intensely competitive. This competitive environment stimulates an ongoing and extensive search for technological innovation and necessitates effective and targeted marketing strategies to communicate the effectiveness, safety and value of products to healthcare professionals in private practice and group practices and payors in managed care organizations, group purchasing organizations, and Medicare and Medicaid services.

We face competition from a number of sources, including large pharmaceutical companies, biotechnology companies, academic institutions, government agencies and private and public research institutions. We compete against all other developers of cancer treatments, including other immunotherapy treatments as well as other types of treatments for the cancer indications on which we are focused. In particular, a number of companies, some of which are large, well-established pharmaceutical companies, have development strategies similar to our current focus. These companies could include, among others, Bristol Myers-Squibb, Iovance Therapeutics, Syndax, Dynavax Technologies, Checkmate Pharmaceuticals and Idera Pharmaceuticals. In addition, we also compete with other clinical-stage biotechnology companies for funding and support from healthcare and other investors and potential collaboration relationships with larger pharmaceutical or other companies, as well as for personnel with expertise in our industry. We are smaller, less experienced and less well-funded than many of our competitors, and we have a shorter and less proven operating history and a less recognizable and established brand name than many of our competitors. In addition, some of our competitors have commercially available products, which provide them with operating revenue and other competitive advantages. Furthermore, recent trends in the biotechnology industry are for large drug companies to acquire smaller outfits and consolidate into a smaller number of very large entities, which further concentrates financial, technical, and market strength and increases competitive pressure in the industry.

Our competitors may obtain regulatory approval of their product candidates more rapidly than we can or may obtain more robust patent protection or other intellectual property rights to protect their product candidates and technologies, which could limit or prevent us from developing or commercializing our product candidates. If we are able to obtain regulatory approval of one or more of our product candidates, we would face competition from approved products or products under development by larger companies that may address our targeted indications. If we directly compete with these very large entities for the same markets and/or customers, their greater resources, brand recognition, sales and marketing experience and financial strength could prevent us from capturing a share of these markets or customers. 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, less costly or more widely accepted for other reasons than any of our products that might obtain regulatory approvals, and our competitors may also be more successful than us in manufacturing, distributing and otherwise marketing their products.

We expect our product candidates, if approved and commercialized, to compete on the basis of, among other things, product efficacy and safety, time to market, price, coverage and reimbursement by third-party payors, extent of adverse side effects and convenience of treatment procedures. We may not be able to effectively compete in any of these areas, or we may be prevented from being able to compete at all in these areas due to the performance of our products during clinical trials and/or the circumstances of an approval. Presently, we compete with other biotechnology companies for funding and support on the basis of our technology platforms and the potential value of our product candidates based on the factors described above.

If we are unable to compete effectively, our business, results of operations, financial condition, and prospects may be materially adversely affected.

We may incur liability if our presentations of information regarding our product candidates are determined, or are perceived, to be inconsistent with regulatory requirements or guidelines.

The FDA provides guidelines regarding appropriate presentation of product information and continuing medical and health education activities. Even though we do not have any FDA approved products, these guidelines apply to our current activities with respect to disclosures, presentations or other communications about our product candidates and technologies at healthcare conferences or in other forums. Although we endeavor to follow these guidelines, the FDA, the Office of the Inspector General of the U.S. Department of Health and Human Services, or the Department of Justice could disagree, in which case we could be subject to significant liability, including civil and administrative remedies as well as criminal sanctions. In addition, management's attention could be diverted and our reputation could be damaged, any of which could materially harm our business and prospects.

If we and our contract manufacturers fail to produce our systems and product candidates in the volumes and within the timelines we require, or if they fail to comply with applicable regulations, we could face delays in the development and commercialization of our equipment and product candidates.

Currently, we assemble certain components of our EP system, which is our proprietary delivery mechanism for our TAVO product candidate, and we utilize the services of contract manufacturers to manufacture the remaining components of these systems and for the manufacture, testing and storage of all of our supply of our plasmid product candidate for clinical trials or other studies. Except for the facility used to assemble certain components of our electroporation system, we do not own and have no plans to build our own clinical or commercial manufacturing capabilities, and we expect to increase our reliance on third-party manufacturers if and when we commercialize any of our product candidates and systems.

The manufacture of our systems and product supplies requires significant expertise and capital investment, including the use of advanced manufacturing techniques and process controls. Manufacturers often encounter difficulties in production, particularly in scaling up for commercial production if regulatory approvals are obtained. These difficulties include, among others: problems with production costs and yields; quality control issues, including qualification of the equipment, stability of product candidates and compliance with testing requirements; shortages of qualified personnel; and compliance with strictly enforced federal, state and foreign regulations. If we or our manufacturers were to encounter any of these difficulties or our manufacturers otherwise fail to comply with their contractual obligations to us, our ability to provide our electroporation equipment to our partners and product candidates to patients enrolled in our clinical trials, or to commercially launch a product if regulatory approvals are obtained, would be jeopardized. Any delay or interruption in the supply of clinical trial supplies could delay the completion of our clinical trials, increase the costs associated with maintaining our clinical trial programs, and, depending upon the period of delay, require us to commence new trials at significant additional expense or terminate the development program completely.

In addition, all manufacturers of our products must comply with current good manufacturing practices, which are regulated by the FDA through its facilities inspection programs. These practices include requirements regarding, among other things, quality control, quality assurance and the generation and maintenance of records and documentation. We are required by law to establish adequate oversight and control over raw materials, components and finished products furnished by our third-party manufacturers, but we have limited direct control over our manufacturers' compliance with these regulations and standards. Any failure by our manufacturers, including our non-U.S. contract manufacturers, to comply with these requirements could potentially result in fines and civil penalties, suspension of production, restrictions on imports and exports, suspension or delay in product approval, product seizure or recall or withdrawal of product approval. Additionally, if the safety of any product candidate or approved product is compromised due to our or our manufacturers' failure to adhere to applicable regulatory requirements or for other reasons, we may not be able to obtain or maintain regulatory approval for or successfully commercialize our products, and we may be held liable for any injuries sustained as a result of the failure. Any of these factors could cause delays in clinical trials, regulatory submissions or approvals, entail significant costs or hinder our ability to effectively commercialize our product candidates. Furthermore, assuming we are successful in receiving approval for and commercializing one or more of our product candidates, if our manufacturers fail to deliver the required commercial quantities on a timely basis, pursuant to provided specifications and at commercially reasonable prices, we may be unable to meet demand for our products and we could lose potential revenue.

Our business and operations could suffer in the event of cyber-attacks or system failures.

Despite the implementation of security measures, our internal computer systems and those of our current and any future partners, contractors and consultants are vulnerable to damage from cyber-attacks, computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. System failures, accidents or security breaches could cause material disruptions to our commercialization activities, clinical and other development programs, financial and disclosure controls and other reporting functions and the administrative aspects of our business, in addition to possibly requiring substantial expenditures of capital and other resources to remedy. Further, any loss of clinical trial data from completed or future clinical trials as a result of such a disruption could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the lost data. Moreover, to the extent any such disruption results in the loss of or damage to our data or applications or inappropriate disclosure of confidential or proprietary information, we could incur significant liabilities. The occurrence of any of these circumstances could cause our operations and our performance to suffer.

We may be unable to acquire or develop new product candidates or technologies, or we may never be able to commercialize any product candidates or technologies we do successfully acquire or develop.

As part of our business strategy, we plan to expand our clinical pipeline and build our portfolio of product candidates through the development, acquisition or licensing of assets or businesses, product candidates or approved products. The process of identifying, planning, negotiating, implementing and integrating an acquisition or license of a new business, product candidate or approved product can be lengthy and complex and can involve numerous difficulties, including difficulties related to:

- identifying new potential product candidates or promising technologies;
- competing with other companies for the acquisition or license, including many of our competitors with substantially greater financial, marketing and sales resources;
- negotiating the terms of the acquisition or license, at which we have relatively little experience;
- accurately judging the value or worth of a potential acquisition or in-license candidate;
- paying for an acquisition or license, including the consideration to acquire or license a business, technology or asset (which could include cash and/or issuance of equity or debt securities);
- acquisition and integration efforts could disrupt our business and divert the time and attention of management and other internal personnel from existing operations;

- any integration failures could result in the loss or impairment of relationships with employees, consultants, suppliers and other vendors and partners;
- exposure to unknown or contingent liabilities based on an acquired company's operations or assets;
- acquisition and integration efforts and costs could reduce available liquidity and other resources to pursue other acquisitions or strategic transactions;
- challenges establishing appropriate controls and procedures for any acquisition by us of a private company;
- failing to recoup our investment of time, capital and other resources into a proposed acquisition or license, as a result of failing to complete the transaction or, for transactions that are completed, failing to realize the anticipated benefits of acquired or licensed business or asset; and
- challenges developing and commercializing any product candidates or technologies that we are successful in acquiring or licensing, which is subject to all of the risks described throughout these risk factors regarding the development of our current product candidates.

As a result of these and other difficulties, any efforts to acquire or develop new product candidates, technologies or businesses may not produce commercially successful products or otherwise result in meaningful revenue or profitability for our business. As a result, the pursuit of these activities could have a material adverse effect on our business, results of operations, financial condition and prospects.

Any collaboration arrangements we may establish may not be successful, which could adversely affect our ability to develop and commercialize our product candidates.

We may seek collaboration arrangements for the development or commercialization of our current and any future product candidates. To the extent we pursue collaboration arrangements, we would face significant risks in connection with establishing and maintaining the arrangements, including, among others:

- we could be subject to intense competition in seeking appropriate collaborators;
- collaboration arrangements are complex, costly and time-consuming to negotiate, document and implement, and they could require our payment to the collaborator of cash or other consideration, including issuances of equity or debt securities, in order to establish the relationship;
- we may be unsuccessful in establishing and implementing any collaboration we desire to pursue, or the terms of the arrangement may not be favorable to us;
- collaborations often would require that we relinquish some or all of the control over the future success of the product candidate to the third-party collaborator;
- the success of any collaboration arrangements we may establish would depend heavily on the efforts and activities of our collaborators, who would likely have significant discretion in determining the efforts and resources they would apply to these collaborations;
- disagreements between collaborators regarding clinical development and commercialization matters can be difficult to resolve and can lead to delays in the development process or commercialization of the applicable product candidate and, in some cases, termination of the arrangement; and
- any termination of a collaboration arrangement that we are able to establish could adversely affect our performance, particularly to the extent we become reliant upon the collaboration for revenue or important commercialization processes or efforts.

In addition, collaboration arrangements may also include our pursuit of combination trials to develop and commercialize our product candidates as combination products, such as our KEYNOTE-695 and KEYNOTE-890 studies with Merck's KEYTRUDA®. To the extent we continue to pursue these or any other similar collaborative arrangement, we will face certain additional risks and uncertainties in development, as drug/device combination products are particularly complex, expensive and time-consuming to develop due to the number of variables involved in the final product design, including ease of patient and doctor use, establishing clinical efficacy, reliability and cost of manufacturing, regulatory approval requirements and standards and other important factors. Additionally, combination products face continued risk and uncertainty post-development in connection with manufacturing and supply regarding the establishment of a reliable commercial supply chain.

The occurrence of any of these risks with respect to any collaboration arrangements we pursue or establish could materially adversely affect our performance, financial condition and reputation.

Our results of operations and liquidity needs could be materially negatively affected by market fluctuations and economic downturn.

Our results of operations could be materially negatively affected by economic conditions generally, both in the U.S. and elsewhere around the world. Continuing concerns over inflation, energy costs, geopolitical issues, the availability and cost of credit, the U.S. mortgage market and residential real estate market in the U.S. have contributed to increased volatility and diminished expectations for the economy and the markets going forward. These factors, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have precipitated an economic recession and fears of a possible depression. Domestic and international equity markets continue to experience heightened volatility and turmoil. These events and the continuing market upheavals may have an adverse effect on us. In the event of a continuing market downturn, our results of operations could be adversely affected by those factors in many ways, including making it more difficult for us to raise funds if necessary, and our stock price may further decline.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. For example, the global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn, such as the global financial crisis, could result in a variety of risks to our business, including, weakened demand for our drug candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services.

Following its June 23, 2016 vote to leave the European Union, on March 29, 2017, the United Kingdom invoked Article 50 of the Lisbon Treaty and formally began the process of exiting the European Union. Although Brexit has already and may continue to adversely affect European and/or worldwide economic or market, political or regulatory conditions and may contribute to instability in the global financial markets, political institutions and regulatory agencies, the resulting immediate changes in foreign currency exchange rates have had a limited overall impact due to natural hedging. The long-term impact of Brexit, including on our business and our industry, will depend on the terms that are negotiated in relation to the United Kingdom's future relationship with the European Union, and we are closely monitoring the Brexit developments in order to determine, quantify and proactively address changes as they become clear. Despite the Brexit developments, we do not expect macroeconomic conditions to have a significant impact on our liquidity needs, financial condition or results of operations.

We may not be successful in executing our sales and marketing strategy for the commercialization of any of our product candidates, should they be approved, in which case we may not be able to generate significant, or any, revenue.

If one or more of our product candidates are approved, our commercialization strategy may include the establishment of our own sales, marketing and distribution capabilities to market products to our target markets. Developing these capabilities would require significant expenditures on personnel and infrastructure. Moreover, we have no experience with these activities. While we currently expect that any approved products would be marketed for a relatively small patient population, we might not be able to create an effective sales force to address even a niche market. In addition, some of our product candidates could require, if approved, a large sales force to call on and educate physicians and patients. We could decide in the future to pursue collaborations with one or more pharmaceutical companies to sell, market and distribute any approved products, but we may not be able to establish any such arrangement when desired, on acceptable terms or at all. Further, any such collaboration we do establish may not be effective in generating meaningful revenue to us.

We may be unsuccessful in implementing the commercialization strategies we have planned. Further, we have not proven our ability to succeed in the biotechnology industry and are not certain that our commercialization strategies, even if implemented as we envision, would lead to significant revenue. If we are unable to successfully implement our commercialization plans and drive adoption by patients and physicians of any product candidates that obtain regulatory approval, then we will not generate meaningful, or any, revenue, which would have a material adverse effect on our business, results of operations, financial condition and prospects.

If any product candidate that receives regulatory approval does not achieve broad market acceptance, our revenue potential may be limited.

The commercial success of any product candidate that obtains marketing approval from the FDA or comparable foreign regulatory authorities will depend on the acceptance of these products by physicians, patients, third-party payors and the medical community. The degree of market acceptance of any product candidate that receives regulatory approval will depend on a number of factors, including:

- our ability to provide acceptable evidence of safety and efficacy;
- acceptance by physicians and patients of the product as a safe and effective treatment;
- the prevalence and severity of adverse effects;
- limitations or warnings contained in a product's FDA-approved or other regulator-approved labeling;
- the clinical indications for which the product is approved;
- the availability and perceived advantages of alternative treatments;
- any negative publicity related to the product or any competing product;
- the effectiveness of our or any current or future collaborators' sales, marketing and distribution strategies;
- pricing and cost effectiveness;
- our ability to obtain adequate third-party payor coverage or reimbursement; and
- the willingness of patients to pay out-of-pocket in the absence of adequate third-party payor coverage and reimbursement.

Failures with respect to any one of these factors could severely limit the commercial potential of any product candidate that obtains regulatory approval, which could materially adversely affect our performance and prospects.

We may not be able to establish adequate coverage and reimbursement by third-party payors for any product candidate that achieves regulatory approvals, which could severely limit our market potential, performance and prospects.

Cost containment has become a significant trend in the U.S. healthcare industry. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for certain products and procedures. Increasingly, third-party payors are requiring that companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products and treatments. In addition, recent trends in U.S. politics suggest that the U.S. healthcare insurance framework may experience significant changes in the near term. For all of these and other reasons, coverage and reimbursement at adequate or any levels may not be available for any product candidate that achieves regulatory approval. If coverage and reimbursement is not available or is not available at an adequate level for any approved product, the demand for or price of the product could be materially negatively affected, which could severely limit our revenue potential and prospects.

In addition, the regulations that govern marketing approvals, pricing, coverage and reimbursement for new therapeutic products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing government control even after initial approval is granted. As a result, even if we obtain regulatory approval for a product candidate in a particular country, we could be subject to continuing pricing regulations that could delay our commercial launch of the product or negatively impact the revenue potential for the product in that country.

Future growth, including growth in international operations, could strain our resources, and if we are unable to manage any growth we may experience, we may not be able to successfully implement our business plans.

In late 2016, we established a subsidiary corporation in Australia in preparation for planned clinical trials in that country. In addition, our business plan includes continued growth of our operations, including, among other things, growth in our workforce, expansion of our clinical trial efforts within and outside of the United States, and expansion of our portfolio of product candidates. This growth could place an additional strain on our management, administrative, operational and financial infrastructure, and will require that we incur significant additional costs and hire and train additional personnel to support our expanding operations. Further, we must maintain and continue to improve our operational, financial and management controls and reporting systems and procedures, which can be more challenging during periods of expansion. As a result, our future success will depend in part on the ability of management to effectively manage any of this growth we may experience. If we fail to successfully manage any growth we may experience, we may be unable to execute on our business plan.

In connection with any geographic expansion we may pursue, international operations would involve substantial additional risks, including, among others:

- difficulties complying with the U.S. Foreign Corrupt Practices Act and other applicable anti-bribery laws, such as the United Kingdom Bribery Act 2010, and similar antibribery and anticorruption laws in other jurisdictions;
- difficulties complying with foreign laws, regulations, standards and regulatory guidance governing the collection, use, disclosure, retention, security and transfer of personal data, including the European Union General Data Privacy Regulation, which introduces strict requirements for processing personal data of individuals within the European Union;
- difficulties maintaining compliance with the varied and potentially conflicting laws and regulations of multiple jurisdictions that may be applicable to our business, many of which may be unfamiliar to us;
- difficulties in managing foreign operations;

- financial risks, such as longer payment cycles, difficulty in enforcing contracts and collecting accounts receivable, and exposure to foreign currency exchange rate fluctuations;
- complexities associated with managing multiple payor-reimbursement regimes or self-pay systems;
- more complexity in our regulatory and accounting compliance;
- differing or changing obligations regarding taxes, duties or other fees;
- limited intellectual property protection in some jurisdictions;
- risks associated with currency exchange and convertibility, including vulnerability to appreciation and depreciation of foreign currencies against the U.S. dollar;
- uncertainty related to developing legal and regulatory systems and standards for economic and business activities in some jurisdictions;
- trade restrictions or barriers, including tariffs or other charges and import-export regulations, which are subject to increased uncertainty following the results of the 2016 U.S. presidential election and the trade policies of the current administration regarding existing and proposed trade agreements and the ability to import goods into the United States;
- changes in applicable laws or policies;
- possible failure by us or our distributors to obtain appropriate licenses or regulatory approvals for the sale or use of our product candidates, if approved, in various countries; and
- business interruptions resulting from geopolitical actions, economic instability, or the impact of and response to natural disasters, including, but not limited to, wars and terrorism, political unrest, outbreak of disease, earthquakes, boycotts, curtailment of trade, and other business restrictions.

The occurrence of any of these risks could limit our ability to pursue international expansion, increase our costs or expose us to fines or other legal sanctions, any of which could negatively impact our business, reputation and financial condition.

If we are unable to successfully recruit and retain qualified personnel, we may not be able to maintain or grow our business.

In order to successfully implement and manage our business plans, we depend on, among other things, successfully recruiting and retaining qualified executives, managers, scientists and other employees with relevant experience in life sciences and the biotechnology industry. Competition for qualified individuals is intense, particularly in our industry, due to the many larger and more established life science and biotechnology companies that compete with us for talent. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we heavily rely on consultants and advisors, including scientific, clinical and regulatory advisors, to assist us in formulating our research and development and commercialization strategies. Our consultants and advisors may be employed by others or may have commitments under consulting or advisory contracts with other entities that may limit their availability to support us. If we are not able to retain existing personnel, consultants and/or advisors, and find, attract and retain new qualified personnel, consultants and/or advisors on acceptable terms and in a timely manner to coincide with our needs, we may not be able to successfully maintain or grow our operations and our business and prospects could suffer.

Additionally, although we have employment agreements with each of our executive officers, these agreements are terminable by them at will. The loss of the services of any one or more members of our current senior management team could, among other things, disrupt or divert our focus from pursuing our business plans while we seek to recruit other executives, impact the perceptions of our existing and prospective employees, partners and investors regarding our business and prospects, cause us to incur substantial costs in connection with managing transitions and recruiting suitable replacements and, if the departing personnel are crucial to any of our clinical or other development programs, delay or prevent the development and commercialization of the affected product candidates. These risks would be amplified if we are not able to recruit suitable replacements for any departing personnel on acceptable terms and in a timely manner. The occurrence of any of these or other potential consequences could cause significant harm to our business.

Extensive industry regulation has had, and will continue to have, a significant impact on our business, especially our product development, manufacturing and distribution capabilities.

Biotechnology companies are subject to extensive, complex, costly and evolving government regulation relating to the ability to market and sell any drug or medical device. In the United States, these regulations are principally administered and enforced by the FDA and, to a lesser extent, by the U.S. Drug Enforcement Agency, or DEA, and comparable state government agencies, and outside the United States, these types of regulations are typically administered by various regulatory agencies comparable to the FDA in foreign countries where products or product candidates are researched, tested, manufactured and/or marketed.

The FDCA, the Controlled Substances Act, and other federal statutes and regulations, as well as similar state and foreign statutes and regulations, govern or influence, among other things, the research, development, testing, manufacture, storage, record-keeping, approval, labeling, promotion, marketing, distribution, post-approval monitoring and reporting, sampling, import and export of product candidates such as ours. Under these regulations, we and our contract manufacturers may become subject to periodic inspection of our facilities, quality control and other procedures, and operations and/or product candidate testing by the FDA, DEA and other authorities during and after the approval process for a product candidate, to confirm compliance with all applicable regulations, including current good manufacturing practices and other applicable requirements. Further, even if regulatory approval of a product candidate is obtained, such approval would, in the U.S. at least, impose limitations on the indicated uses for which the product may be marketed, and these limitations could materially limit a product's market and revenue potential. Additionally, we would be subject to pervasive and continuing regulation by the FDA and/or comparable foreign regulators with respect to any approved product. Moreover, we could be required to conduct potentially costly post-approval studies or surveillance programs to monitor the effect of any approved products, and the FDA and comparable foreign regulators have the authority to stop or limit further marketing of a product or impose more stringent labeling restrictions based on the results of these post-approval tests and programs or in the event of any unexpected or serious health or safety concern regarding any approved product.

Possible penalties or other consequences for failure to comply with these regulatory requirements include, among others, observations, notices, citations and/or warning letters that could force us to modify our clinical programs or other activities; clinical holds on our ongoing clinical programs; adverse publicity from the FDA or others; the FDA's suspension of its review of pending applications; fines; product recalls or seizures; total or partial suspension of production and/or distribution; labeling changes; withdrawal of previously granted product approvals; enforcement actions; restrictions on imports and exports; injunctions and civil or criminal prosecution. Any such sanctions, if imposed, could have a material adverse effect on our business, operating results and financial condition.

Moreover, the regulations, policies and guidance of the FDA or other regulatory agencies could change and new or additional statutes or regulations could be enacted or promulgated. If changes or new laws are more stringent or impose additional or more challenging requirements, our costs of compliance could increase, regulatory approval of our product candidates could be delayed or jeopardized, or post-approval activities for any product candidates that obtain regulatory approval could be further restricted or regulated. If we are not able to achieve and maintain regulatory compliance, we may not be permitted to market any of our product candidates, which would materially adversely affect our prospects to generate revenue.

If we fail to comply with applicable healthcare laws and regulations, we could face substantial penalties and our business, operations, prospects and financial condition could be adversely affected.

The healthcare industry is heavily regulated, constantly evolving and subject to significant change and fluctuation. The U.S. federal and state healthcare laws and regulations that impact our business include, among others:

- the laws and regulations administered and enforced by the FDA, including the FDCA, Controlled Substances Act and other federal statutes and regulations, discussed above;
- the federal Anti-Kickback Statute, which generally prohibits, among other things, soliciting, receiving or providing remuneration to induce the referral of an individual for an item or service or the purchasing or ordering of an item or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;
- the federal false claims laws, which generally prohibit, among other things, knowingly presenting or causing to be presented claims for payment from Medicare, Medicaid or other third-party payors that are false or fraudulent;
- the Affordable Care Act, which, in general and among other things, expands the government's investigative and enforcement authority, including requiring pharmaceutical companies to record and disclose to government agencies any transfers of value to doctors and teaching hospitals, and increases the penalties for fraud and abuse, including amendments to the federal False Claims Act and the Anti-Kickback Statute to make it easier to file lawsuits under these statutes;
- HIPAA and HITECH, which, in general and among other things, establish comprehensive federal standards with respect to the privacy, security and transmission of individually identifiable health information and impose requirements for the use of standardized electronic transactions with respect to transmission of such information;
- the FCPA and other applicable anti-bribery laws; and
- state law equivalents of each of these federal laws, such as anti-kickback and false claims laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not be preempted by applicable federal laws, thus complicating compliance efforts.

Additionally, the healthcare compliance environment is continuously changing, with proposed revisions to or replacement of the Affordable Care Act at the federal level and with some states mandating implementation of compliance programs, compliance with industry ethics codes, registration requirements for sales personnel, spending limits and reporting to state governments of gifts, compensation and other remuneration to physicians. This shifting regulatory environment, as well as our obligation to comply with different reporting and other compliance requirements, in multiple jurisdictions, including foreign laws and regulations comparable to the U.S. laws and regulations described above, to the extent we continue to pursue operations in foreign countries, such as our clinical activities in Australia, or if we seek to sell any product that obtains regulatory approval in a foreign country, increases the possibility that we may violate one or more of these laws. In addition, these conditions may also adversely affect our ability to obtain regulatory approval for any of our product candidates, the availability of capital, our ability to generate meaningful or any revenue and, if any of our product candidates achieve regulatory approval, our ability to establish a price we believe is fair for the approved product. Further, even though we do not and will not control referrals of healthcare services or bill directly to third-party payors, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights would be applicable to our business, if any of our product candidates obtain regulatory approval and become commercially available.

All of these laws impose penalties or other consequences for non-compliance, some of which may be severe. If we or our operations are found to be in violation of any of these laws or any other governmental regulations that apply to us, the consequences could include, but are not limited to, fines or other monetary damages, orders forcing us to curtail or restructure our operations, injunctions and civil or criminal prosecution. Any such penalties could adversely affect our ability to operate our business and pursue our strategic plans. Additionally, any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert management's attention from the operation of our business. Moreover, achieving and sustaining compliance with the various U.S. federal and state and foreign laws and regulations that apply to our business could prove costly. The occurrence of any of these risks could cause our performance and financial condition to materially suffer.

We are subject to new legislation and regulatory proposals that may affect costs for compliance and adversely affect revenue.

The 116th Congress has closely monitored health care spending in the United States. Many members of Congress have prioritized health care spending and are committed to lowering spending in federal government programs. Legislative efforts to reduce health care spending within federal programs may affect overall health care spending in the United States. The Senate Health, Education, Labor, and Pensions (HELP Committee) advanced legislation in June 2019 intended to improve price transparency for health care services and products. The provisions would increase public access to pricing information and allow patients to choose lower cost care options. This may drive down health care spending and impact medical device prices. Further, there are efforts by the House Energy and Commerce Committee as well as the House Ways and Means Committee to broadly address spending for prescription drugs. It is possible that the Committees could attempt legislate on medical device costs as well. Lastly, the House and Senate Judiciary Committees have also focused heavily on patent and exclusivity reform for prescription drugs. It is also possible that the Judiciary Committees could expand into device-related issues. While we cannot predict what proposals may ultimately become law, elements under consideration could significantly change health care spending in which the medical device market operates.

President Donald Trump and the Department of Health and Human Services (HHS) are also addressing price transparency in the health care industry. On June 24, 2019, President Trump signed an Executive Order (EO) directing federal agencies to improve price transparency. Since then, HHS has proposed regulations to improve price transparency in various health care settings that utilize medical devices (e.g., hospitals). Although these are broad efforts to improve transparency across sectors, it is possible the rulemaking could impact health care costs generally.

Any product for which we obtain marketing approval could be subject to restrictions or withdrawal from the market and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with products, when and if any of them is approved.

Any product for which we might obtain marketing approval, along with the manufacturing processes and facilities, post-approval data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and comparable regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration requirements, industry standards and regulatory requirements (e.g. CGMPs) relating to quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping, and requirements regarding company presentations and interactions with healthcare professionals. Even if we obtain regulatory approval of a product, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing, studies, and surveillance to monitor the safety or efficacy of the product. We also may be subject to state laws and registration requirements covering the marketing, promotion, and distribution of products. Later discovery of previously unknown problems with products, manufacturers or manufacturing processes, or failure to comply with legal and regulatory requirements, may result in actions such as:

- restrictions on product manufacturing, distribution or use;
- restrictions on the labeling, marketing, or promotion of a product;
- requirements to conduct post-marketing studies or clinical trials;

- Inspectional observations or warning letters from regulatory authorities;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- voluntary or mandatory recall;
- fines;
- suspension or withdrawal of marketing or regulatory approvals;
- refusal to permit the import or export of products;
- product seizure or detentions;
- injunctions or the imposition of civil or criminal penalties; and
- adverse publicity.

If we or our respective suppliers, third-party contractors, clinical investigators or collaborators are slow to adapt, or are unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we or our respective collaborators may experience one or more of the actions above, resulting in decreased revenue from milestones, product sales or royalties.

We are heavily dependent on the success of our clinical product candidates and we cannot provide any assurance that any of our product candidates will be approved, commercialized or successfully marketed in the future.

We plan to seek regulatory approval to commercialize our product candidates in the United States, and potentially in the European Union and additional foreign countries. While the scope of regulatory review and approval can be similar in other countries, to obtain separate regulatory review and approval in many other countries, we must comply with the numerous and varying regulatory requirements of such countries, including those regarding safety and efficacy, clinical trials, manufacturing, post-marketing commitments, and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in those jurisdictions.

In addition, the clinical trial requirements of the FDA, the European Commission, the European Medicines Agency, or the EMA, the competent authorities of the European Union, or EU, Member States and other regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of such product candidates. The regulatory approval process for novel product candidates such as ours can be more expensive and take longer than for other, better known or more extensively studied product candidates. Even if we are successful in developing additional product candidates, it is difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for these product candidates in either the United States or the EU, or how long it will take to commercialize any other products for which we receive marketing approval. In addition, any future marketing authorization granted by the European Commission may not be indicative of what FDA may require for approval and vice versa.

Further, in the U.S., the European Union member states, and elsewhere, there have been, and we expect there will continue to be, efforts to control and reduce healthcare costs. In the U.S. for example, the price of drugs has come under intense scrutiny by the U.S. Congress. Third party payers decide which drugs they will pay for and establish reimbursement and co-payment levels. Government and other third-party payers are increasingly challenging the prices charged for healthcare products, examining the cost effectiveness of drugs in addition to their safety and efficacy, and limiting or attempting to limit both coverage and the level of reimbursement for prescription drugs.

Europe has enacted a new data privacy regulation, the General Data Protection Regulation, a violation of which could subject us to significant fines.

In May 2018, a new privacy regime, the General Data Protection Regulation, or GDPR, took effect across all member states of the European Economic Area. The new regime increases our obligations with respect to clinical trials conducted in the member states by expanding the definition of personal data to include coded data, and requiring changes to informed consent practices and more detailed notices for clinical trial subjects and investigators. In addition, it increases the scrutiny that clinical trial sites located in the member states should apply to transfers of personal data from such sites to countries that are considered to lack an adequate level of data protection, such as the United States. The regime imposes substantial fines for breaches of data protection requirements, which can be up to four percent of global revenues or 20 million Euros, whichever is greater, and it also confers a private right of action on data subjects for breaches of data protection requirements. Compliance with these directives is a rigorous and time-intensive process that may increase our cost of doing business, and the failure to comply with these laws could subject us to significant fines.

Our employees, consultants, or third-party partners may engage in misconduct or other improper activities, including but not necessarily limited to noncompliance with regulatory standards and requirements or internal procedures, policies or agreements to which such employees, consultants and partners are subject, any of which could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees, consultants, or third party partners could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with manufacturing standards, including those we have established, to comply with federal and state healthcare fraud and abuse laws and regulations, to report financial information or data accurately, to comply with internal procedures, policies or agreements to which such employees, consultants or partners are subject, or to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing, promotion, sales commission, customer incentive programs and other business arrangements. Employee, consultant, or third-party misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. The precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

We receive a large amount of proprietary information from potential or existing licensors of intellectual property and potential acquisition target companies, all pursuant to confidentiality agreements. The confidentiality and proprietary invention assignment agreements that we have in place with each of our employees and consultants prohibit the unauthorized disclosure of such information, but such employees or consultants may nonetheless disclose such information through negligence or willful misconduct. Any such unauthorized disclosures could subject us to monetary damages and/or injunctive or equitable relief. The notes, analyses and memoranda that we have generated based off such information are also valuable to our businesses, and the unauthorized disclosure or misappropriation of such materials by our employees and consultants could significantly harm our strategic initiatives, especially if such disclosures are made to our competitor companies.

We may use biological materials and hazardous materials, and any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

We may use hazardous materials, including chemicals and biological agents and compounds that could be dangerous to human health and safety or the environment. Our operations may also produce hazardous waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our product development efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. We do not carry specific biological or hazardous waste insurance coverage, and our property and casualty and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or penalized with fines in an amount exceeding our respective resources, and clinical trials or regulatory approvals could be suspended.

Although we maintain workers' compensation insurance to cover costs and expenses incurred due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not have insurance for environmental liability or toxic tort claims that may be asserted in connection with the storage or disposal of biological or hazardous materials.

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

We face potential product liability exposure, and if successful claims are brought against us, we could incur substantial liability.

The clinical use of our product candidates and, if any of our product candidates achieves regulatory approval, any future commercial use of the approved products, exposes us to the risk of product liability claims. Any side effects, manufacturing defects, misuse, or abuse associated with our product candidates or any approved products could result in injury to a patient or even death. In addition, a liability claim could be brought against us even if our product candidates or any approved products merely appear to have caused an injury. These product liability claims could be brought against us by consumers, healthcare providers, pharmaceutical companies or others that come into contact with our product candidates or any approved products.

Regardless of merit or potential outcome, product liability claims against us could result in, among other effects, the inability to continue clinical testing of our product candidates or, for any approved products, commercialization of the products, impairment of our business reputation, withdrawal of clinical trial participants and distraction of management's attention from our primary business activities. In addition, if we cannot successfully defend against product liability claims, we could incur substantial liabilities, including liabilities that may be beyond the scope or limits of any applicable insurance policies we may have in place. Any of these outcomes could severely harm our business, financial condition and prospects.

Our business depends in large part on our ability to protect our proprietary rights and technologies, and we may be unsuccessful in these efforts.

We believe our success and ability to compete depends in large part on obtaining and maintaining patent, trademark and trade secret protection of our product candidates and their respective components and underlying technologies, including devices, formulations, manufacturing methods and methods of treatment, as well as successfully defending our intellectual property rights against third-party challenges. Our ability to stop third parties from making, using or selling products that infringe on our intellectual property rights depends on the extent to which we have secured and properly safeguarded these rights under valid and enforceable patents or trade secrets.

Although we previously owned patents protecting our OMS EP Devices, our primary U.S. and foreign patents providing such protection expired in 2017 and 2018, and the final foreign patents expired in late 2019. As a result, we may have limited ability to enforce these rights against third parties to prevent them from making or selling competing products that rely upon the protected technology, which could harm our competitive position and prospects. In addition to these proprietary rights that expired between 2017 and 2019, we also own or have exclusively licensed certain patents and applications that cover our current clinical methods. These patents will expire between 2024 and 2037. These method patents protect the use of a product for a specified method under certain defined parameters. These types of method patents do not prevent a competitor from making and marketing a product that is identical or similar to the protected product under parameters that are outside the scope of the patented method claims. Moreover, even if competitors do not actively promote such a product for the indications protected by the method patent, physicians could prescribe the products for these methods on an off-label basis. Although such off-label prescriptions may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to detect, prevent or prosecute. Furthermore, our licensed patents expiring between 2024 and 2032 may not have as broad a scope as our patents that expired between 2017 and 2019, which in turn may limit our remedies against competitors making and marketing a product that is identical or similar to ours.

To the extent our existing patents or pending or planned patent applications expire before we are able to commercialize product depending on the technology or do not otherwise provide sufficient protection, we could be subject to substantially increased competition and our business and ability to commercialize or license our technology or product candidates could be materially adversely affected.

Even if we secure patents that cover our proprietary technology, our efforts to protect our intellectual property rights with patents may prove inadequate. For instance, the breadth of claims in a patent application is often restricted during patent prosecution, resulting in granted claims with a more limited scope than the claims in the original application. Additionally, pending or future patent applications may not result in issued patents. Laws and regulations for the prosecution of patents are continuously evolving, and the U.S. Supreme Court has, in the past several years, revised certain tests regarding both the grant and review of patents that could make it more difficult to obtain issued patents. Also, any patents that are granted could be subject to post-grant proceedings that could limit their scope or enforceability, and claims that are amended during post-grant proceedings may not be broad enough to provide meaningful protection. Moreover, any patents that are issued to us or any future collaborators may be circumvented or invalidated by third-party efforts, may expire before or shortly after obtaining necessary regulatory approvals, or may not provide sufficient proprietary protection or competitive advantage for other reasons. Such challenges could include third-party pre-issuance submissions of prior art to the PTO, or opposition, derivation, reexamination, inter parties review, or post-grant review or interference proceedings challenging our patent rights or the patent rights of others. The cost of these proceedings could be substantial, and it is possible that our efforts to establish priority or validity of the invention would be unsuccessful, resulting in a material adverse effect on our U.S. patent position. An adverse determination in any such submission, patent office trial, proceeding or litigation could reduce the scope of, render unenforceable, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Further, obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements. These risks may be amplified in some foreign jurisdictions, where patent protection may not be as strong or as effective as it is in the United States.

Our reliance on unpatented proprietary rights, including trade secrets and know-how, may also pose significant risks. For instance, it can be difficult to protect these rights and they may lose their value if they are independently developed by a third party or if their secrecy is lost. Although we have taken measures to protect these rights, including establishing confidentiality agreements with employees, consultants and other third parties, these measures may not sufficiently safeguard our unpatented proprietary rights and may not provide adequate remedies in the event of unauthorized use or disclosure of the confidential information. Despite these efforts, any of these parties may breach the agreements and may unintentionally or willfully disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the U.S. are less willing or unwilling to protect trade secrets. Moreover, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

If we are unable to secure patent protection for our patentable technologies, if any of our issued patents are limited or found to be invalid or unenforceable, or if we are otherwise unable to adequately protect our patented or unpatented proprietary rights, our business and prospects could be materially negatively affected.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results and stockholders and the investment community could lose confidence in our financial reporting, which could harm our business.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Although management has determined that our internal control over financial reporting was effective as of July 31, 2020, our controls over financial processes and reporting may not continue to be effective, or we may identify significant deficiencies or material weaknesses in our internal controls in the future. Any failure to maintain effective internal control over financial reporting, including failures to implement new or improved controls as needed in a timely and effective manner or remediate any significant deficiency or material weakness that is identified in the future, could cause noncompliance with our public reporting obligations, an inability to produce reliable financial reports or material misstatements in our financial statements or other public disclosures. If any of these circumstances were to occur, investors could lose confidence in our financial and other reported information, our reputation could otherwise be harmed, the investment of our stockholders in our company could be negatively affected and the costs to us of raising additional capital could materially increase, any of which could harm our business and prospects.

Maintaining compliance with our reporting and other obligations as a public company could strain our resources and distract management.

As a public company, we experience significant demands that are not applicable to private companies. For example, the Sarbanes-Oxley Act of 2002 and related and other rules implemented by the SEC and the Nasdaq Capital Market, which maintains the securities exchange on which our common stock is listed for trading, impose a number of requirements on public companies, including with respect to corporate governance practices, periodic reporting and other disclosure requirements and financial and disclosure controls and procedures. Further, the SEC and other regulators have continued to adopt new rules and make changes to existing regulations that require our compliance, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the corporate governance and executive compensation-related disclosure requirements of this legislation.

Maintaining compliance with the rules and regulations applicable to public companies involves significant legal, accounting and financial costs. Additionally, if we grow as anticipated, we may need to hire additional personnel and implement new and more sophisticated financial and accounting systems and procedures to continue to meet our public company obligations. Our management and other personnel devote substantial attention to maintaining our compliance with these obligations, which diverts attention from other aspects of our business. Any failure to comply with these public company requirements could have a material adverse effect on our business and prospects and could materially harm our stockholders' investment in our Company.

We may not be able to realize value from, or otherwise preserve and utilize, our net operating loss carryforwards and certain other tax attributes.

If a corporation undergoes an "ownership change" within the meaning of Section 382 of the Internal Revenue Code of 1986, as amended, the corporation's net operating loss carryforwards and certain other tax attributes arising prior to the ownership change are subject to limitations on use after the ownership change. In general, an ownership change occurs if there is a cumulative change in the corporation's equity ownership by certain stockholders that exceeds 50% over a rolling three-year period. Similar rules may apply under state tax laws. If we experience such an ownership change, our net operating loss carryforwards generated prior to the ownership change would be subject to annual limitations that could reduce, eliminate or defer the utilization of these losses.

Moreover, the recognition and measurement of net operating loss carryforwards may include estimates and judgments by management, and the Internal Revenue Service could, upon audit or other investigation, disagree with the amount of net operating loss carryforwards or the determination of whether an ownership change has occurred. Additionally, legislative or regulatory changes or judicial decisions could further negatively impact the ability to use any tax benefits associated with net operating loss carryforwards. Any inability to use net operating loss carryforwards to reduce our U.S. federal or state income tax liability could materially harm our financial condition and results of operations.

Our tax position could be affected by recent changes in United States federal income tax laws.

On December 22, 2017, legislation commonly referred to as the "Tax Cuts and Jobs Act" was signed into law and is generally effective after December 31, 2017. The Tax Cuts and Jobs Act made significant changes to the United States federal income tax rules for taxation of individuals and business entities. Most of the changes applicable to individuals are temporary and apply only to taxable years beginning after December 31, 2017 and before January 1, 2026. For corporations, the Tax Cuts and Jobs Act reduced the top corporate income tax rate to 21% and repealed the corporate alternative minimum tax, limits the deduction for net interest expense, limits the deduction for net operating losses and eliminates net operating loss carrybacks, modifies or repeals many business deductions and credits, shifts the United States toward a more territorial tax system, and imposes new taxes to combat erosion of the United States federal income tax base. The Company accounted for the identified changes and adjusted the carrying amounts of gross deferred tax assets and corresponding valuation allowance in the year ended July 31, 2018. There was no net impact to the Company's financial statements as a result. affect us. However, the effect of the Tax Cuts and Jobs Act on us and our affiliates, whether adverse or favorable, is uncertain, and may not become evident for some period of time. This document does not discuss such legislation or the manner in which it might affect us or purchasers of our common stock. Prospective investors are urged to consult with their legal and tax advisors with respect to the Tax Cuts and Jobs Act and any other regulatory or administrative developments and proposals, and their potential effects on them based on their unique circumstances.

Risks Related to our Growth Strategy

If we acquire, enter into joint ventures with or obtain a controlling interest in companies in the future, it could adversely affect our operating results and the value of our Common Stock thereby diluting stockholder value and disrupting our business.

As part of our growth strategy, we might acquire, enter into joint ventures with, or obtain a significant ownership stake in other companies. Acquisitions of, joint ventures with and investments in other companies involve numerous risks, including, but not necessarily limited to:

- risk of entering new markets in which we have little to no experience;
- diversion of financial and managerial resources from existing operations;
- successfully negotiating a proposed acquisition or investment timely and at a price or on terms and conditions favorable to us;
- the impact of regulatory reviews on a proposed acquisition or investment;

- the outcome of any legal proceedings that may be instituted with respect to the proposed acquisitions or investment;
- with respect to an acquisition, difficulties in integrating operations, technologies, services and personnel; and
- potential inability to maintain relationships with customers of the companies we may acquire or invest in.

If we fail to properly evaluate potential acquisitions, joint ventures or investments, we might not achieve the anticipated benefits of any such transaction, we might incur costs in excess of what we anticipate, and management resources and attention might be diverted from other necessary or valuable activities.

If we cannot continue to fund our research and development programs, we may be required to reduce product development, which will adversely impact our growth strategy.

Our research and development ("R&D") programs will require substantial additional capital to conduct research, preclinical testing and human studies, establish pilot scale and commercial scale manufacturing processes and facilities, and establish and develop quality control, regulatory, marketing, sales and administrative capabilities to support these programs. We expect to fund our R&D activities from a combination of cash generated from royalties and milestones from our partners in various past, ongoing and future collaborations and additional equity or debt financings from third parties. These financings could depress our stock price. If additional funds are required to support our operations and such funds cannot be obtained on favorable terms, we may not be able to develop products, which will adversely impact our growth strategy.

Risks Related to Our Common Stock

The price and trading volume of our common stock may be subject to extreme volatility, and stockholders could lose all or part of their investment in our company.

The trading volume and market price of our common stock has experienced, and is likely to continue to experience, significant volatility. This volatility could negatively impact our ability to raise additional capital or utilize equity as consideration in any acquisition transactions we may seek to pursue, and could make it more difficult for existing stockholders to sell their shares of our common stock at a price they consider acceptable or at all. This volatility is caused by a variety of factors, including, among the other risks described in these risk factors:

- adverse research and development or clinical trial results;
- our liquidity and ability to obtain additional capital, including the market's reaction to any capital-raising transaction we may pursue;
- declining working capital to fund operations, or other signs of financial uncertainty;
- any negative announcement by the FDA or comparable regulatory bodies outside the United States, including that it has denied any request to approve any of our product candidates for commercialization;
- conducting open-ended clinical trials, which could lead to results (either positive or negative) being available to the public prior to a formal announcement;
- market assessments of any strategic transaction or collaboration arrangement we may pursue;
- potential negative market reaction to the terms or volume of any issuance of shares of our common stock or other securities to new investors pursuant to strategic or capital-raising transactions or to employees, directors or other service providers;

- sales of substantial amounts of our common stock, or the perception that substantial amounts of our common stock may be sold, by stockholders in the public market;
- issuance of new or updated research or reports by securities analysts or changed recommendations for our common stock;
- significant advances made by competitors that adversely affect our competitive position;
- the loss of key personnel and the inability to attract and retain additional highly-skilled personnel; and
- general market and economic conditions, including factors not directly related to our operating performance or the operating performance of our competitors, such as increased uncertainty in the U.S. healthcare regulatory environment following the results of the 2020 U.S. presidential election.

In addition, the stock market in general, and the market for stock of companies in the life sciences and biotechnology industries in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of specific companies. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against a company. This type of litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

The possibility of the economy's return to recessionary conditions and the possibility of further turmoil or volatility in the financial markets would likely have an adverse effect on our business, financial position, and results of operations.

The economy in the United States and globally has experienced volatility in recent years and may continue to experience such volatility for the foreseeable future. There can be no assurance that economic conditions will not worsen. Unfavorable or uncertain economic conditions can be caused by declines in economic growth, business activity, or investor or business confidence, limitations on the availability or increases in the cost of credit and capital, the timing and impact of changing governmental policies, natural disasters, epidemics / pandemics, such as COVID-19, terrorist attacks, acts of war, or a combination of these or other factors. A worsening of business and economic conditions could have adverse effects on our business, including substantial fluctuations in the market price of our common stock, which could decline below current levels.

If we issue additional equity securities in the future, our existing stockholders would be diluted.

Our articles of incorporation authorize the issuance of up to 100,000,000 shares of our common stock. In addition to capital-raising activities, on which we have historically relied for cash to fund our operations, other possible business and financial uses for our authorized common stock include, among others, stock splits, acquiring other businesses or assets in exchange for shares of our common stock, issuing shares of our common stock to collaborators in connection with strategic alliances, issuing common stock to vendors for services performed, attracting and retaining employees with equity compensation or other transactions and corporate purposes that our Board of Directors deems to be in the best interest of our Company. Additionally, issuances of common stock could be used for anti-takeover purposes or to delay or prevent changes in control or management of our Company. Any future issuances of our common stock may be consummated on terms that are not favorable, may not enhance stockholder value and may adversely affect the trading price of our common stock. Further, any such issuance will reduce the book value per share of our common stock and reduce the proportionate ownership and voting power of our existing stockholders.

We have not paid dividends in the past and do not expect to pay dividends in the future, and any return on investment may be limited to the value of your stock.

We have never paid dividends on our common stock and do not anticipate paying any dividends for the foreseeable future. You should not rely on an investment in our stock if you require dividend income. Further, you will only realize income on an investment in our stock in the event you sell or otherwise dispose of your shares at a price higher than the price you paid for your shares. Such a gain would result only from an increase in the market price of our common stock, which is uncertain and unpredictable.

If outstanding options or warrants to purchase shares of our common stock are exercised or outstanding restricted stock units vest and settle, our existing stockholders would be diluted.

As of July 31, 2020, we had outstanding (i) options to purchase 1.4 million shares of our common stock, (ii) warrants to purchase 3.1 million shares of our common stock, and (iii) 0.1 million restricted stock units. In addition, as of July 31, 2020, there were approximately 1.6 million shares reserved for future issuance under our stock incentive and stock purchase plans. The exercise of options and warrants, the vesting and settlement of restricted stock units or the issuance of additional equity awards under our stock incentive and stock purchase plans could have an adverse effect on the market for our common stock, including the price that any stockholder could obtain for its shares. Further, our existing stockholders could experience significant dilution in the net tangible book value of their investment upon the issuance of additional shares of our common stock through the exercise of derivative securities that are currently outstanding or that we may issue in the future.

Sales of common stock by our stockholders, or the perception that such sales may occur, could depress the market price of our common stock.

The market price of our common stock could decline as a result of sales by, or the perceived possibility of sales by, our existing stockholders. Since March 2011, we have completed a number of offerings of our common stock and warrants. Future sales of common stock by significant stockholders, including by those who acquired their shares in our prior equity offerings, or the perception that such sales may occur, could depress the price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate and executive office is located in Pennington, New Jersey, where we lease space at 24 N. Main Street, Pennington, New Jersey, pursuant to a lease agreement which expires in 2021. Our Company also has an office located in San Diego, California, where we lease space at 3565 General Atomics Court, Suite 100, San Diego, CA, 92121, pursuant to lease which expires in 2023. Additionally, we entered into a lease assignment agreement for space located at 5820 Nancy Ridge Drive, San Diego, California, 92121 which expires in 2025. We have also entered into lease arrangements for lab space in San Diego, California to support our research and development department.

We believe our current facilities are adequate to meet our current operating needs and will remain adequate for the foreseeable future. Should we need additional space, we currently do not foresee significant difficulties in obtaining additional facilities.

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of business, we may become a party to lawsuits involving various matters. The impact and outcome of litigation, if any, is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. We are not currently a party, and our properties are not currently subject, to any legal proceedings that, in the opinion of management, are expected to have a material adverse effect on our business, financial condition or results of operations.

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

Trading Information

Our common stock began trading on the NASDAQ Capital Market tier under the symbol "ONCS" since May 29, 2015.

The following table sets forth the range of reported high and low sales prices for our common stock for the fiscal quarters indicated, as reported on the NASDAQ:

	High	Low
Fiscal Year Ended July 31, 2020 *		
First Quarter ended October 31, 2019	$ 2.65	$ 1.60
Second Quarter ended January 31, 2020	$ 2.50	$ 1.70
Third Quarter ended April 30, 2020	$ 2.54	$ 1.04
Fourth Quarter ended July 31, 2020	$ 4.89	$ 1.51
Fiscal Year Ended July 31, 2019 *		
First Quarter ended October 31, 2018	$ 18.60	$ 11.70
Second Quarter ended January 31, 2019	$ 19.60	$ 5.40
Third Quarter ended April 30, 2019	$ 8.10	$ 4.20
Fourth Quarter ended July 31, 2019	$ 5.90	$ 2.02

* prices reflect 1:10 reverse stock split effectuated by the Company on May 20, 2019

Holders

As of October 28, 2020, there were 45 holders of record of our common stock, plus an indeterminate number of additional stockholders whose shares of our common stock are held on their behalf by brokerage firms or other agents.

Dividends

We have never declared or paid any cash dividends or distributions on our capital stock. We currently intend to retain future earnings, if any, to support operations and to finance expansion and therefore we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Securities Authorized for Issuance under Equity Compensation Plans

The information included under Item 12 of Part III of this report, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters," is hereby incorporated by reference into this Item 5 of Part II of this report.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis of Financial Conditions and Results of Operations and other portions of this report contain forward-looking information that involves risks and uncertainties. Our actual results could differ materially from those anticipated by the forward-looking information. Factors that may cause such differences include, but are not limited to, availability and cost of financial resources, product demand, market acceptance and other factors discussed in this report under the heading "Risk Factors". This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our financial statements and the related notes included elsewhere in this report.

Overview

We are a late-stage biotechnology company focused on designing, developing and commercializing innovative therapies and proprietary medical approaches to stimulate and to guide an anti-tumor immune response for the treatment of cancer. Our core technology platform, ImmunoPulse®is a drug-device therapeutic modality platform comprised of proprietary intratumoral electroporation ("EP") delivery, devices (the "OncoSec Medical System (OMS) Electroporation Device" or "OMS EP device". The OMS EP device is designed to deliver plasmid DNA-encoded drugs directly into a solid tumor and promote an immunological response against cancer. The OMS EP device can be adapted to treat different tumor types, and consists of an electrical pulse generator, a reusable handle and disposable applicators. Our lead product candidate is a DNA-encoded interleukin-12 ("IL-12") called tavokinogene telseplasmid ("TAVO"). The OMS EP device is used to deliver TAVO intratumorally, with the aim of reversing the immunosuppressive microenvironment in the treated tumor. The activation of the appropriate inflammatory response can drive a systemic anti-tumor response against untreated tumors in other parts of the body. In 2017, we received Fast Track designation and Orphan Drug Designation from the U.S. Food and Drug Administration ("FDA") for TAVO in metastatic melanoma, which could qualify TAVO for expedited FDA review, a rolling Biologics License Application review and certain other benefits.

We have completed monotherapy and combination programs and our current focus is to pursue clinical development programs with TAVO, in combination with anti-PD-1 checkpoint inhibitors, in metastatic melanoma, triple negative breast cancer ("TNBC") and squamous cell carcinoma head and neck ("SCCHN"). The Company intends to continue to pursue other ongoing or potential new trials and studies related to TAVO, in various tumor types. In addition to TAVO, we have identified and are developing new DNA-encoded therapeutic candidates and tumor indications for use with our new Visceral Lesion Applicator ("VLA"), to target deep visceral lesions, such as liver, lung, bladder, pancreatic and other difficult to treat visceral lesions.

Performance Outlook

We expect to use our available working capital in the near term primarily for the advancement of our existing and planned clinical programs, including performance of the KEYNOTE-695 and KEYNOTE-890 studies and, to a lesser extent, the continuation of our other clinical trials and studies. We anticipate our spending on clinical programs and the development of our next-generation OMS EP device will continue throughout our current fiscal year, primarily in support of the KEYNOTE-695 and KEYNOTE-890 studies, while our spending on research and development programs will be prioritized, based on our focus on the KEYNOTE-695 and KEYNOTE-890 studies. We expect our cash-based general and administrative expenses to remain relatively flat in the near term, as we seek to continue to leverage internal resources and automate processes to decrease our outside services expenses. See "Results of Operations" below for more information.

Results of Operations for the Year Ended July 31, 2020 Compared to the Year Ended July 31, 2019

The financial data for the years ended July 31, 2020 and July 31, 2019 is presented in the following table and the results of these two periods are included in the discussion thereafter.

	July 31, 2020	July 31, 2019	$ Change	% Change
Revenue	$ -	$ -	$ -	-
Expenses				
Research and development	25,096,817	18,445,199	6,651,618	36
General and administrative	18,312,268	11,971,479	6,340,789	53
Loss from operations	(43,409,085)	(30,416,678)	12,992,407	43
Other income, net	185,052	440,037	(254,985)	(58)
Interest expense	(5,114)	(3,805)	1,309	34
Loss on disposal of property and equipment	-	(703)	(703)	(100)
Foreign currency exchange gain/(loss), net	103,136	(281,473)	(384,609)	(137)
Realized loss on sale of securities, net	-	(12,134)	(12,134)	(100)
Loss before income taxes	(43,126,011)	(30,274,756)	12,851,255	42
Income tax expense (benefit)	(872,585)	1,297	(873,882)	(67,377)
Net loss	$ (42,253,426)	$ (30,276,053)	$ 11,977,373	40

Revenue

We have not generated any revenue since our inception, and we do not anticipate generating meaningful revenue in the near term.

Research and Development Expenses

Our research and development expenses increased by approximately $6.7 million, from $18.4 million during the year ended July 31, 2019 to $25.1 million during the year ended July 31, 2020. This increase was primarily due to the following approximate increases: (i) $5.7 million in clinical trial-related costs to support our various clinical studies and costs for discovery research and product development (ii) $0.5 million in higher rent expense as a result of the adoption of ASC 842 for our operating leases on August 1, 2019 and (iii) $0.6 million increase in payroll and related benefits expenses, primarily due to additional headcount and merit increases. These increases were partially offset by a $0.1 million reduction in stock-based compensation expense for employees and consultants.

General and Administrative

Our general and administrative expenses increased by approximately $6.3 million, from $12.0 million during the year ended July 31, 2019, to $18.3 million during the year ended July 31, 2020. This increase was largely due to the following approximate increases: (i) $4.8 million in legal costs primarily related to the Alpha Holdings litigation and the contested proxy; (ii) $0.9 million in consulting costs, primarily due to business development and public relations (iii) $0.8 million in proxy costs primarily related to the Company's special meeting held in February 2020 and (iv) $0.5 million increase in payroll and related benefits expenses primarily due to additional headcount and merit increases. These increases were partially offset by a $0.5 million reduction in stock-based compensation expense for employees and consultants, and $0.2 million in travel and travel related expenses due to COVID-19 restrictions. The Company believes a significant portion of its legal costs related to the Alpha Holdings litigation are recoverable and are likely to be recovered. At this point, no amount for insurance recoveries has been recorded.

Other Income, Net

Other income, net, decreased by approximately $0.2 million from $0.4 million for the year ended July 31, 2019 to $0.2 million for the year ended July 31, 2020. This decrease was primarily due to reduced interest income as a result of lower cash balances as well as a lower return on our investments for these respective periods.

Foreign Currency Exchange Gain/(Loss), Net

Foreign currency exchange gain/(loss), net, increased by approximately $0.4 million from a loss of $(0.3) million for the year ended July 31, 2019 to a gain of $0.1 million for the year ended July 31, 2020. The increase was primarily due to unrealized foreign currency transaction gains and losses recognized in connection with the Australian subsidiary's intercompany loan.

Income Tax expense (benefit)

In May 2020, the Company received $0.9 million in net proceeds from the sale of its New Jersey Net Operating Losses under the State of New Jersey NOL Transfer Program. The Company incurred minimum tax expense during the period ended July 31, 2019.

Liquidity and Capital Resources

Working Capital

The following table and subsequent discussion summarize our working capital as of each of the periods presented:

	At July 31, 2020	At July 31, 2019
Current assets	$ 22,821,685	$ 28,507,336
Current liabilities	9,678,030	4,977,000
Working capital	$ 13,143,655	$ 23,530,336

Current Assets

Current assets as of July 31, 2020 decreased by $5.7 million to $22.8 million, from $28.5 million as of July 31, 2019. In February 2020, the Company received $28.0 million net proceeds from the China Grand Pharmaceutical and Healthcare Holdings Limited ("CGP"), and Sirtex Medical US Holdings, Inc. ("Sirtex") financing transaction. The proceeds from CGP and Sirtex financing were offset by cash used to support our operations during the year ended July 31, 2020.

Current Liabilities

Current liabilities as of July 31, 2020 increased by $4.7 million to $9.7 million, from $5.0 million as of July 31, 2019. This increase was primarily due to an increase in accounts payable related to the Alpha Holdings litigation and contested proxy as well as the addition of operating lease liabilities to the balance sheet as a result of the adoption of ASC 842.

Cash Flow

Cash Used in Operating Activities

Net cash used in operating activities for the year ended July 31, 2020 was $33.1 million, as compared to $29.0 million for the year ended July 31, 2019. The $4.1 million increase in cash used in operating activities was primarily attributable to an increase in cash used to support our operating activities, including but not limited to, our clinical trials, an increase in R&D activities, amounts for the Alpha litigation and contested proxy and general working capital requirements.

Cash Provided by Investing Activities

Net cash provided by investing activities for year ended July 31, 2020 was $0, as compared to $23.2 million provided by investing activities for the year ended July 31, 2019. Net cash provided by investing activities for the year ended July 31, 2019 was related to maturities and sales of certain investment securities. We have an investment policy which is administered by management and reviewed by the Board of Directors. We believe our investment policy is conservative and maximizes returns, while minimizes risk, since we rely on the cash to fund operations.

Cash Provided by Financing Activities

Net cash provided by financing activities was $28.4 million for the year ended July 31, 2020, as compared to $27.2 million provided by financing activities for the year ended July 31, 2019. Net proceeds during the year ended July 31, 2020 was primarily attributable to the $28.0 million received from the CGP and Sirtex offering (see "Sources of Capital" below). Net proceeds during the year ended July 31, 2019 was primarily attributable to the net proceeds received from the May 2019 Offering and the Alpha Holdings offering (see "Sources of Capital" below).

Uses of Cash and Cash Requirements

Our primary uses of cash have been to finance clinical and research and development activities focused on the identification and discovery of new potential product candidates, the development of innovative and proprietary medical approaches for the treatment of cancer, and the design and advancement of pre-clinical and clinical trials and studies related to our pipeline of product candidates. We have also used our capital resources on general and administrative activities, including legal fees associated with the Alpha Holdings litigation and building and strengthening our corporate infrastructure, programs and procedures to enable compliance with applicable federal, state and local laws and regulations.

Our primary objectives for the next 12 months are to continue the advancement of our KEYNOTE-695 and KEYNOTE-890 studies and, to a lesser extent, our other ongoing clinical trials and studies, and to continue our research and development activities for our next-generation EP device and drug discovery efforts. In addition, we expect to pursue capital-raising transactions, which could include equity or debt financings, in the near term to fund our existing and planned operations and acquire and develop additional assets and technology consistent with our business objectives as opportunities arise.

Going Concern and Managements Plans

The Company has sustained losses in all reporting periods since inception, with an inception-to date-loss of $207 million as of July 31, 2020. These losses are expected to continue for an extended period of time. Further, the Company has never generated any cash from its operations and does not expect to generate such cash in the near term. The aforementioned factors raise substantial doubt about the Company's ability to continue as a going concern within one year from the issuance date of the consolidated financial statements elsewhere in this Form 10-K. The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of asset amounts or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern within one year after the date the consolidated financial statements are issued.

As of October 13, 2020, the Company had cash and cash equivalents of $25.2 million. Since inception, cash flows from financing activities has been the primary source of the Company's liquidity. The Company currently estimates its monthly working capital requirements to be approximately $2.3 million, although the Company may modify or deviate from this estimate and it is likely that the Company's actual operating expenses and working capital requirements will vary from its estimate. Based on these expectations regarding future expenses, rate of consumption, as well as its current cash levels, the Company believes its cash resources are insufficient to meet the Company's anticipated needs for the 12 months following the date the consolidated financial statements are issued.

The Company recognizes it will need to raise additional capital to continue operating its business and fund its planned operations, including research and development, clinical trials and, if regulatory approval is obtained, commercialization of its product candidates. In addition, the Company will require additional financing if it desires to in-license or acquire new assets, research and develop new compounds or new technologies and pursue related patent protection, or obtain any other intellectual property rights or other assets. There is no assurance that additional financing will be available when needed or that management will be able to obtain financing on terms acceptable to the Company or whether the Company will become profitable and generate positive operating cash flow. If the Company is unable to raise sufficient additional funds when needed, on favorable terms or at all, the Company will not be able to continue development of its product candidates as currently planned or at all, will need to reevaluate its planned operations and may need to delay, scale back or eliminate some or all of its development programs, reduce expenses or cease operations, any of which would have a significant negative impact on its prospects and financial condition.

Sources of Capital

We have not generated any revenue since our inception, and we do not anticipate generating meaningful revenue in the near term. Historically, we have raised the majority of the funding for our business through offerings of our common stock and warrants to purchase our common stock. If we issue equity or convertible debt securities to raise additional funds, our existing stockholders would experience further dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. If we incur debt, our fixed payment obligations, liabilities and leverage relative to our equity capitalization would increase, which could increase the cost of future capital. Further, the terms of any debt securities we issue or borrowings we incur, if available, could impose significant restrictions on our operations, such as limitations on our ability to incur additional debt or issue additional equity or other operating restrictions that could adversely affect our ability to conduct our business, and any such debt could be secured by any or all of our assets pledged as collateral. Additionally, we may incur substantial costs in pursuing future capital, including investment banking, legal and accounting fees, printing and distribution expenses and other costs.

Registered Direct Offering

On August 19, 2020, the Company completed the offer and sale of an aggregate of 4,608,589 shares of its common stock at a purchase price of $3.25 per share in a registered direct offering. The gross proceeds of the offering were approximately $15.0 million, and the net proceeds, after deducting the placement agent's fee and other offering fees and expenses paid by the Company, were approximately $13.7 million. In connection with the offering, the Company paid the placement agent and other financial advisors an aggregate cash fee equal to 8.0% of the gross proceeds of the offering, as well as legal and other expenses equal to $75,000.

Sale of New Jersey Net Operating Losses (NOLs)

In May 2020, the Company received $0.9 million in net proceeds from the sale of its New Jersey Net Operating Losses under the State of New Jersey NOL Transfer Program for the period ended July 31, 2019.

Small Business Administration Loan

On April 27, 2020, the Company was granted a loan (the "Loan") from the Banc of California in the aggregate amount of $952,744, pursuant to the Paycheck Protection Program (the "PPP") under the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), which was enacted March 27, 2020. The term of the loan is two years, with monthly payments due the first day of each month, beginning seven months from the date of initial disbursement, or December 1, 2020. Interest accrues at 1% per year, effective on the date of initial disbursement.

CGP and Sirtex

On February 7, 2020, the Company closed (the "Closing") a strategic transaction (the "Transaction") with CGP and its affiliate, Sirtex. On October 10, 2019, the Company and the Buyers entered into Stock Purchase Agreements (as amended, the "Purchase Agreements") pursuant to which the Company agreed to sell and issue to CGP and Sirtex 10,000,000 shares and 2,000,000 shares, respectively, of the Company's common stock for an aggregate purchase price of $30 million. The net proceeds, after deducting offering fees and expenses paid by us, were approximately $28.0 million.

May 2019 Offering

On May 24, 2019, we completed our offer and sale of an aggregate of 3,492,063 shares of our common stock, together with 3,492,063 accompanying warrants to purchase an aggregate of 2,619,047 shares of our common stock, at a combined purchase price of $3.15 per share of common stock and warrant. The warrants have an exercise price of $3.45 per full share, became exercisable on May 24, 2019 and expire on May 24, 2024. The gross proceeds of the offering were approximately $11.0 million, and the net proceeds, after deducting the placement agent's fee and other offering fees and expenses paid by us, were approximately $10.0 million. In connection with the offering, we paid the placement agent a cash fee equal to 6.5% of the gross proceeds of the offering, as well as legal and other expenses equal to $90,000. In addition, pursuant to the underwriting agreement, the Company granted the underwriters an option, exercisable for 45 days, to purchase up to an additional 523,809 shares of our common stock (the "Option Shares") and/or warrants to purchase up to 392,857 shares of common stock (the "Option Warrants"). On May 24, 2019, the underwriters partially exercised their option and purchased 238,095 Option Warrants to purchase an aggregate of 178,571 shares of our common stock, at a purchase price of $0.01 per warrant before underwriting discounts, or $2,381. The Option Warrants have an exercise price of $3.45 per full share, became exercisable on May 24, 2019 and expire on May 24, 2024.

Aspire Capital

On March 29, 2019, the Company entered into a common stock purchase agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC, ("Aspire Capital") pursuant to which the Company agreed to issue and sell to Aspire Capital shares of its common stock equal to an aggregate amount of up to $20.0 million at the Company's request from time to time during a 30-month period. The Company filed with the Securities and Exchange Commission a prospectus supplement to the Company's effective shelf registration statement on Form S-3 registering all the shares of common stock that have been offered to Aspire Capital from time to time. In consideration for entering into the Purchase Agreement, the Company issued to Aspire Capital 120,201 shares of the Company's common stock which represented 3% of the aggregate commitment.

Under the Purchase Agreement, on any trading day selected by the Company, the Company had the right, in its sole discretion, to present Aspire Capital with a purchase notice, directing Aspire Capital to purchase up to 30,000 shares of the Company's common stock per business day, up to $20.0 million of the Company's common stock in the aggregate at a per share price equal to the lesser of:

- the lowest sale price of the Company's common stock on the purchase date; or
- the arithmetic average of the three (3) lowest closing sale prices for the Company's common stock during the ten (10) consecutive trading days ending on the trading day immediately preceding the purchase date.

Upon execution of the Purchase Agreement, the Company agreed to sell to Aspire Capital 400,674 shares of common stock for total proceeds, before expenses, of $2,000,000. Additionally, in April 2019, the Company sold a total of 90,000 shares of its common stock to Aspire Capital resulting in the Company receiving total proceeds, before expenses, of approximately $520,000 in cash. There were no underwriting or placement agent fees associated with the offering.

On May 27, 2019, the Company terminated the Purchase Agreement.

Alpha Holdings

On August 31, 2018, the Company entered into a stock purchase agreement with Alpha Holdings, Inc. ("Alpha Holdings"), pursuant to which the Company agreed to issue and sell to Alpha Holdings shares of its common stock equal to an aggregate amount of up to $15.0 million at a market purchase price of $15.00 per share, which was the closing price of the Company's common stock the day immediately before the agreement was executed by the parties.

On October 9, 2018, the Company received total proceeds, before expenses, of $8.0 million in cash from the offering and issued Alpha Holdings 533,333 shares of common stock. There were no underwriting or placement agent fees associated with the offering.

On December 6, 2018, the Company received total proceeds, before expenses, of $7.0 million in cash from the offering and issued Alpha Holdings 466,667 shares of common stock. There were no underwriting or placement agent fees associated with the offering.

Critical Accounting Policies

Accounting for Long-Lived Assets

We assess the impairment of long-lived assets, consisting of property and equipment, periodically and whenever events or circumstances indicate that the carrying value may not be recoverable. Examples of such circumstances may include: (1) the asset's ability to continue to generate income from operations and positive cash flow in future periods; (2) loss of legal ownership or title to an asset; (3) significant changes in our strategic business objectives and utilization of the assets; and (4) the impact of significant negative industry or economic trends. If a change were to occur in any of these or similar factors, the likelihood of a material change in our net loss would increase.

Recoverability of assets to be held and used in operations is measured by a comparison of the carrying amount of an asset to the future net cash flows expected to be generated by the assets. Although we believe the factors used by management to evaluate future net cash flows are reasonable, this evaluation requires a high degree of judgment, and results could vary if the actual amounts are materially different than management's estimates. In addition, we base estimates of useful lives and related amortization or depreciation expense on our subjective estimate of the period the assets will generate revenue or otherwise be used by us. If long-lived assets are considered impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less selling costs.

Equity-Based Awards

The Company grants equity-based awards (typically stock options or restricted stock units) under our stock-based compensation plan and outside of our stock-based compensation plan, with terms generally similar to the terms under our stock-based compensation plan. The Company estimates the fair value of stock option awards using the Black-Scholes option valuation model. For employees, directors and consultants, the fair value of the award is measured on the grant date. The fair value amount is then recognized over the period during which services are required to be provided in exchange for the award, usually the vesting period. The Black-Scholes option valuation model requires the input of subjective assumptions, including price volatility of the underlying stock, risk-free interest rate, dividend yield, and expected life of the option. The Company estimates the fair value of restricted stock unit awards based on the closing price of the Company's common stock on the date of issuance.

Employee Stock Purchase Plan

Employees may elect to participate in our stockholder approved employee stock purchase plan. The stock purchase plan allows for the purchase of our common stock at not less than 85% of the lesser of (i) the fair market value of a share of stock on the beginning date of the offering period or (ii) the fair market value of a share of stock on the purchase date of the offering period, subject to a share and dollar limit as defined in the plan and subject to the applicable legal requirements. There are two 6-month offering periods during each fiscal year, ending on January 31 and July 31. In accordance with applicable accounting guidance, the fair value of awards under the stock purchase plan is calculated at the beginning of each offering period. We estimate the fair value of the awards using the Black-Scholes option valuation model. The Black-Scholes option valuation model requires the input of subjective assumptions, including price volatility of the underlying stock, risk-free interest rate, dividend yield, and the offering period. This fair value is then amortized at the beginning of the offering period. Stock-based compensation expense is based on awards expected to be purchased at the beginning of the offering period, and therefore is reduced when participants withdraw during the offering period.

Australia Research and Development Tax Credit

Our Australian, wholly-owned, subsidiary incurs research and development expenses, primarily in the course of conducting clinical trials. The Australian research and development activities qualify for the Australian government's tax credit program, which provides a 41% credit for qualifying research and development expenses. The tax credit does not depend on our generation of future taxable income or ongoing tax status or position. Accordingly, the credit is not considered an element of income tax accounting under ASC 740 and is recorded against qualifying research and development expenses in the Company's consolidated statements of operations.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use ("ROU") assets represent the Company's right to use an underlying asset during the lease term, and operating lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating leases are included in ROU assets, current operating lease liabilities, and long-term operating lease liabilities on the Company's consolidated balance sheets.

Lease ROU assets and lease liabilities are initially recognized based on the present value of the future minimum lease payments over the lease term at commencement date calculated using our incremental borrowing rate applicable to the lease asset, unless the implicit rate is readily determinable. ROU assets also include any lease payments made at or before lease commencement and exclude any lease incentives received. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Leases with a term of 12 months or less are not recognized on the consolidated balance sheet. The Company's leases do not contain any residual value guarantees. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term. The Company accounts for lease and non-lease components as a single lease component for all its leases.

Recent Accounting Pronouncements

Information regarding recent accounting pronouncements is contained in Note 2 to our consolidated financial statements included in this report.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditure or capital resources that is material to investors.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is incorporated by reference to our consolidated financial statements and the related notes and the report of our independent registered public accounting firm beginning at page F-1 of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow 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. In addition, the design of disclosure controls and procedures reflects the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

As required by Rule 13a-15(b) under the Exchange Act, our management, under the supervision and with the participation of our President and Chief Executive Officer and Principal Accounting Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of July 31, 2020. Based on such evaluation, our President and Chief Executive Officer and Principal Accounting Officer concluded that, as of July 31, 2020, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. With the participation of our President and Chief Executive Officer and Principal Accounting Officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of July 31, 2020. In conducting such evaluation, management used the criteria set forth in the report entitled "*Internal Control — Integrated Framework*" published by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) to evaluate the effectiveness of our internal control over financial reporting. Based on this evaluation, management has concluded that our internal control over financial reporting was effective as of July 31, 2020, based on those criteria.

This report does not include an attestation report of our independent registered public accounting firm regarding our internal control over financial reporting, in accordance with applicable SEC rules that permit us to provide only management's report in this report.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting during the year ended July 31, 2020, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements prepared for external purposes in accordance with generally accepted accounting principles. 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.

ITEM 9B. OTHER INFORMATION

None

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 is incorporated herein by reference from our Proxy Statement for our 2020 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated herein by reference from our Proxy Statement for our 2020 Annual Meeting of Stockholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 is incorporated herein by reference from our Proxy Statement for our 2020 Annual Meeting of Stockholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Director independence and other information required by this Item 13 is incorporated herein by reference from our Proxy Statement for our 2020 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item 14 is incorporated herein by reference from our Proxy Statement for our 2020 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)(1) The following financial statements of OncoSec Medical Incorporated are filed as part of this report under Item 8 — Financial Statements and Supplementary Data:

(a)(2) All financial statement schedules are omitted because they are not required, or are not applicable, or the required information is shown in the consolidated financial statements or notes thereto included in this report.

(a)(3) The exhibits listed in the Exhibit Index, which appears immediately following the last page of this report and is incorporated herein by reference, are filed or incorporated by reference as part of this report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of **OncoSec Medical Incorporated**

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of **OncoSec Medical Incorporated** (the "Company") as of July 31, 2020 and 2019, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the years in the two-year period ended July 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of July 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the two-year period ended July 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 3 to the financial statements, the Company has incurred recurring losses from operations, and is dependent on additional financing to fund operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are described in Note 3 to the financial statements. The financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

Adoption of New Accounting Standard

As discussed in Note 2 to the financial statements, the Company changed its method of accounting for leases as a result of the adoption of Accounting Standards Codification Topic 842, Leases. Our opinion is not modified with respect to this matter.

Basis for Opinion

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

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

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

/s/ Mayer Hoffman McCann P.C.

We have served as the Company's auditor since 2011.

San Diego, California
October 28, 2020

OncoSec Medical Incorporated
Consolidated Balance Sheets

	July 31, 2020	July 31, 2019
Assets		
Current assets		
Cash and cash equivalents	$ 20,354,462	$ 25,147,780
Prepaid expenses and other current assets	2,467,223	3,359,556
Total Current Assets	22,821,685	28,507,336
Property and equipment, net	814,494	1,031,129
Operating right-of-use assets	5,948,224	-
Other long-term assets	319,058	353,547
Total Assets	$ 29,903,461	$ 29,892,012
Liabilities and Stockholders' Equity		
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	$ 7,923,036	$ 4,217,017
Accrued compensation related	285,127	676,223
Operating lease liabilities	500,357	-
Notes payable	969,509	83,760
Total Current Liabilities	9,678,029	4,977,000
Operating lease liabilities, net of current portion	5,874,442	-
Notes payable, net of current portion	480,554	-
Other long-term liabilities	-	635,913
Total Liabilities	16,033,025	5,612,913
Commitments and Contingencies (Note 10)		
Stockholders' Equity		
Common stock authorized - 100,000,000 and 16,000,000 common shares with a par value of $0.0001 as of July 31, 2020 and July 31, 2019, respectively, common stock issued and outstanding — 23,054,474 and 10,633,043 common shares as of July 31, 2020 and July 31, 2019, respectively	2,305	1,063
Additional paid-in capital	214,789,808	177,656,149
Warrants issued and outstanding – 3,114,288 and 3,631,953 warrants as of July 31, 2020 and July 31, 2019, respectively	5,708,127	10,809,724
Accumulated other comprehensive income (loss)	(19,504)	169,037
Accumulated deficit	(206,610,300)	(164,356,874)
Total Stockholders' Equity	13,870,436	24,279,099
Total Liabilities and Stockholders' Equity	$ 29,903,461	$ 29,892,012

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

OncoSec Medical Incorporated
Consolidated Statements of Operations

	Year Ended July 31, 2020	Year Ended July 31, 2019
Revenue	$ -	$ -
Expenses:		
Research and development	25,096,817	18,445,199
General and administrative	18,312,268	11,971,479
Loss from operations	(43,409,085)	(30,416,678)
Other income, net	185,052	440,037
Interest expense	(5,114)	(3,805)
Loss on disposal of property and equipment	-	(703)
Foreign currency exchange gain (loss), net	103,136	(281,473)
Realized loss on sale of securities, net	-	(12,134)
Loss before income taxes	(43,126,011)	(30,274,756)
Income tax expense (benefit)	(872,585)	1,297
Net loss	$ (42,253,426)	$ (30,276,053)
Basic and diluted net loss per common share	$ (2.56)	$ (4.29)
Weighted average shares used in computing basic and diluted net loss per common share	16,534,551	7,053,279

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

OncoSec Medical Incorporated
Consolidated Statements of Comprehensive Loss

	Year Ended July 31, 2020	Year Ended July 31, 2019
Net Loss	$ (42,253,426)	$ (30,276,053)
Foreign currency translation adjustments	(188,541)	185,061
Comprehensive Loss	$ (42,441,967)	$ (30,090,992)

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

OncoSec Medical Incorporated
Consolidated Statements of Stockholders' Equity

	Common Stock		Additional Paid-In	Warrants		Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Shares	Amount	Income (Loss)	Deficit	Equity
Balance, July 31, 2018	5,351,290	$ 535	$ 145,749,189	895,805	$ 11,271,327	$ (16,024)	$ (134,080,821)	$ 22,924,206
Repurchase of fractional shares	(1,456)	—	(567)	—	—	—	—	(567)
Exercise of common stock options	43,029	4	566,131	—	—	—	—	566,135
Common stock issued for employee stock purchase plan	4,688	1	27,290	—	—	—	—	27,291
Stock-based compensation expense	54,755	5	3,364,366	—	—	—	—	3,364,371
Tax withholdings paid on equity awards	—	—	(101,480)	—	—	—	—	(101,480)
Tax shares sold to pay for tax withholdings on equity awards	—	—	83,246	—	—	—	—	83,246
Tax withholdings paid related to net share settlement of equity awards	—	—	(32,505)	—	—	—	—	(32,505)
Private placement on October 8, 2018, net of issuance costs of $573,189	533,333	53	7,446,758	—	—	—	—	7,446,811
Private placement on December 6, 2018, net of issuance costs of $304,916	466,666	47	6,695,038	—	—	—	—	6,695,085
Private placement on May 24, 2019, net of issuance costs of $1,025,655	3,492,063	349	6,377,220	2,797,618	3,599,156	—	—	9,976,725
Private placement, net of issuance costs of $80,575	610,875	61	2,439,293	—	—	—	—	2,439,354
Cancellation of expired warrants	—	—	4,060,759	(61,470)	(4,060,759)	—	—	—
Common stock issued for services	60,300	6	845,988	—	—	—	—	845,994
Modification of equity award	17,500	2	135,423	—	—	—	—	135,425
Net loss and comprehensive loss	—	—	—	—	—	185,061	(30,276,053)	(30,090,992)
Balance, July 31, 2019	10,633,043	1,063	177,656,149	3,631,953	10,809,724	169,037	(164,356,874)	24,279,099
Common stock issued for employee stock purchase plan	4,199	—	7,012	—	—	—	—	7,012
Stock-based compensation expense	220,233	22	3,517,106	—	—	—	—	3,517,128
Cash paid for stock options cancellation	—	—	(25,819)	—	—	—	—	(25,819)
Repurchase of warrants	—	—	2,457,976	(266,098)	(2,636,201)	—	—	(178,225)
Tax withholdings paid on equity awards	—	—	(26,859)	—	—	—	—	(26,859)
Tax shares sold to pay for tax withholdings on equity awards	—	—	26,495	—	—	—	—	26,495
Tax withholdings paid related to net share settlement of equity awards	—	—	(263,100)	—	—	—	—	(263,100)
Cancellation of expired warrants	—	—	2,465,396	(251,567)	(2,465,396)	—	—	—
February 2020 Financing, net of issuance costs of$1,954,678	12,000,000	1,200	28,044,122	—	—	—	—	28,045,322
Common stock issued for services	196,999	20	931,330	—	—	—	—	931,350
Net loss and comprehensive loss	—	—	—	—	—	(188,541)	(42,253,426)	(42,441,967)
Balance, July 31, 2020	23,054,474	$ 2,305	$ 214,789,808	3,114,288	$ 5,708,127	$ (19,504)	$ (206,610,300)	$ 13,870,436

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

OncoSec Medical Incorporated
Consolidated Statements of Cash Flows

	Year Ended July 31, 2020	Year Ended July 31, 2019
Operating activities		
Net loss	$ (42,253,426)	$ (30,276,053)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	216,635	243,712
Amortization of right-of-use assets	773,653	-
Loss on disposal of property and equipment	-	703
Amortization of discount on investments	-	(51,481)
Stock-based compensation	3,517,128	3,364,371
Common stock issued for services	931,350	845,994
Modification of equity award	-	135,425
Foreign currency exchange loss, net	(103,136)	281,473
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	1,470,982	(1,566,415)
Other long-term assets	42,431	(9,035)
Accounts payable and accrued liabilities	3,617,923	(741,444)
Accrued compensation related	(391,096)	(394,521)
Operating lease liabilities	(967,808)	-
Other long-term liabilities	-	(836,714)
Net cash used in operating activities	(33,145,364)	(29,003,985)
Investing activities		
Purchases of property and equipment	-	(9,882)
Maturity of investment securities	-	17,236,000
Sale of investment securities	-	5,977,794
Net cash provided by investing activities	-	23,203,912
Financing activities		
Proceeds from issuance of common stock through ESPP	7,012	27,291
Proceeds from issuance of common stock and/or warrants	30,000,000	27,897,155
Payment of financing and offering costs	(1,954,678)	(1,159,180)
Cash paid for stock options cancellation	(25,819)	-
Cash paid for repurchase of warrants	(178,225)	-
Proceeds from exercise of options	-	566,135
Proceeds from note payable	952,744	-
Principal payments on note payable	(138,244)	(81,577)
Tax withholdings paid on equity awards	(26,859)	(101,480)
Tax withholdings paid related to net share settlement of equity awards	(263,100)	(32,505)
Tax shares sold to pay for tax withholdings on equity awards	26,495	83,246
Repurchase of fractional shares	-	(567)
Net cash provided by financing activities	28,399,326	27,198,518
Effect of exchange rate changes on cash	(47,280)	(54,292)
Net increase (decrease) in cash and cash equivalents	(4,793,318)	21,344,153
Cash and cash equivalents, at beginning of year	25,147,780	3,803,627
Cash and cash equivalents, at end of year	$ 20,354,462	$ 25,147,780
Supplemental disclosure for cash flow information:		
Cash paid during the period for:		
Interest	$ 3,179	$ 3,253
Income taxes	$ 2,450	$ 1,700
Noncash investing and financing transactions:		
Expiration of warrants	$ 2,465,396	$ 4,060,759
Increase in right-of-use assets and operating lease liabilities resulting from contract modification	$ 5,288,981	$ -
Amounts accrued for offering costs	$ -	$ 200,000
Note issued for insurance premium	$ 551,803	$ 185,990

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

Note 1—Nature of Operations and Basis of Presentation

OncoSec Medical Incorporated (together with its subsidiary, unless the context indicates otherwise, being collectively referred to as the "Company") began its operations as a biotechnology company in March 2011. The Company has not produced any revenues since its inception. The Company was incorporated in the State of Nevada on February 8, 2008 under the name of Netventory Solutions, Inc. and changed its name in March 2011 when it began operating as a biotechnology company.

The Company is a late-stage biotechnology company focused on designing, developing and commercializing innovative therapies and proprietary medical approaches to stimulate and to guide an anti-tumor immune response for the treatment of cancer. Its core technology platform, ImmunoPulse®, is a drug-device therapeutic modality comprised of proprietary intratumoral electroporation ("EP") delivery devices (the "OncoSec Medical System (OMS) Electroporation device" or "OMS EP device". The OMS EP device is designed to deliver plasmid DNA-encoded drugs directly into a solid tumor and promote an immunological response against cancer. The OMS EP device can be adapted to treat different tumor types, and consists of an electrical pulse generator, a reusable handle and disposable applicators. The Company's lead product candidate is a DNA-encoded interleukin-12 ("IL-12") called tavokinogene telseplasmid ("TAVO"). The OMS EP device is used to deliver TAVO intratumorally, with the aim of reversing the immunosuppressive microenvironment in the treated tumor. The activation of the appropriate inflammatory response can drive a systemic anti-tumor response against untreated tumors in other parts of the body. In 2017, the Company received Fast Track designation and Orphan Drug Designation from the U.S. Food and Drug Administration ("FDA") for TAVO in metastatic melanoma, which could qualify TAVO for expedited FDA review, a rolling Biologics License Application review and certain other benefits.

The Company's current focus is to pursue our study of TAVO in combination with KEYTRUDA® (pembrolizumab) in melanoma, triple negative breast cancer ("TNBC").

KEYNOTE-695 targets melanoma patients who are definitive anti-PD-1 non-responders. In May 2017, we entered into a clinical trial collaboration and supply agreement with a subsidiary of Merck & Co., Inc. ("Merck") in connection with KEYNOTE-695 study. Pursuant to the terms of the agreement, both companies will bear their own costs related to manufacturing and supply of their product, as well as be responsible for their own internal costs. The Company is the study sponsor and is responsible for external costs. The KEYNOTE-695 study is currently enrolling and treating patients and we plan to complete enrollment or near complete enrollment in this study in the second half 2020. This study is a registration-directed, Phase 2b open-label, single-arm, multicenter study in the United States, Canada, Australia and Europe.

In May 2018, the Company entered into a second clinical trial collaboration and supply agreement with Merck with respect to a Phase 2 study of TAVO in combination with KEYTRUDA® to evaluate the safety and efficacy of the combination in patients with inoperable locally advanced or metastatic TNBC, who have previously failed at least one systemic chemotherapy or immunotherapy. This study is referred to as KEYNOTE-890, Cohort 1. Pursuant to the terms of the agreement, both companies will bear their own costs related to manufacturing and supply of their product, as well as be responsible for their own internal costs. The Company is the study sponsor and is responsible for external costs. The KEYNOTE-890 study, Cohort 1 is currently treating patients. The Company completed enrollment in fourth quarter 2019 and provided interim preliminary data from this study at the San Antonio Breast Cancer Symposium ("SABCS") in December 2019. The study is a Phase 2 open-label, single-arm, multicenter study in the United States and Australia.

In June 2020, the Company amended its second clinical trial collaboration and supply agreement with Merck to include another Phase 2 study of TAVO in combination with KEYTRUDA® plus chemotherapy to evaluate the safety and efficacy of the combination in patients with inoperable locally advanced or metastatic triple negative breast cancer (mTNBC). This study is referred to as KEYNOTE-890, Cohort 2. Pursuant to the terms of the amended agreement, both companies will bear their own costs related to manufacturing and supply of their product, as well as be responsible for their own internal costs. The Company is the study sponsor and are responsible for external costs. The KEYNOTE-890, Cohort 2 study is currently expected to begin enrolling patients in Q4 2020/Q1 2021. The Company expects to complete enrollment in within fifteen months and provided interim preliminary data from this study at a future medical conference. The study is a Phase 2 open-label, single-arm, multicenter study in the United States and Australia.

In August 2020, the Company commenced an investigator-initiated Phase 2 study conducted by the H. Lee Moffitt Cancer Center and Research Institute and the University of South Florida Morsani College of Medicine to evaluate TAVO™ as neoadjuvant treatment (administered before surgery) in combination with intravenous OPDIVO®(nivolumab) in up to 33 patients with operable locally/regionally advanced melanoma. This investigator-initiated Phase 2 study has been designed to evaluate whether the addition of TAVO can increase the published anti-tumor response observed with monotherapy OPDIVO®, an anti-PD-1 checkpoint inhibitor, in patients with locally/regionally advanced melanoma prior to surgical resection of tumors. This study is currently enrolling and expected to complete enrollment within eighteen months.

In April 2020, the Company announced that Providence Cancer Institute, a part of Providence St. Joseph Health (“Providence”), is pursuing a first-in-human Phase 1 clinical trial of OncoSec’s novel DNA-encodable, investigational vaccine, CORVax12, which is designed to act as a prophylactic vaccine to prevent COVID-19. CORVax12 consists of the Company’s existing product candidate, TAVO™ (interleukin-12 or “IL-12” plasmid), in combination with an immunogenic component of the SARS-CoV-2 virus recently developed by researchers at NIH’s National Institute of Allergy and Infectious Diseases (“NIAID”) and licensed to the Company on a non-exclusive basis.

Providence investigators have filed an Investigator-Initiated Investigational New Drug (IND) Application with the United States Food and Drug Administration (FDA) and have designed a clinical trial protocol that will evaluate the vaccination of healthy adult volunteers utilizing CORVax12 and an investigational low voltage generator technology if FDA clears the IND. The trial will also include extensive immune monitoring.

The Company will supply TAVO and the low voltage electroporation device to Providence as part of this effort and does not anticipate any additional capital commitment at this time. Additionally, the Company will contribute manufacturing, preclinical, and prior clinical information and data for TAVO, along with manufacturing data with respect to the generator, to support FDA’s allowance of the Providence IND. Providence will hold the IND, if cleared by FDA, and perform the preclinical and clinical development work. The anticipated work and clinical trials outlined above are subject to FDA allowance of the Investigator-Initiated IND filed by Providence.

In May 2019, the Company commenced an investigator-initiated Phase 1 clinical trial conducted by the University of California San Francisco Helen Diller Family Comprehensive Cancer Center (OMS-131). This study targets patients with SQUAMOUS CELL CARCINOMA HEAD & NECK CANCER (SCCHN) and is a single-arm open-label clinical trial in which 35 evaluable patients will receive TAVO, KEYTRUDA® and epacadostat. OMS-131 is currently enrolling and treating patients and is expected to complete enrollment within eighteen months.

The Company intends to continue to pursue other ongoing or potential new trials and studies related to TAVO, in various tumor types. In addition, the Company is also developing our next-generation EP device and applicator, including advancements toward prototypes, pursuing discovery research to identify other product candidates that, in addition to IL-12, can be encoded into propriety plasmid-DNA and delivered intratumorally using EP. Specifically, we are developing a new, propriety technology to potentially treat liver, lung, bladder, pancreatic and other difficult to treat visceral lesions through the direct delivery of plasmid-based IL-12 with a new Visceral Lesions Applicator (“VLA”).

The VLA has been designed to work with low voltage EP generators, including but not limited to the Company's proprietary APOLLO™ EP generator to leverage plasmid-optimized EP and enhance the depth of transfection of immunologically relevant genes into cells located in visceral organs. In early 2020, the Company had two poster presentations, one at the Society for Interventional Oncology ("SIO") and one at the Society for Interventional Radiology ("SIR"), where it presented preclinical data on both the VLA and APOLLO generator. The poster at SIO was awarded "Best Technology Scientific Abstract". Additionally, the Company has successfully completed several large animal studies and aim to bring the VLA into the clinic in 2021. By using the Company's next-generation technology with the VLA (and in cutaneous/subcutaneous settings as well), the Company's goal is to reverse the immunosuppressive mechanisms of a tumor, as well as to expand the Company's pipeline. The Company believes that the flexibility of the Company's propriety plasmid-DNA technology allows the Company to deliver other immunologically relevant molecules into the tumor microenvironment in addition to the delivery of plasmid-DNA encoding for IL-12. In June 2020, the Company had two poster presentations at the 2020 America Association for Cancer Research ("AACR") where the Company presented pre-clinical data regarding its new anti-tumor product candidate, which will amplify the power of intratumoral IL-12 through the addition of both CXCL9, a critical T cell chemokine, and anti-CD3, a membrane bound pan T cell stimulator. These other immunologically relevant molecules may complement IL-12's activity by limiting or enhancing key pathways associated with tumor immune subversion.

The Company has established a collaboration with Emerge Health Pty ("Emerge"), the leading Australian company providing full registration, reimbursement, sales, marketing and distribution services of therapeutic products in Australia and New Zealand, to commercialize TAVO and made it available under Australia's Special Access Scheme ("SAS") in early 2020. As a specialized Australian pharmaceutical company focused on the marketing and sales of high-quality medicines to the hospital sector, Emerge has previously made numerous other products successfully available under Australia's SAS.

Reverse Stock Split

On May 20, 2019, the Company effected a one-for-ten reverse stock split of its authorized and outstanding common stock. All share and per share information has been retroactively adjusted to reflect the reverse stock split. The par value was not adjusted as a result of the reverse stock split.

Reclassifications

Certain amounts in the accompanying consolidated statements of cash flows for the year ended July 31, 2019 have been reclassified to conform to the year ended July 31, 2020 presentation, but there was no effect on net loss or total assets for the year ended July 31, 2019.

Note 2—Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, OncoSec Medical Australia PTY LTD. All significant intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The accompanying consolidated financial statements have been prepared in conformity with U.S. GAAP, which requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Such estimates include stock-based compensation, accounting for long-lived assets, determining the Incremental Borrowing Rate ("IBR") for calculating Right-Of-Use ("ROU") assets and lease liabilities and accounting for income taxes, including the related valuation allowance on the deferred tax asset and uncertain tax positions. The Company bases its estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. On an ongoing basis, the Company reviews its estimates to ensure that they appropriately reflect changes in the business or as new information becomes available. Actual results may differ from these estimates.

Segment Reporting

The Company operates in a single industry segment—the discovery and development of novel immunotherapeutic product candidates to improve treatment options for patients and physicians, intended to treat a wide range of oncology indications.

Cash and Cash Equivalents

The Company considers all highly liquid investments that are readily convertible into cash and have an original maturity of three months or less at the time of purchase to be cash equivalents.

Concentrations and Credit Risk

The Company maintains cash balances at a small number of financial institutions and such balances commonly exceed the $250,000 amount insured by the Federal Deposit Insurance Corporation. The Company has not experienced any losses in such accounts and management believes that the Company does not have significant credit risk with respect to such cash and cash equivalents.

Property and Equipment

The Company's capitalization threshold is $5,000 for property and equipment. The cost of property and equipment is depreciated on a straight-line basis over the estimated useful lives of the related assets. The useful lives of property and equipment for the purpose of computing depreciation are as follows:

Computers and equipment:	3 to 10 years
Computer software:	1 to 3 years
Leasehold improvements:	Shorter of lease period or useful life

Impairment of Long-Lived Assets

The Company periodically assesses the carrying value of intangible and other long-lived assets, and whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. The assets are considered to be impaired if the Company determines that the carrying value may not be recoverable based upon its assessment, which includes consideration of the following events or changes in circumstances:

- the asset's ability to continue to generate income from operations and positive cash flow in future periods;
- loss of legal ownership or title to the asset(s);
- significant changes in the Company's strategic business objectives and utilization of the asset(s); and
- the impact of significant negative industry or economic trends.

If the assets are considered to be impaired, the impairment recognized is the amount by which the carrying value of the assets exceeds the fair value of the assets. Fair value is determined by the application of discounted cash flow models to project cash flows from the assets. In addition, the Company bases estimates of the useful lives and related amortization or depreciation expense on its subjective estimate of the period the assets will generate revenue or otherwise be used by it. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less selling costs. The Company also periodically reviews the lives assigned to long-lived assets to ensure that the initial estimates do not exceed any revised estimated periods from which the Company expects to realize cash flows from its assets.

Fair Value of Financial Instruments

The carrying amounts for cash and cash equivalents, prepaid expenses, accounts payable and accrued expenses and notes payable approximate fair value due to the short-term nature of these instruments. It is management's opinion that the Company is not exposed to significant interest, currency, or credit risks arising from its other financial instruments and that their fair values approximate their carrying values except where expressly disclosed.

The accounting standard for fair value measurements provides a framework for measuring fair value and requires disclosures regarding fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, based on the Company's principal or, in the absence of a principal, most advantageous market for the specific asset or liability.

The Company uses a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. The hierarchy requires the Company to use observable inputs when available, and to minimize the use of unobservable inputs, when determining fair value.

The three tiers are defined as follows:

- Level 1—Observable inputs that reflect quoted market prices (unadjusted) for identical assets or liabilities in active markets at the measurement date. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

- Level 2—Observable inputs other than quoted prices in active markets that are observable either directly or indirectly in the marketplace for identical or similar assets and liabilities.

- Level 3— Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The development and determination of the unobservable inputs for Level 3 fair value measurements and fair value calculations are the responsibility of the Company's Principal Accounting Officer.

Changes in fair value measurements categorized within Level 3 of the fair value hierarchy are analyzed each period based on changes in estimates or assumptions and recorded as appropriate.

The Company had no assets or liabilities that required remeasurement on a recurring basis as of July 31, 2020 and 2019.

Warrants

The Company assesses its warrants as either equity or a liability based upon the characteristics and provisions of each instrument. Warrants classified as equity are recorded at fair value as of the date of issuance on the Company's balance sheet and no further adjustments to their valuation are made. Warrants classified as derivative liabilities and other derivative financial instruments that require separate accounting as liabilities are recorded on the Company's balance sheet at their fair value on the date of issuance and are re-measured on each subsequent balance sheet date until such instruments are exercised or expire, with any changes in the fair value between reporting periods recorded as other income or expense. Management estimates the fair value of these liabilities using option pricing models and assumptions that are based on the individual characteristics of the warrants or other instruments on the valuation date, as well as assumptions for future financings, expected volatility, expected life, yield and risk-free interest rate. As of July 31, 2020, and 2019, all outstanding warrants issued by the Company were classified as equity.

Net Loss Per Share

The Company computes basic net loss per common share by dividing the applicable net loss by the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing the applicable net loss by the weighted-average number of common shares outstanding during the period plus additional shares to account for the dilutive effect of potential future issuances of common stock relating to stock options and other potentially dilutive securities using the treasury stock method.

The Company did not include shares underlying stock options, restricted stock units and warrants issued and outstanding during any of the periods presented in the computation of net loss per share, as the effect would have been anti-dilutive. The following potentially dilutive outstanding securities were excluded from diluted net loss per share because of their anti-dilutive effect:

	July 31, 2020	July 31, 2019
Stock options	1,442,856	921,572
Restricted stock units	34,914	77,956
Warrants	3,114,288	3,631,953
Total	4,592,058	4,631,481

Subsequent to July 31, 2020, the Company issued shares of common stock that will impact earnings per share in the future. (See Note 13)

Stock-Based Compensation

The Company grants equity-based awards (typically stock options or restricted stock units) under its stock-based compensation plan and outside of its stock-based compensation plan, with terms generally similar to the terms under the Company's stock-based compensation plan. The Company estimates the fair value of stock option awards using the Black-Scholes option valuation model. For employees, directors and consultants, the fair value of the award is measured on the grant date. The fair value amount is then recognized over the period during which services are required to be provided in exchange for the award, usually the vesting period. The Black-Scholes option valuation model requires the input of subjective assumptions, including price volatility of the underlying stock, risk-free interest rate, dividend yield, and expected life of the option. The Company estimates the fair value of restricted stock unit awards based on the closing price of the Company's common stock on the date of issuance.

Employee Stock Purchase Plan

Employees may elect to participate in the Company's stockholder-approved employee stock purchase plan. The stock purchase plan allows for the purchase of the Company's common stock at not less than 85% of the lesser of (i) the fair market value of a share of common stock on the beginning date of the offering period or (ii) the fair market value of a share of common stock on the purchase date of the offering period, subject to a share and dollar limit as defined in the plan and subject to the applicable legal requirements. There are two six-month offering periods during each fiscal year, ending on January 31 and July 31.

In accordance with applicable accounting guidance, the fair value of awards under the stock purchase plan is calculated at the beginning of each offering period. The Company estimates the fair value of the awards using the Black-Scholes option valuation model. The Black-Scholes option valuation model requires the input of subjective assumptions, including price volatility of the underlying stock, risk-free interest rate, dividend yield, and the offering period. This fair value is then amortized at the beginning of the offering period. Stock-based compensation expense is based on awards expected to be purchased at the beginning of the offering period, and therefore is reduced when participants withdraw during the offering period.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use ("ROU") assets represent the Company's right to use an underlying asset during the lease term, and operating lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating leases are included in ROU assets, current operating lease liabilities, and long-term operating lease liabilities on the Company's consolidated balance sheets.

Lease ROU assets and lease liabilities are initially recognized based on the present value of the future minimum lease payments over the lease term at commencement date calculated using the Company's incremental borrowing rate applicable to the lease asset, unless the implicit rate is readily determinable. ROU assets also include any lease payments made at or before lease commencement and exclude any lease incentives received. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Leases with a term of 12 months or less are not recognized on the consolidated balance sheets. The Company's leases do not contain any residual value guarantees. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term. The Company accounts for lease and non-lease components as a single lease component for all its leases.

Foreign Currency Translation

The Company uses the U.S. Dollar as the reporting currency for its financial statements. Functional currency is the currency of the primary economic environment in which an entity operates. The functional currency of the Company's wholly owned subsidiary is the Australian dollar.

Assets and liabilities of the Company's subsidiary are translated into U.S. Dollars at period-end foreign exchange rates, and revenues and expenses are translated at average rates prevailing throughout the period. Translation adjustments are included in "Accumulated other comprehensive income" a separate component of stockholders' equity, and in the "Effect of exchange rate changes on cash and cash equivalents," on the Company's condensed consolidated statements of cash flows. Transaction gains and losses including intercompany transactions denominated in a currency other than the functional currency of the entity involved are included in "Foreign currency exchange gain (loss), net" on the Company's consolidated statements of operations.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) includes foreign currency translation adjustments related to the Company's subsidiary in Australia and is excluded from the accompanying consolidated statements of operations.

Australia Research and Development Tax Credit

The Company's wholly-owned Australian subsidiary incurs research and development expenses, primarily in the course of conducting clinical trials. The Company's Australian research and development activities qualify for the Australian government's tax credit program, which provides a 41% credit for qualifying research and development expenses. The tax credit does not depend on the Company's generation of future taxable income or ongoing tax status or position. Accordingly, the credit is not considered an element of income tax accounting under ASC 740 *"Income Taxes"* and is recorded against qualifying research and development expenses.

Tax Reform

The Tax Cuts and Jobs Act (the "Act") was enacted in December 2017. Among other things, the Act reduced the U.S. federal corporate tax rate from 34 percent to 21 percent as of January 1, 2018 and eliminated the alternative minimum tax ("AMT") for corporations. Since the deferred tax assets are expected to reverse in a future year, it has been tax effected using the 21% federal corporate tax rate. The effects of the 2017 Tax Act did not have a significant impact on the Company's consolidated financial statements during the years ended July 31, 2020 and 2019.

On March 27, 2020, the president signed into law the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") providing nearly $2 trillion in economic relief to eligible businesses impacted by the coronavirus outbreak. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer social security payments, net operating loss ("NOL") utilization and carryback periods, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. In addition to the Small Business Administration ("SBA") loan received in April 2020 (See Note 5), the Company continues to review, and intends to seek, any other available potential benefits under the CARES Act as well as any future legislation signed into law during 2020. Other than the proceeds from the SBA loan, the effects of the CARES Act did not have a significant impact on the Company's consolidated financial statements during the year ended July 31, 2020.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("the FASB") issued Accounting Standards Update No. 2016-02, Leases ("ASU 2016-02"), which supersedes previous lease accounting guidance (Topic 840) and establishes a right-of-use model that requires a lessee to record an asset and liability on the balance sheet for all leases with terms longer than 12 months. ASU 2016-02 is effective for fiscal years and interim periods beginning after December 15, 2018. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. In July 2018, the FASB issued ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements*. In issuing ASU No. 2018-11, the FASB decided to provide another transition method in addition to the existing transition method by allowing entities to initially apply the new leases standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. ASU 2016-02 also requires expanded financial statement disclosures on leasing activities.

The Company adopted the standard effective August 1, 2019 using the modified retrospective approach with the effective date as the date of initial application. Consequently, prior period balances and disclosures have not been restated.

ASC 842 provides a number of optional practical expedients in transition. For leases that commenced prior to August 1, 2019, the Company elected: (1) the "package of practical expedients", which permits it not to reassess under the new standard its prior conclusions about lease identification, lease classification, and initial direct costs, and (2) the use-of-hindsight in determining the lease term and in assessing impairment of ROU assets. In addition, ASC 842 provides practical expedients for an entity's ongoing accounting that the Company has elected, comprised of the following: (1) the election for classes of underlying asset to not separate non-lease components from lease components, and (2) the election for short-term lease recognition exemption for all leases that qualify.

See Note 11 for the Company's additional required disclosures under Topic 842.

In August 2020, the FASB issued ASU 2020-06, Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40)-Accounting For Convertible Instruments and Contracts in an Entity's Own Equity. The ASU simplifies accounting for convertible instruments by removing major separation models required under current GAAP. Consequently, more convertible debt instruments will be reported as a single liability instrument with no separate accounting for embedded conversion features. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, which will permit more equity contracts to qualify for it. The ASU also simplifies the diluted net income per share calculation in certain areas. The new guidance is effective for annual and interim periods beginning after December 15, 2021, and early adoption is permitted for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. The Company is currently evaluating the impact that this new guidance will have on its consolidated financial statements.

Note 3—Going Concern and Managements Plans

The Company has sustained losses in all reporting periods since inception, with an inception-to date-loss of $207 million as of July 31, 2020. These losses are expected to continue for an extended period of time. Further, the Company has never generated any cash from its operations and does not expect to generate such cash in the near term. The aforementioned factors raise substantial doubt about the Company's ability to continue as a going concern within one year from the issuance date of the consolidated financial statements. The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of asset amounts or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern within one year after the date the consolidated financial statements are issued.

As of October 13, 2020, the Company had cash and cash equivalents of $25.3 million. Since inception, cash flows from financing activities has been the primary source of the Company's liquidity. The Company currently estimates its monthly working capital requirements to be approximately $2.3 million, although the Company may modify or deviate from this estimate and it is likely that the Company's actual operating expenses and working capital requirements will vary from its estimate. Based on these expectations regarding future expenses, rate of consumption, as well as its current cash levels, the Company believes its cash resources are insufficient to meet the Company's anticipated needs for the 12 months following the date the consolidated financial statements are issued.

The Company recognizes it will need to raise additional capital to continue operating its business and fund its planned operations, including research and development, clinical trials and, if regulatory approval is obtained, commercialization of its product candidates. In addition, the Company will require additional financing if it desires to in-license or acquire new assets, research and develop new compounds or new technologies and pursue related patent protection, or obtain any other intellectual property rights or other assets. There is no assurance that additional financing will be available when needed or that management will be able to obtain financing on terms acceptable to the Company or whether the Company will become profitable and generate positive operating cash flow. If the Company is unable to raise sufficient additional funds when needed, on favorable terms or at all, the Company will not be able to continue development of its product candidates as currently planned or at all, will need to reevaluate its planned operations and may need to delay, scale back or eliminate some or all of its development programs, reduce expenses or cease operations, any of which would have a significant negative impact on its prospects and financial condition.

Note 4—Investment Securities

The Company did not have any investment securities on its consolidated balance sheets as of July 31, 2020 and 2019.

During the year ended July 31, 2019, the Company sold investments, categorized as held to maturity, with a net carrying amount of $5,989,928 for gross proceeds of $5,977,794 and realized a loss of $12,134. The sale of the securities was suggested by the Company's investment advisors and the event is isolated. The Company did not sell any investments during the year ended July 31, 2020.

Note 5 – Balance Sheet Details

Property and Equipment

Property and equipment, net, is comprised of the following:

	July 31, 2020	July 31, 2019
Equipment and furniture	$ 1,859,824	$ 1,859,824
Computer software	109,242	109,242
Leasehold improvements	21,934	21,934
Property and equipment, gross	1,991,000	1,991,000
Accumulated depreciation and amortization	(1,176,506)	(959,871)
Total	$ 814,494	$ 1,031,129

Depreciation and amortization expense recorded for the years ended July 31, 2020 and 2019 was approximately $0.2 million and $0.2 million, respectively.

Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities are comprised of the following:

	July 31, 2020	July 31, 2019
Research and development costs	$ 4,730,347	$ 2,380,215
Professional services fees	3,097,881	1,702,886
Other	94,808	133,916
Total	$ 7,923,036	$ 4,217,017

Accrued Compensation

Accrued compensation is comprised of the following:

	July 31, 2020	July 31, 2019
Separation costs	$ -	$ 495,004
Accrued payroll	279,473	181,219
401K payable	5,654	-
Total	$ 285,127	$ 676,223

Other Long-Term Liabilities

Other long-term liabilities are comprised of the following:

	July 31, 2020	July 31, 2019
Deferred rent	$ -	$ 635,913
Total	$ -	$ 635,913

Note 6 – Notes Payable

On March 22, 2019, the Company entered into a finance agreement with First Insurance Funding ("FIF"). Pursuant to the terms of the agreement, FIF loaned the Company the principal amount of $185,990, which would accrue interest at 6.25% per annum, to partially fund the payment of the premium of the Company's Director & Officer insurance. The agreement requires the Company to make nine monthly payments of $21,207, including interest starting on April 18, 2019. At July 31, 2020, the outstanding balance related to this finance agreement was paid in full.

On April 27, 2020, the Company was granted a loan (the "Loan") from the Banc of California in the aggregate amount of $952,744, pursuant to the Paycheck Protection Program (the "PPP") under the CARES Act, which was enacted March 27, 2020. The term of the loan is two years, with monthly payments due the first day of each month, beginning seven months from the date of initial disbursement, or December 1, 2020. Interest accrues at 1% per year, effective on the date of initial disbursement. The outstanding principal balance on the loan as of July 31, 2020 was $952,744.

Pursuant to the terms of the CARES Act and any implementing rules and regulations, the Company may apply for the Loan to be forgiven by the SBA in whole or in part beginning no sooner than seven weeks from the date of initial disbursement. The Company intends to use the proceeds for purposes consistent with the PPP. While the Company currently believes that its use of the Loan proceeds will meet the conditions for forgiveness of the Loan, the Company cannot assure that it will be eligible for forgiveness of the Loan, in whole or in part. Any Loan balance remaining following forgiveness by the SBA will be fully re-amortized over the remaining term of the Loan. The entire principal balance remaining unpaid, along with all accrued and unpaid interest, shall be due and payable on the Maturity Date.

On June 18, 2020, the Company entered into a finance agreement with AFCO Premium Credit LLC ("AFCO"). Pursuant to the terms of the agreement, AFCO loaned the Company the principal amount of $551,803, which would accrue interest at 3.381% per annum, to partially fund the payment of the premium of the Company's Director & Officer insurance. The agreement requires the Company to make ten monthly payments of $56,039, including interest starting on July 18, 2020. At July 31, 2020, the outstanding balance related to this finance agreement was $497,319.

Future minimum payments under note payable liabilities as of July 31, 2020 are as follows:

Years ending July 31,		
2021	$	969,509
2022		480,554
Total	$	1,450,063

Note 7—Stockholders' Equity

Reverse Stock Split

On May 20, 2019, the Company effected a one-for-ten reverse stock split of its authorized and outstanding common stock. Under Nevada law, and in accordance with Nevada Revised Statutes ("NRS") Section 78.207, the split was approved by the Board of Directors of the Company and shareholder approval was not required. Pursuant to this reverse stock split, the total number of authorized common shares was reduced from 160,000,000 to 16,000,000 shares and the number of common shares outstanding was reduced from 71,216,082 shares to 7,121,594 shares (which reflects adjustments for fractional share settlements). The par value was not adjusted as a result of the reverse stock split. All applicable share and per share information contained in these consolidated financial statements has been retroactively adjusted to reflect the reverse stock split.

Amendment to Articles of Incorporation

On September 6, 2019, the Company filed with the Secretary of State of Nevada an amendment to its Certificate of Incorporation increasing the number of shares of common stock that the Company is authorized to issue from 16,000,000 shares of common stock, par value $0.0001 per share, to 26,000,000 shares of common stock, par value $0.0001 per share.

On May 29, 2020, the Company filed with the Secretary of State of Nevada an amendment to its Certificate of Incorporation increasing the number of shares of common stock that the Company is authorized to issue from 26,000,000 shares of common stock, par value $0.0001 per share, to 100,000,000 shares of common stock, par value $0.0001 per share.

China Grand Pharmaceutical and Healthcare Holdings Limited and Sirtex Medical US Holdings, Inc.

On February 7, 2020, the Company closed (the "Closing") a strategic transaction (the "Transaction") with Grand Decade Developments Limited, a direct, wholly-owned subsidiary of China Grand Pharmaceutical and Healthcare Holdings Limited, a company formed under the laws of the British Virgin Islands ("CGP"), and its affiliate, Sirtex Medical US Holdings, Inc., a Delaware corporation ("Sirtex" and, together with CGP, the "Buyers"). On October 10, 2019, the Company and the Buyers entered into Stock Purchase Agreements (as amended, the "Purchase Agreements") pursuant to which the Company agreed to sell and issue to CGP and Sirtex 10,000,000 shares and 2,000,000 shares, respectively, of the Company's common stock for a total purchase price of $30 million. The net proceeds, after deducting offering fees and expenses paid by the Company, were approximately $28.0 million. The Company evaluated whether any proceeds received in the Stock Purchase Agreements should be allocated to other agreements entered into at the same time and concluded that there should not be any allocation due to the de minimis value of the other agreements. Upon Closing, CGP and Sirtex owned 43.95% and 8.79%, respectively, of the outstanding shares of common stock of the Company.

Purchase Agreements

The Purchase Agreements include customary covenants that obligate the Company to use commercially reasonable efforts to cause the purchased shares to be approved for listing on The Nasdaq Capital Market, and a contractual anti-dilution mechanism that accounts for the Company's outstanding options and warrants, as well as other customary covenants. In addition, the Company, CGP, and Sirtex each shall pay their respective fees and expenses in connection with the transactions contemplated by the Purchase Agreements. On the date of the Closing the Company reimbursed legal fees and expenses incurred by each of CGP and Sirtex in an aggregate amount of $600,000, which are part of the offering fees and expenses noted above.

Stockholders Agreements

Concurrently with the execution and delivery of the Purchase Agreements, the Company, CGP, and Sirtex entered into Stockholders Agreements (the "Stockholders Agreements"), to be effective upon the Closing, pursuant to which, among other things, CGP and Sirtex received and exercised the option to nominate a combined total of three (3) members to the Board of Directors, initially at the Closing, and thereafter at every annual meeting of the stockholders of the Company in which directors are generally elected, including at every adjournment or postponement thereof. If either CGP or Sirtex beneficially owns less than 40% of the shares acquired pursuant to the Purchase Agreements, either (as applicable) shall have the right to nominate members to the Board of Directors in proportion with their ownership of the issued and outstanding common stock.

In addition, CGP and Sirtex will have certain rights of participation in future financings as well as a right of first refusal related to future potential transactions. The Stockholder Agreements implement a 70% supermajority approval by the Board of Directors for certain actions, as well as stockholder consent rights for CGP, all of which are conditioned upon CGP and Sirtex maintaining certain ownership thresholds.

First Amendment to the Purchase Agreements and Stockholder Agreement

On November 26, 2019, the Company entered into an amendment (the "First Amendment") to the Purchase Agreements with CGP and Sirtex and to the Stockholder Agreement with CGP. The First Amendment provided that following the Closing, the Company would, at its next annual meeting of stockholders (instead of at the Special Meeting, as previously required by the Purchase Agreements), seek, among other things, the requisite stockholder approval for the Company to amend its Articles of Incorporation to (i) increase the Company's authorized shares of common stock by 4,000,000 shares from 26,000,000 shares to 30,000,000 shares and (ii) add the corporate opportunity waiver (described below). In addition, the First Amendment (a) amended the Purchase Agreements to provide that a material breach of the Purchase Agreements shall be deemed to have occurred if the Closing does not occur within 10 business days of the satisfaction of the conditions to the Company's obligations, including the approval of the Proposed Transactions by the Company's shareholders and (b) amended the Stockholder Agreement with CGP to provide that rescission of the corporate opportunity waiver is subject to the enhanced voting requirements described below.

In connection with approving the First Amendment, to the extent permitted by applicable law, the Board has (i) renounced any interest or expectancy of the Company in, or in being offered an opportunity to participate in, business opportunities that are presented to CGP and certain related parties, the directors on the Board which have been nominated by CGP or Sirtex pursuant to the Stockholder Agreements, any other person or persons who are, at the time, associated with or nominated by, or serving as representatives of either CGP or Sirtex, or the respective affiliates of the foregoing parties (including their officers or directors who are employees, officers, directors, managers, stockholders or members) (the "Covered Persons"), (ii) resolved that none of such Covered Persons shall have any obligation to refrain from (a) engaging in similar activities or lines of business as the Company or developing or marketing any products or services that compete, directly or indirectly, with those of the Company, (b) investing or owning any interest publicly or privately in, serving as a director or officer of or developing a business relationship with, any person engaged in similar activities or lines of business as, or otherwise in competition with, the Company, (c) doing business with any client or customer of the Company or (d) employing or otherwise engaging a former officer or employee of the Company, and (iii) resolved that neither the Company nor any of its subsidiaries shall have any right to be offered any opportunity to participate or invest in any venture engaged or to be engaged in by any Covered Person.

On May 29, 2020, the Company's shareholders approved amendments to its Articles of Incorporation to, among other things, increase the Company's authorized shares of common stock by 74,000,000 shares from 26,000,000 shares to 100,000,000 shares and include a waiver of the duty of certain directors to present corporate opportunities to the Company.

May 2019 Offering

On May 24, 2019, the Company completed the offer and sale of an aggregate of 3,492,063 shares of its common stock, together with 3,492,063 accompanying warrants to purchase an aggregate of 2,619,047 shares of its common stock, at a combined purchase price of $3.15 per share of common stock and warrant. The warrants have an exercise price of $3.45 per full share, became exercisable on May 24, 2019 and expire on May 24, 2024. The gross proceeds of the offering were approximately $11.0 million, and the net proceeds, after deducting the placement agent's fee and other offering fees and expenses paid by the Company, were approximately $10.0 million. In connection with the offering, the Company paid the placement agent a cash fee equal to 6.5% of the gross proceeds of the offering, as well as legal and other expenses equal to $90,000. In addition, pursuant to the underwriting agreement, the Company granted the underwriters an option, exercisable for 45 days, to purchase up to an additional 523,809 shares of its common stock (the "Option Shares") and/or warrants to purchase up to 392,857 shares of common stock (the "Option Warrants"). On May 24, 2019, the underwriters partially exercised their option and purchased 238,095 Option Warrants to purchase an aggregate of 178,571 shares of the Company's common stock, at a purchase price of $0.01 per warrant before underwriting discounts, or $2,381. The Option Warrants have an exercise price of $3.45 per share, became exercisable on May 24, 2019 and expire on May 24, 2024.

The fair value of the warrants issued to the purchasers in the offering, based on their fair value relative to the common stock issued, was approximately $3.6 million (based on the Black-Scholes option valuation model assuming no dividend yield, a 5.0 year life, volatility of 82.99% and a risk-free interest rate of 2.12%). The Company completed an evaluation of these warrants and determined they should be classified as equity within the accompanying consolidated balance sheets.

Aspire Capital

On March 29, 2019, the Company entered into a common stock purchase agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC, ("Aspire Capital") pursuant to which the Company agreed to issue and sell to Aspire Capital shares of its common stock equal to an aggregate amount of up to $20.0 million at the Company's request from time to time during a 30-month period. The Company had filed with the Securities and Exchange Commission a prospectus supplement to the Company's effective shelf registration statement on Form S-3 registering all the shares of common stock that may be offered to Aspire Capital from time to time. In consideration for entering into the Purchase Agreement the Company issued to Aspire Capital 120,201 shares of the Company's common stock which represented 3% of the aggregate commitment.

Under the Purchase Agreement, on any trading day selected by the Company, the Company had the right, in its sole discretion, to present Aspire Capital with a purchase notice, directing Aspire Capital to purchase up to 30,000 shares of the Company's common stock per business day, up to $20.0 million of the Company's common stock in the aggregate at a per share price equal to the lesser of:

- the lowest sale price of the Company's common stock on the purchase date; or
- the arithmetic average of the three (3) lowest closing sale prices for the Company's common stock during the ten (10) consecutive trading days ending on the trading day immediately preceding the purchase date

Upon execution of the Purchase Agreement, the Company agreed to sell to Aspire Capital 400,674 shares of common stock for total proceeds, before expenses, of $2,000,000. Additionally, in April 2019, the Company sold a total of 90,000 shares of its common stock to Aspire Capital resulting in the Company receiving total proceeds, before expenses, of approximately $520,000 in cash. There were no underwriting or placement agent fees associated with the offering.

On May 27, 2019, the Company terminated the Purchase Agreement.

Alpha Holdings

On August 31, 2018, the Company entered into a stock purchase agreement with Alpha Holdings, Inc. ("Alpha Holdings"), pursuant to which the Company agreed to issue and sell to Alpha Holdings shares of its common stock equal to an aggregate amount of up to $15.0 million at a market purchase price of $15.00 per share, which was the closing price of the Company's common stock the day immediately before the agreement was executed by the parties.

On October 9, 2018, the Company received total proceeds, before expenses, of $8.0 million in cash from the offering and issued Alpha Holdings 533,333 shares of common stock. There were no underwriting or placement agent fees associated with the offering.

On December 6, 2018, the Company received total proceeds, before expenses, of $7.0 million in cash from the offering and issued Alpha Holdings 466,666 shares of common stock. There were no underwriting or placement agent fees associated with the offering.

Common Stock Option Exercise

During the year ended July 31, 2019, shares of common stock issued related to option exercises totaled 43,029. The Company realized proceeds of $0.6 million from the stock option exercises. There were no stock options exercised during the year ended July 31, 2020.

Outstanding Warrants

During the year ended July 31, 2020, the Company repurchased an aggregate of 266,098 warrants from certain warrant holders for an aggregate of approximately $0.2 million. The repurchase price was paid in cash, and upon repurchase, all the warrants were cancelled and of no further force and effect.

At July 31, 2020, the Company had outstanding warrants to purchase 3,114,288 shares of its common stock, with exercise prices ranging from $3.45 to $43.75, all of which were classified as equity instruments. These warrants expire at various dates between November 2020 and May 2024.

Note 8—Stock-Based Compensation

The OncoSec Medical Incorporated 2011 Stock Incentive Plan (as amended and approved by the Company's stockholders (the "2011 Plan")), authorizes the Company's Board of Directors to grant equity awards, including stock options and restricted stock units, to employees, directors and consultants. The 2011 Plan authorizes a total of 750,000 shares for issuance thereunder, and includes an automatic increase of the number of shares of common stock reserved thereunder on the first business day of each calendar year by the lesser of: (i) 3% of the shares of the Company's common stock outstanding as of the last day of the immediately preceding calendar year; (ii) 100,000 shares; or (iii) such lesser number of shares as determined by the Company's Board of Directors. As of July 31, 2020, there were an aggregate of 3,350,000 shares of the Company's common stock authorized for issuance under the 2011 Plan. Under the 2011 Plan, incentive stock options are to be granted at a price that is no less than 100% of the fair value of the Company's common stock at the date of grant. Stock options vest over a period specified in the individual option agreements entered into with grantees, and are exercisable for a maximum period of 10 years after the date of grant. Stock options granted to stockholders who own more than 10% of the outstanding stock of the Company at the time of grant must be issued at an exercise price of no less than 110% of the fair value of the Company's common stock on the date of grant.

On April 14, 2020, the Board approved, subject to and contingent on stockholder approval at the Company's Annual Meeting, amendments to the 2011 Plan to (i) increase the number of shares authorized under the 2011 Plan by 2,300,000 shares, and (ii) delete the provision in the 2011 Plan that provides for certain annual and automatic increases in the shares of our common stock reserved for issuance thereunder. On May 29, 2020, the Company's shareholders approved the amendments to the 2011 Plan.

Modification of Stock Option Awards

During the year ended July 31, 2020, the Company cancelled 878,534 outstanding common stock option awards under the following terms:

- The Company entered into Stock Option Cancellation Agreements (the "Cancellation Agreements") with certain executive officers, directors and other senior level employees of the Company, pursuant to which such individuals (the "Senior Level Option holder") agreed to the voluntary surrender and cancellation of certain previously granted stock options (the "Cancelled Options") to purchase in the aggregate 699,140 shares of the Company's common stock. Under the terms of the Cancellation Agreements, each Senior Level Option holder and the Company acknowledged and agreed that the surrender and cancellation of the Cancelled Options was without any expectation on the part of the Senior Level Option holder to receive, and without any obligation on the Company to pay or grant, any cash, equity awards or other consideration presently or in the future with respect to the Cancelled Options.

- The Company cancelled outstanding common stock options held by employees and consultants other than Senior Level Option holders of the Company, pursuant to which such individuals previously granted stock options to purchase in the aggregate 179,394 shares of the Company's common stock were cancelled for cash consideration of approximately $26,000.

The Company accounted for the effects of the stock option modifications described above under the guidance of ASC 718 as follows:

- A cancellation of an award that is not accompanied by the concurrent grant of (or offer to grant) a replacement award or other valuable consideration shall be accounted for as a repurchase for no consideration. Accordingly, any previously unrecognized compensation expense is recognized at the cancellation date.

- The amount of cash paid to settle an equity-classified award is charged directly to equity as long as that amount is equal to or less than the fair-value-based measure of the award on the settlement date. To the extent that the settlement consideration exceeds the fair-value-based measure of the equity-classified award on the settlement date, that difference is recognized as additional compensation cost. The cash paid to settle employee and consultant equity-classified awards, other than Senior Level Option holders, was less than the fair-value-based measure of the award on the settlement date. The approximately $26,000 in cash paid to settle the equity-classified awards was charged directly to additional paid in capital.

Following the cancellation of the outstanding option awards described above, there were 15,000 stock option awards outstanding under the 2011 Plan. The Company recorded the previously unrecognized compensation cost related to the cancelled outstanding stock option awards of approximately $1.2 million on the date of cancellation.

On October 23, 2018, the Company entered into stock option cancellation agreements with two consultants. As per the terms of the agreements, an aggregate of 53,500 stock options were cancelled. The consultants were not issued replacement awards under the cancellation agreements. Under ASC 718, a cancellation of an award that is not accompanied by the concurrent grant of (or offer to grant) a replacement award or other valuable consideration shall be accounted for as a repurchase for no consideration. Accordingly, any previously unrecognized compensation cost shall be recognized at the cancellation date. The Company recorded unrecognized compensation of the cancelled awards, or $377,278, to compensation costs with an offsetting entry to additional paid in capital on the date of the cancellation.

On August 22, 2018, the Company entered into a stock option cancellation agreement with an individual. As per the terms of the agreement, 30,000 fully vested stock options were cancelled. On August 22, 2018, the Company issued 17,500 shares of restricted common stock. Upon modification, it is required under ASC 718 to analyze the fair value of the instruments, before and after the modification, recognizing the increase as a charge to the statement of operations. The Company computed the fair value of the cancelled award and compared the fair value to that of the restricted stock award. The Company recorded the excess of the fair value of the restricted stock award over the fair value of the cancelled award, or $135,425, to compensation costs with an offsetting entry to common stock and additional paid in capital on the date of the modification.

Modification of Award

On October 2, 2019, the Company entered into an amendment to a consulting agreement with a consulting firm. Prior to the amendment the Company was required to issue 3,000 restricted common shares monthly for services through July 2, 2020. As per the terms of the amended agreement, starting October 2, 2019, the Company will be required to issue 15,000 shares of restricted common stock monthly for services through July 2, 2020. Upon modification, it is required under ASC 718 to analyze the fair value of the instruments, before and after the modification, recognizing additional compensation cost for any incremental value. The Company computed the fair value of the award prior to the amendment and compared the fair value to that of the modified award. The incremental compensation cost of approximately $0.2 million resulting from the modification will be recognized ratably over the remaining term of the consulting agreement.

Bonuses Paid in Common Stock

On March 11, 2020, the Compensation Committee of the Board of Directors approved the payment of discretionary bonuses to our Chief Executive Officer and seven other officers in an aggregate amount equal to $836,250 (the “2019 Incentive Bonuses”), in recognition of the Company’s achievement of certain operational and strategic objectives in 2019 and each individual’s ongoing contributions to the success of the Company.

In order to conserve cash and improve cash flow, the Compensation Committee determined that it would be in the Company's best interests to pay one-half of the 2019 Incentive Bonuses, or $418,125, in cash, and one-half of the 2019 Incentive Bonuses in shares of our common stock ("Contingent Bonus Shares"), subject to approval by the Board of Directors and contingent on stockholder approval of the issuance of the Contingent Bonus Shares at the Company's annual shareholder meeting (the "Annual Meeting"). On April 14, 2020, the Board of Directors approved the issuance of the Contingent Bonus Shares to the officers, contingent on stockholder approval at the Annual Meeting, and determined that the aggregate number of Contingent Bonus Shares would be 302,989 shares (the "Bonus Share Pool"), which was determined by dividing $418,125 by $1.38, the closing price of our common stock on March 11, 2020.

On May 29, 2020, the Company's stockholders approved the Bonus Share Pool and the Contingent Bonus Shares were granted to the officers following the Annual Meeting. The Contingent Bonus Shares are subject to a six-month holding period requirement. The Company, using the net shares method, issued an aggregate of 185,003 shares of Company common stock to pay one-half of the discretionary bonuses. 117,986 shares of Company common stock were withheld at vesting to cover individual tax withholding obligations. The Company recorded compensation expense related to the Contingent Bonus Shares of $0.7 million during the year ended July 31, 2020, which was determined by multiplying the Bonus Share Pool, or 302,989, by $2.23, the closing price of our common stock on May 29, 2020.

Stock Options

During the year ended July 31, 2020, the Company granted options to purchase 1,158,982, 225,000 and 80,000 shares of its common stock to employees, directors and consultants under the 2011 Plan, respectively. The stock options issued to employees have a ten-year term, vest over a period ranging from two to three years and have exercise prices ranging from $1.56 to $3.30. The stock options issued to directors have a 10-year term, vest over three years and have an exercise price of $1.56. The stock options issued to consultants have ten-year terms, vest in accordance with the terms of the applicable consulting agreement and have an exercise price of $1.56. 5,050 options granted during the year ended July 31, 2020 were cancelled during the second quarter of fiscal year 2020 as part of the stock option cancellation transaction discussed previously.

During the year ended July 31, 2019, the Company granted options to purchase 154,249, 77,500 and 1,000 shares of its common stock to employees, directors and consultants under the 2011 Plan, respectively. The stock options issued to employees have a ten-year term, vest over three years, and have exercise prices ranging from $2.57 to $15.80. The stock options issued to directors have a 10-year term, vest over a period ranging from one to three years and have exercise prices ranging from $5.80 and $8.41. The stock options issued to consultants have ten-year terms, vest in accordance with the terms of the applicable consulting agreement and have an exercise price of $6.25.

During the year ended July 31, 2019, the Company granted options to purchase 20,000 and 50,000 shares of its common stock to employees and consultants outside the 2011 Plan. The stock options issued to employees have a ten-year term, vest over three years, and have an exercise price of $16.40. The stock options issued to consultants have ten-year terms, vest in accordance with the terms of the applicable consulting agreement and have exercise prices ranging from $8.46 and $14.30.

The Company accounts for stock-based compensation based on the fair value of the stock-based awards granted and records forfeitures as they occur. As such, the Company recognizes stock-based compensation cost only for those stock-based awards that vest over their requisite service period, based on the vesting provisions of the individual grants. The service period is generally the vesting period, with the exception of stock options granted pursuant to a consulting agreement, in which case the stock option vesting period and the service period are defined pursuant to the terms of the consulting agreement.

The following assumptions were used for the Black-Scholes calculation of the fair value of stock-based compensation related to stock options granted during the periods presented:

	Year Ended July 31, 2020	Year Ended July 31, 2019
Expected term (years)	5.00–6.50 years	5.00–6.50 years
Risk-free interest rate	0.30 -1.70%	1.74 – 3.09%
Volatility	80.93 – 87.95%	72.88 –83.87%
Dividend yield	0%	0%

The Company's expected volatility is derived from the historical daily change in the market price of its common stock. The Company uses the simplified method to calculate the expected term of options issued to employees, non-employees and directors. The risk-free interest rate used in the Black-Scholes calculation is based on the prevailing U.S. Treasury yield in effect at the time of grant, commensurate with the expected term. For the expected dividend yield used in the Black-Scholes calculation, the Company has never paid any dividends on its common stock and does not anticipate paying dividends on its common stock in the foreseeable future.

The following is a summary of the Company's 2011 Plan and non-Plan stock option activity for the years ended July 31, 2020 and 2019:

	Options		Weighted Average Exercise Price
Outstanding - July 31, 2018	891,252	$	15.00
Granted	302,749	$	7.88
Exercised	(43,029)	$	13.16
Forfeited/Cancelled	(228,700)	$	15.32
Expired	(700)	$	57.60
Outstanding - July 31, 2019	921,572	$	12.63
Granted	1,463,982	$	1.60
Exercised	-	$	-
Forfeited/Cancelled	(942,698)	$	12.31
Outstanding and expected to vest – July 31, 2020	1,442,856	$	1.65
Exercisable – July 31, 2020	474,933	$	1.72

As of July 31, 2020, the total intrinsic value of options outstanding and exercisable was $3.7 million and $1.2 million, respectively. As of July 31, 2020, the Company has approximately $1.6 million in unrecognized stock-based compensation expense attributable to the outstanding options, which will be amortized over a period of approximately 2.61 years.

Stock-based compensation expense recorded in the Company's consolidated statements of operations for the year ended July 31, 2020 resulting from stock options awarded to the Company's employees, directors and consultants was approximately $2.6 million, which included approximately $1.2 million related to the cancellation of certain stock option awards. Of the total expense, $1.3 million was recorded to research and development and $1.3 million was recorded in general and administrative in the Company's consolidated statements of operations for the year ended July 31, 2020.

Stock-based compensation expense recorded in the Company's consolidated statements of operations for year ended July 31, 2019 resulting from stock options awarded to the Company's employees, directors and consultants was approximately $2.9 million, respectively. Of this balance, $1.2 million was recorded to research and development and $1.7 million was recorded in general and administrative in the Company's consolidated statements of operations for year ended July 31, 2019.

The weighted-average grant date fair value of stock options granted during the year ended July 31, 2020 was $1.67. The weighted-average grant date fair value of stock options granted during the year ended July 31, 2019 was $5.29.

Restricted Stock Units ("RSUs")

For the year ended July 31, 2020, the Company recorded $0.3 million, in stock-based compensation related to RSUs, which is reflected in the consolidated statements of operations.

As of July 31, 2020, there were 34,914 restricted stock units ("RSUs") outstanding. During the year ended July 31, 2020, 35,230 RSU's vested.

In December 2018, the Company granted its President and Chief Executive Officer 75,000 restricted stock unit awards ("RSUs"). The units vest as follows: 6,250 units vested on January 31, 2019, and the remaining 68,750 units vest in equal quarterly installments of 6,250 units beginning on April 30, 2019 and ending on October 31, 2021. The closing price of the Company's common stock on the date of grant was $6.00 per share, which is the fair market value per unit of the RSUs.

In October 2018, the Company granted 5,000 RSUs to an employee. The units vest as follows: 1,250 units vested on October 29, 2018, and the remaining 3,750 units vest according to the following vesting schedule: 1,250 units on October 29, 2019, 1,250 units on October 29, 2020 and 1,250 units on October 29, 2021. The closing price of the Company's common stock on the date of grant was $16.40 per share, which is the fair market value per unit of the RSUs.

On October 26, 2018, in accordance with a severance agreement with an employee, the Company's Board of Directors approved the accelerated vesting of 25% of the outstanding RSUs held by the employee. The RSUs, which originally vest on the third anniversary of the grant date, or March 29, 2020, were accelerated to vest on October 26, 2018. As per ASC 718, on the date of the modification the Company reversed the previously accrued expense on the unvested RSUs of $63,278 and recognized the fair value of the modified grant of $44,250 on the date of the modification.

For the year ended July 31, 2019, the Company recorded approximately $0.4 million in stock-based compensation related to RSUs, which is reflected in the consolidated statements of operations. As of July 31, 2019, there were 77,956 RSU's outstanding.

Shares Issued to Directors

In April 2020, the Company granted a director 12,500 shares of common stock under the 2011 Plan for services rendered. The shares vested immediately and the closing price of the Company's common stock on the date of grant was $1.55 per share. The Company recorded compensation expense relating to the share issuance of approximately $19,000 during the year ended July 31, 2020.

Shares Issued to Consultants

During the year ended July 31, 2020, 184,499 shares of common stock valued at approximately $0.9 million, were issued to consultants for services. The common stock share values were based on the dates the shares were granted. The Company recorded compensation expense relating to the share issuances of approximately $0.9 million, during the year ended July 31, 2020.

During the year ended July 31, 2019, 60,300 shares of common stock valued at approximately $0.9 million were issued to consultants for services. The common stock share values were based on the dates the shares were granted. The Company recorded compensation expense relating to the share issuances of approximately $0.9 million during the year ended July 31, 2019.

2015 Employee Stock Purchase Plan

Under the Company's 2015 Employee Stock Purchase Plan ("ESPP"), the Company is authorized to issue 50,000 shares of the Company's common stock. The sixth offering period under the ESPP ended on January 31, 2019, with 1,428 shares purchased and distributed to employees, the seventh offering period under the ESPP ended on July 31, 2019, with 2,053 shares purchased and distributed to employees, the eighth offering period under the ESPP ended on January 31, 2020, with 2,841 shares purchased and distributed to employees, and the ninth offering period under the ESPP ended on July 31, 2020, with 1,358 shares purchased and distributed to employees. At July 31, 2020, there were 33,409 shares remaining available for issuance under the ESPP.

The ESPP is considered a Type B plan under FASB ASC Topic 718 because the number of shares a participant is permitted to purchase is not fixed based on the stock price at the beginning of the offering period and the expected withholdings. The ESPP enables the participant to "buy-up" to the plan's share limit, if the stock price is lower on the purchase date. As a result, the fair value of the awards granted under the ESPP is calculated at the beginning of each offering period as the sum of:

- 15% of the share price of an unvested share at the beginning of the offering period,
- 85% of the fair market value of a six-month call on the unvested share aforementioned, and
- 15% of the fair market value of a six-month put on the unvested share aforementioned.

The fair market value of the six-month call and six-month put are based on the Black-Scholes option valuation model. For the six-month offering period ended January 31, 2020, the following assumptions were used: six-month maturity, 2.04% risk free interest, 90.64% volatility, 0% forfeitures and $0 dividends. For the six-month offering period ended July 31, 2020, the following assumptions were used: six-month maturity, 1.54% risk free interest, 76.59% volatility, 0% forfeitures and $0 dividends.

For the six-month offering period ended January 31, 2019, the following assumptions were used: six-month maturity, 2.22% risk free interest, 61.83% volatility, 0% forfeitures and $0 dividends. For the six-month offering period ended July 31, 2019, the following assumptions were used: six-month maturity, 2.46% risk free interest, 126.35% volatility, 0% forfeitures and $0 dividends.

Approximately $3,800 and $12,000 was recorded as stock-based compensation during the years ended July 31, 2020 and 2019, respectively.

Common Stock Reserved for Future Issuance

The following table summarizes all common stock reserved for future issuance at July 31, 2020:

Common Stock options outstanding (within the 2011 Plan and outside of the terms of the 2011 Plan)	1,442,856
Common Stock reserved for restricted stock unit release	34,914
Common Stock authorized for future grant under the 2011 Plan	1,616,901
Common Stock reserved for warrant exercise	3,114,288
Commons Stock reserved for future ESPP issuance	33,409
Total common stock reserved for future issuance	6,242,368

Note 9—Income Taxes

The FASB Topic on Income Taxes prescribes a recognition threshold and measurement attribute criteria for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. The Company has had no unrecognized tax benefits.

The Company recognizes interest and/or penalties related to income tax matters in income tax expense. The Company has not recognized any interest and/or penalties in the accompanying consolidated statements of operations for the year ended July 31, 2020 and 2019.

The Company is subject to taxation in the United States, various states and in Australia. The Company's tax years for 2007 and forward, 2010 and forward and 2017 and forward are subject to examination by the United States federal tax authorities, California tax authorities and New Jersey tax authorities, respectively, due to the carry forward of unutilized net operating losses and research and development credits.

At July 31, 2020, the Company had federal, New Jersey and California net operating loss carryforwards of approximately $170 million, $67 million and $87 million, respectively. In addition, the Company has federal, California and New Jersey research and development tax credit carryforwards of approximately $2.4 million, $2.0 million and $0.3 million, respectively. The Company also has California Hiring Credits of approximately $9,300. The federal net operating losses incurred in years beginning after January 1, 2018 in the amount of $67 million can be carried forward indefinitely. The remaining $103 million of federal net operating loss, research tax credit carryforwards and New Jersey and California net operating loss carryforwards will begin to expire in 2029 unless previously utilized. The California research and development credit carryforwards will carry forward indefinitely until utilized. The Company has foreign net operating loss carryforwards in Australia of $1.0 million.

The Company has not completed a study to assess whether one or more ownership changes, as defined by IRC Section 382/383 of the Internal Revenue Code of 1986, as amended (the "Code"), have occurred since the Company's formation, due to the complexity and cost associated with such a study, and the fact that there may be additional such ownership changes in the future. Based on a preliminary assessment, the Company believes that ownership changes have occurred. The Company estimates that if such an ownership change had occurred, the federal and state net operating loss carry-forwards and research and development tax credits that can be utilized in the future will be significantly limited. The Company may never be able to realize the benefit of some or all of the federal and state net loss carryforwards or research and development tax credit carryforwards, either due to ongoing operating losses or due to ownership changes, which limits the usefulness of the loss carryforwards.

Set forth below is the (benefit) provision for income taxes for continuing operations for the years ended July,31:

	2020	2019
Current:	$	$
Federal	-	-
State	(872,000)	1,300
Foreign	-	-
Total (benefit from) provision for income taxes	$ (872,000)	$ 1,300

Significant components of the Company's deferred tax assets as of July 31, 2020 and 2019 are listed below:

	2020	2019
Net operating loss carryforwards	$ 46,623,000	$ 35,361,000
Credits	4,311,000	3,257,000
Start-up costs	21,000	23,000
Accumulated depreciation	98,000	122,000
Option and stock awards	386,000	4,825,000
Other	122,000	241,000
Net deferred tax assets	51,561,000	43,829,000
Valuation allowance for deferred tax assets	(51,561,000)	(43,829,000)
Net deferred taxes	$ -	-

A valuation allowance of $51.6 million and $43.8 million at July 31, 2020 and 2019, respectively, has been recognized to offset the net deferred tax assets as realization of such assets is uncertain. The valuation allowance increased by $7.8 million and increased by $6.6 million for the years ended July 31, 2020 and 2019, respectively.

A reconciliation of income taxes using the statutory income tax rate, compared to the effective rate, is as follows:

	2020	2019
Federal tax benefit at the expected statutory rate	21.00%	21.00%
State income tax, net of federal tax benefit	1.60%	(0.01)%
Non-deductible expenses	(0.76)%	(0.46)%
Tax impact of stock option cancellations	(10.04)%	-%
Change in valuation allowance	(11.46)%	(21.32)%
Other	1.68%	0.79%
Income tax benefit - effective rate	2.02%	(0.00)%

Sale of New Jersey Net Operating Losses

In May 2020, the Company received $0.9 million in net proceeds from the sale of its New Jersey Net Operating Losses under the State of New Jersey NOL Transfer Program.

Note 10—Commitments and Contingencies

Contingencies

On October 29, 2019, the Company's stockholder, Alpha Holdings, Inc. ("Alpha") filed two civil actions in the district court, Clark County, Nevada (the "District Court"), related to the proposed equity investment in the Company (the "Proposed Transaction") by (i) Grand Decade Developments Limited ("Grand Decade"), a British Virgin Islands limited company and a wholly-owned subsidiary of China Grand Pharmaceutical and Healthcare Holdings Limited ("CGP") and (ii) Sirtex Medical US Holdings, Inc., an affiliate of CGP ("Sirtex"). The first action, asserted against the Company only, sought to compel the Company to make its books and records available for inspection, so that Alpha could solicit proxies from other stockholders in connection with the vote to approve the Proposed Transaction. The second action, a putative class action asserted against the Company, certain directors on the OncoSec Board (the "Director Defendants"), Sirtex and Grand Decade, sought, among other things, a preliminary injunction to enjoin the Proposed Transaction and a special meeting of OncoSec's shareholders seeking approval of the Proposed Transaction, based on claims that the Director Defendants breached their fiduciary duties by (i) failing to make complete and accurate disclosures concerning the Proposed Transaction, (ii) adopting improper defensive measures to preclude the Company from pursuing or receiving alternatives to the Proposed Transaction, and (iii) running an inadequate "sales process" that failed to obtain the highest value reasonably available. This second action also asserted a claim against Sirtex and CGP for aiding and abetting the Director Defendants' alleged breaches of fiduciary duties. On November 13, 2019, the two actions were consolidated into a single proceeding, when the court so-ordered a joint stipulation filed by the parties. On February 6, 2020, the District Court judge denied Alpha's motion for preliminary injunction in its entirety and allowed the special meeting of shareholders to take place on February 7, 2020. The Nevada Supreme Court then denied Alpha's request for an emergency appeal. Alpha subsequently filed a stipulation dismissing the action with prejudice, which the District Court entered on March 5, 2020. Since Alpha's cases were dismissed with prejudice, they cannot be relitigated and the Company has no liability to Alpha with matters addressed in these lawsuits.

The Company is not a party to any other legal proceeding or aware of any other threatened action as of the date of this annual report.

Employment Agreements

The Company has entered into employment agreements with certain executive officers and certain other key employees. Generally, the terms of these agreements provide that, if the Company terminates the officer or employee other than for cause, death or disability, or if the officer terminates his or her employment with the Company for good cause, the officer shall be entitled to receive certain severance compensation and benefits as described in each such agreement.

On July 16, 2018, the Company and the Company's former Chief Financial Officer entered into a separation and release agreement in connection with the former CFO's termination of employment with the Company. Pursuant to the agreement, the Company will pay the former CFO severance compensation of $300,000, less applicable withholdings, in the form of salary continuation in accordance with the Company's customary payroll practices. On July 16, 2018, the Company recorded a liability of $300,000 on its consolidated balance sheet, and the offsetting charge was recorded in general and administrative expense as salary expense. As of July 31, 2019, the Company accrued a liability under the agreement of $9,364 and as of July 31, 2020 the liability was paid in full.

On October 26, 2018, the Company and an employee entered into a separation and release agreement in connection with the employee's termination of employment with the Company. Pursuant to the agreement, the Company will pay the former employee severance compensation of $415,000, less applicable withholdings, in the form of salary and bonus continuation in accordance with the Company's customary payroll practices. In addition, the Company agreed to pay the cost of health insurance for 12 months from the date of separation and accelerate the vesting of 2,500 RSUs. On October 26, 2018, the Company recorded a liability of $451,112 on its consolidated balance sheet, and the offsetting charge was recorded in research and development expense as salary expense. As of July 31, 2019, the Company accrued a liability under the agreement of $117,271 and as of July 31, 2020 the liability was paid in full.

CGP and Sirtex

License Agreement and Services Agreement

Concurrently with the execution and delivery of the Purchase Agreements, the Company and CGP entered into a License Agreement (the "License Agreement"), which became effective upon the Closing. Pursuant to the License Agreement, the Company, among other things, granted CGP and its affiliates an exclusive, sublicensable, royalty-bearing license to develop, manufacture, commercialize, or otherwise exploit the Company's current and future products, including TAVO and the VLA in the following territories: China Mainland, Hong Kong, Macau, Taiwan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Burma, Cambodia, East Timor, Georgia, India, Indonesia, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Laos, Malaysia, Mongolia, Nepal, Oman, Pakistan, Papua New Guinea, Philippines, Qatar, Saudi Arabia, Singapore, South Korea, Sri Lanka, Tajikistan, Thailand, Turkmenistan, United Arab Emirates, Uzbekistan and Vietnam (the "Territory"). Under the terms of the License Agreement, CGP will pay the Company up to 20% royalties on the net sales (as defined in the License Agreement) of such products in the Territory during the applicable Royalty Term (as defined in the License Agreement) (such royalties, the "Royalties').

During the Royalty Term for a Licensed Product and a Region in the Territory, under no circumstances will the Royalties payable to Licensor hereunder in respect of such Licensed Product and such Region for a calendar half be less than ten percent (10%) of Net Sales of such Licensed Product for such Region for such calendar half, provided that such percentage shall be pro-rated if such Royalty Term ends in such calendar half.

If either party believes that the other party has materially breached one or more of its material obligations under the License Agreement, then the non-breaching party may, following a cure period, terminate the License Agreement upon written notice to the breaching party, subject to other conditions. Licensee may terminate the License Agreement in its entirety for any reason or no reason upon prior written notice to Licensor. Additionally, the License Agreement may be terminated upon certain events involving bankruptcy or insolvency. If CGP terminates the License Agreement for convenience or the Company terminates the License Agreement due to CGP's breach or insolvency, then, subject to certain conditions, each party's rights and licenses will terminate, and CGP will have certain obligations to assign to the Company, or grant a right of reference under, certain regulatory documentation or approvals. If CGP terminates the License Agreement due to the Company's breach or insolvency, then CGP will have the option either to keep the License Agreement in effect with the royalty rate owed by CGP to the Company reduced by 50% or to terminate the License Agreement (in which case each party's rights and licenses will terminate, except that CGP will have the right to wind down certain clinical trials).

In addition, the Company and Sirtex entered into a Services Agreement (the "Services Agreement") which became effective upon the Closing. Pursuant to the Services Agreement, the Company agreed, among other things, to pay Sirtex low single-digit royalties on the Net Sales (as defined in the Services Agreement) of all Products (defined as TAVO and VLA products and their accompanying generators, and any products (including, for clarity, combination products) incorporating or including such products and their accompanying generators), in all countries other than those in the Territory. In exchange for the royalty fee, Sirtex will provide the Company with certain services for these products, including key opinion leader management and engagement services, voice of customer (VOC) services, development of a go to market strategy, and pricing, reimbursement and market access services.

If either party believes that the other party has materially breached one or more of its material obligations under the Services Agreement, then the non-breaching party may, following a cure period, terminate the Services Agreement upon written notice to the breaching party, subject to other conditions. Sirtex may terminate the Services Agreement in its entirety for any reason or no reason upon prior written notice to the Company. Additionally, the Services Agreement may be terminated upon certain events involving bankruptcy or insolvency.

Registration Rights Agreements

On the date of the Closing, the Company, CGP, and Sirtex entered into Registration Rights Agreements (the "Registration Rights Agreements"), pursuant to which, among other things, CGP and Sirtex will each have the right to deliver to the Company a written notice requiring the Company to prepare and file with the SEC, a registration statement with respect to resales of shares of some or all the common stock of the Company held by CGP and Sirtex. The Registration Rights Agreements do not provide for any cash penalties or additional penalties associated with any delays in registering the securities.

Note 11 – Leases

In February 2016, the FASB issued ASU 2016-02, which supersedes previous lease accounting guidance (Topic 840) and establishes a right-of-use model that requires a lessee to record an asset and liability on the balance sheet for all leases with terms longer than 12 months. The Company does not have any material variable payments, residual value guarantees or restrictive covenants for its leases and does not have any leases with terms of 12 months or less.

On August 1, 2019, upon adoption of ASC Topic 842, the Company recorded right-of-use assets of approximately $1.4 million, lease liabilities of approximately $2.1 million and a reduction in deferred rent liabilities of $0.6 million for operating leases. Also, the adoption of ASC 842 did not have an impact on the Company's beginning accumulated deficit balance.

Lease Agreements

On February 14, 2018, the Company entered into a lease agreement with MawIt Inc., for approximately 3,100 rentable square feet located at 24 N. Main Street, Pennington, New Jersey, which serves as the Company's New Jersey corporate headquarters. The term of the lease commenced on March 1, 2018 and was to expire on April 30, 2020. In November 2018, the Company entered into an amended lease agreement for the addition of approximately 2,800 rentable square feet. The term of the amended lease commenced on January 15, 2019 and expires on December 31, 2020. Base rent under the amended lease agreement is $11,686 per month for each of the first two months, $11,929 per month for each of the third through fifteenth months and $12,173 per month for each of the sixteenth through twenty-three months. The Company prepaid rent of approximately $60,000 as per the terms of the amended agreement. The lease agreement also requires the Company to share in certain monthly operating expenses of the premises and required the Company to pay a security deposit of $23,372.

In March 2018, the Company entered into a Lease Assignment Agreement (the "Lease Assignment Agreement") with Vividion Therapeutics, Inc. ("Vividion") for the Company's 34,054 square foot location at 5820 Nancy Ridge Drive, San Diego, California, 92121 ("NR Premises"), whereby the Company assigned its Lease Agreement with ARE-SD Region No. 18, LLC (the "Landlord") to Vividion. Under the Lease Assignment Agreement, Vividion pays directly to Landlord the base rent of $101,500 per month (based upon $2.98 per rentable square foot of the NR Premises) plus operating expenses and property management fees attributable to the NR Premises currently estimated at $46,500 per month (including an estimate for utilities) during the term of the Lease Assignment Agreement, which was the remaining term of the lease through October 2025.

While the lease and all of the related obligations were assigned to Vividion, prior to November 2019 the Company could ultimately have an obligation on the Lease Assignment Agreement if Vividion defaulted on their obligation to the Landlord after all remedies were exhausted by the Landlord with regard to Vividion's obligations. Such an event was not considered probable and no obligation was recorded as of July 31, 2019. In connection with the Company entering into a new lease in November 2019 (See below), the landlord released the Company from any obligations and liabilities arising under the Lease Assignment Agreement.

In conjunction with the Lease Assignment Agreement, the Company and Vividion also entered into a sublease (the "Sublease"), with respect to the 12,442 square-foot location at 3565 General Atomics Court, Suite 100, San Diego, CA, 92121 leased by Vividion from Landlord which serves as the Company's California office (the "Sublease Premise"). Under the Sublease, the Company shall pay to Vividion base rent of $49,768 per month subject to an annual 3% increase, (based upon $4.00 per rentable square foot of the Sublease Premises) plus operating expenses and property management fees attributable to the Sublease Premises currently estimated at $30,400 per month during the term of the Sublease, which extends through September 2020. The Company moved to the new location in April 2018.

At the time of the lease agreements noted above, the Company had a deferred rent liability recorded on the consolidated balance sheet of $1.1 million, of which $0.6 million is remaining as of July 31, 2019. The deferred rent liability associated with the lease/sublease was reduced to $0 on August 1, 2019 upon adoption of ASC Topic 842.

In November 2019, the Company entered into a lease agreement for its office space in California directly with the landlord, ARE-SD Region No. 18, LLC ("ARE"), with an effective date being the earlier of: (a) October 1, 2020 or (b) the day after the termination of the Company's existing sublease if it ends prior to September 30, 2020. The lease is for a term of 36 months, with one renewal option for an additional 36-month term. The minimum monthly payment is $55,989. The Company accounted for the ARE lease as a contract modification, and accordingly, recorded an additional right-of-use asset for approximately $5.3 million and lease liabilities of approximately $5.2 million for this operating lease.

The Company has operating leases for corporate offices and lab space. These leases have remaining lease terms of approximately one year to seven years, some of which include options to extend the lease. For any lease where the Company is reasonably certain that a renewal option will be exercised, the lease payments associated with the renewal option period are included in the ROU asset and lease liability as of July 31, 2020.

Supplemental balance sheet information related to leases as of July 31, 2020 was as follows:

Operating Leases:	
Operating lease right-of-use assets	$ 5,948,224
Operating Leases:	
Current portion included in current liabilities	$ 500,357
Long-term portion included in non-current liabilities	5,874,442
Total operating lease liabilities	$ 6,374,799

Supplemental lease expense related to leases was as follows:

	For the Year Ended July 31, 2020
Operating lease cost	$ 1,273,616
Total lease expense	$ 1,273,616

Other information related to leases where the Company is the lessee is as follows:

	As of July 31, 2020
Weighted-average remaining lease term	6.1 years
Weighted-average discount rate	10.00%

Supplemental cash flow information related to operating leases was as follows:

	For the Year Ended July 31, 2020
Cash paid for operating lease liabilities	$ 1,406,167
Total cash flows related to operating lease liabilities	$ 1,406,167

Future minimum lease payments under non-cancellable leases as of July 31, 2020 were as follows:

Years ending July 31,	
2021	$ 1,116,946
2022	1,392,265
2023	1,431,473
2024	1,474,552
2025	1,516,126
Thereafter	1,774,569
Total minimum lease payments	8,705,931
Less: Imputed interest	(2,331,132)
Total	$ 6,374,799

Disclosures related to periods prior to adoption of ASC 842

The future minimum obligations under leases in effect as of July 31, 2019 having a noncancelable term in excess of one year as determined prior to the adoption of ASC 842 are as follows:

Years ending July 31,	
2020	$ 1,356,000
2021	308,000
Total minimum lease payments	$ 1,664,000

Note 12—401(k) Plan

Effective May 15, 2012, the Company adopted a defined contribution savings plan pursuant to Section 401(k) of the Code. The plan is for the benefit of all qualifying employees and permits voluntary contributions by employees of up to 100% of eligible compensation, subject to the maximum limits imposed by Internal Revenue Service. The terms of the plan allow for discretionary employer contributions and the Company currently matches 100% of its employees' contributions, up to 3% of their annual compensation. The Company's contributions are recorded as expense in the accompanying consolidated statements of operations and totaled approximately $136,342 and $94,000 for the years ended July 31, 2020 and 2019, respectively.

Note 13—Related Party Transactions

On February 12, 2020, the Company entered into a consulting agreement with the spouse of the Company's Chief Scientific Officer. The term of the agreement is four months and can be extended by written agreement. The agreement provides for an hourly based fee structure for assisting the Company with matters related to oncology and device development related to the Company's platform. In addition to an hourly based fee structure, the consultant will be eligible to receive stock option awards. On June 12, 2020 the Company amended the consulting agreement, extending the term of the existing agreement until December 12, 2020. The consultant was paid consulting fees of approximately $0.1 million during the year ended July 31, 2020. In addition, the consultant was granted 30,000 non-qualified stock option valued at approximately $48,000 on the date of grant. The non-qualified stock options have a 10-year term, vest immediately and have an exercise prices of $1.56. As of July 31, 2020, the Company accrued consulting fees of approximately $0.1 million, under the consulting agreement and is included in accounts payable and accrued liabilities at July 31, 2020 in the accompanying consolidated balance sheets.

Note 14—Subsequent Events

Except as disclosed elsewhere herein, below are the Company's subsequent events.

On August 19, 2020, the Company completed the offer and sale of an aggregate of 4,608,589 shares of its common stock at a purchase price of $3.25 per share in a registered direct offering. The gross proceeds of the offering were approximately $15.0 million, and the net proceeds, after deducting the placement agent's fee and other offering fees and expenses paid by the Company, were approximately $13.7 million. In connection with the offering, the Company paid the placement agent and other financial advisors an aggregate cash fee equal to 8.0% of the gross proceeds of the offering, as well as legal and other expenses equal to $75,000.

On August 25, 2020, the Company entered into an amended lease agreement for the Company's Pennington, New Jersey office. The lease was to expire on December 31, 2020. The amendment extends the lease term through December 31, 2021 and the lease term automatically renews for up to two additional one-year terms. Base rent under the amended lease agreement escalates 2% per year over the term beginning January 1, 2021.

Subsequent to July 31, 2020, the Company issued an aggregate of 1,176,576 stock options to certain individuals, including executive officers, non-executive employees, non-employee directors and consultants. The stock options issued have a ten-year term, vest over a period ranging from one to three years and have an exercise price ranging from $3.43 to $3.82. In addition, the compensation committee approved the accelerated vesting of 1,206,102 previously granted time-vesting stock options.

ITEM 16. FORM 10-K SUMMARY

The Company has elected not to provide summary information.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ONCOSEC MEDICAL INCORPORATED

By: */s/ Daniel J. O'Connor*
Daniel J. O'Connor
President and Chief Executive Officer

Date: October 28, 2020

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Daniel J. O'Connor Daniel J. O'Connor, J.D.	President, Chief Executive Officer and Director (*Principal Executive Officer*)	October 28, 2020
/s/ Robert J. DelAversano Robert J. DelAversano	Principal Accounting Officer and Controller (*Interim Principal Financial Officer and Principal Accounting Officer*)	October 28, 2020
/s/ Margaret Dalesandro Margaret Dalesandro, PhD	Chair of the Board	October 28, 2020
/s/ James DeMesa Dr. James DeMesa	Director	October 28, 2020
/s/ Joon Kim Joon Kim	Director	October 28, 2020
/s/ Herbert Kim Lyerly Dr. Herbert Kim Lyerly	Director	October 28, 2020
/s/ Kevin R. Smith Kevin R. Smith	Director	October 28, 2020
/s/ Robert Ward Robert Ward	Director	October 28, 2020
/s/ Yuhang Zhao Yuhang Zhao	Director	October 28, 2020
/s/ Chao Zhou Chao Zhou	Director	October 28, 2020

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
3.1	Articles of Incorporation of OncoSec Medical Incorporated, as amended (incorporated by reference to our Annual Report on Form 10-K, filed on October 25, 2017.)
3.2	Amended and Restated Bylaws (incorporated by reference to our Current Report on Form 8-K, filed on March 6, 2012)
3.3	Certificate of Change to amend the Articles of Incorporation of OncoSec Medical Incorporated, as filed with the Nevada Secretary of State on May 20, 2019 (incorporated by reference to Exhibit 3.1 on our Current Report on Form 8-K, filed on May 20, 2019)
3.4	Certificate of Change to amend the Articles of Incorporation of OncoSec Medical Incorporated, as filed with the Nevada Secretary of State on September 6, 2019 (incorporated by reference to Exhibit 3.4 on our Form 10-K filed on October 25, 2019)
3.5	Amended and Restated Bylaws of OncoSec Medical Incorporated (incorporated by reference to Exhibit 3.1 on Form 8-K filed with the SEC on February 10, 2020).
3.6	Certificate of Amendment of Amended and Restated Articles of Incorporation of OncoSec Medical Incorporated (incorporated by reference to Exhibit 3.1 on Form 8-K filed with the SEC on May 29, 2020).
4.1	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on December 19, 2012)
4.2	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on September 19, 2013)
4.3	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on June 5, 2014)
4.4	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on November 5, 2015)
4.5	Form of Series A Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on May 24, 2016)
4.6	Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 of our Current Report on Form 8-K, filed on May 24, 2016)
4.7	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on October 24, 2017)
4.8	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on October 26, 2017)
4.9	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on November 13, 2017)
4.10	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 of our Current Report on Form 8-K, filed on November 13, 2017)
4.11	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K, filed on May 23, 2019)
4.12	Form of Indenture (incorporated by reference to Exhibit 4.1 of Form S-3, filed on August 23, 2019)
4.13	Registration Rights Agreement, dated as of February 7, 2020, by and between OncoSec Medical Incorporated and Grand Decade Developments Limited (incorporated by reference to Exhibit 4.1 on Form 8-K filed with the SEC on February 10, 2020).
4.14	Registration Rights Agreement, dated as of February 7, 2020, by and between OncoSec Medical Incorporated and Sirtex Medical US Holdings, Inc. (incorporated by reference to Exhibit 4.2 on Form 8-K filed with the SEC on February 10, 2020).
4.15	Description of Securities of OncoSec Medical Incorporated.
10.1†	Cross-License Agreement, dated March 24, 2011 by and between OncoSec Medical Incorporated and Inovio Pharmaceuticals, Inc. (incorporated by reference to our Quarterly Report on Form 10-Q, filed on June 14, 2011)
10.2#	Employment Agreement with Punit Dhillon dated May 18, 2011 (incorporated by reference to our Quarterly Report on Form 10-Q, filed on June 14, 2011)
10.3#	Form of Indemnification Agreement (incorporated by reference to our Current Report on Form 8-K, filed on October 29, 2015)
10.4#	Executive Employment Agreement, effective July 6, 2015, by and between the Company and Richard Slansky (incorporated by reference to our Quarterly Report on Form 10-Q, filed on December 8, 2015)

Exhibit Number	Description of Exhibit
10.5	Lease Agreement, dated December 31, 2014, by and between the Company and ARE-SD Region No. 18, LLC (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on January 2, 2015)
10.6	Securities Purchase Agreement, dated as of November 3, 2015, by and among the Company and signatories thereto (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on November 5, 2015)
10.7	Placement Agency Agreement, dated as of November 3, 2015, by and between the Company and H.C. Wainright & Co., LLC (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K, filed on November 5, 2015)
10.8	Securities Purchase Agreement, dated as of May 22, 2016, by and among the Company and signatories thereto (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on May 24, 2016)
10.9	Placement Agency Agreement, dated as of May 22, 2016, by and between the Company and H.C. Wainwright & Co., LLC (incorporated by reference to Exhibit 10.2 our Current Report on Form 8-K, filed on May 24, 2016)
10.10†	Clinical Trial Collaboration and Supply Agreement, dated as of May 10, 2017, by and between the Company and MSD International GmbH (incorporated by reference to Exhibit 10.11 of our Current Report on Form 10-Q, filed on June 13, 2018)
10.11	Securities Purchase Agreement, dated October 22, 2017, by and between the Company and each purchaser named therein (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on October 24, 2017)
10.12	Engagement Letter, dated October 20, 2017, by and between the Company and H.C. Wainwright & Co., LLC (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K, filed on October 24, 2017)
10.13	Securities Purchase Agreement, dated October 25, 2017, by and between the Company and the purchaser named therein (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on October 26, 2017)
10.14#	Executive Employment Agreement, dated November 7, 2017, by and between the Company and Daniel J. O'Connor (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on November 9, 2017)
10.15#	Amended and Restated Executive Employment Agreement, dated November 7, 2017, by and between the Company and Punit Dhillon (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K, filed on November 9, 2017)
10.16#	Stock Option Award Agreement, dated November 7, 2017, by and between the Company and Daniel J. O'Connor (incorporated by reference to Exhibit 10.3 of our Current Report on Form 8-K, filed on November 9, 2017)
10.17#	Stock Option Award Agreement, dated November 7, 2017, by and between the Company and Daniel J. O'Connor (incorporated by reference to Exhibit 10.4 of our Current Report on Form 8-K, filed on November 9, 2017)

Exhibit Number	Description of Exhibit
10.18	Form of Warrant Exercise Agreement, dated November 13, 2017, by and between the Company and such holder named therein (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on November 13, 2017)
10.19#	OncoSec Medical Incorporated 2011 Stock Incentive Plan, as amended and restated, dated January 12, 2018 (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on January 12, 2018)
10.20	Assignment of Lease, dated March 9, 2018, by and between OncoSec Medical Incorporated and Vividion Therapeutics, Inc. (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on March 22, 2018)
10.21	Sublease, dated March 9, 2018, by and between OncoSec Medical Incorporated and Vividion Therapeutics, Inc. (incorporated by reference to Exhibit 10.3 of our Current Report on Form 10-Q, filed on June 13, 2018)
10.22#	Confidential Separation Agreement, dated May 2, 2018, by and between OncoSec Medical Incorporated and Punit S. Dhillon (incorporated by reference to Exhibit 10.4 of our Current Report on Form 10-Q, filed on June 13, 2018)
10.23	Clinical Trial Collaboration and Supply Agreement between OncoSec Medical Incorporated and Merck dated May 8, 2018 (incorporated by reference to Exhibit 10.5 of our Current Report on Form 10-Q, filed on June 13, 2018)
10.24#	Executive Employment Agreement, dated July 16, 2018, by and between the Company and Sara M. Bonstein (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on July 16, 2018)
10.25	Purchase Agreement, dated February 1, 2018, between OncoSec Medical Incorporated and Piper Jaffray & Co., as representatives of the several underwriters named therein (incorporated by reference to Exhibit 1.1 of our Current Report on Form 8-K filed on February 1, 2018)
10.26	Stock Purchase Agreement, dated as of August 31, 2018, between OncoSec Medical Incorporated and Alpha Holdings, Inc. (incorporate by reference to Exhibit 10.1 on our Current Report on Form 8-K filed on August 31, 2018)
10.27	Lease Agreement, dated February 14, 2018, between OncoSec Medical Incorporated and Mawlt Incorporated (incorporated by reference to Exhibit 10.27 on our Current Report on Form 10-K, filed on October 19, 2018)
10.28	Common Stock Purchase Agreement, dated March 29, 2019, between OncoSec Medical Incorporated and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on March 29, 2019)
10.29	OncoSec Medical Incorporated Change in Control Plan, effective as of June 7, 2019 (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on June 10, 2019)
10.30	Stock Purchase Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on October 11, 2019
10.31	Stock Purchase Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K, filed on October 11, 2019
10.32+	License Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.3 of our Current Report on Form 8-K, filed on October 11, 2019)
10.33+	Service Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.4 of our Current Report on Form 8-K, filed on October 11, 2019)
10.34	Stockholder Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.5 of our Current Report on Form 8-K, filed on October 11, 2019)
10.35	Stockholder Agreement, dated as of October 10, 2019 (incorporated by reference to Exhibit 10.6 of our Current Report on Form 8-K, filed on October 11, 2019)
10.36	Lease Agreement, dated November 20, 2019, between OncoSec Medical Incorporated and 3535/3565 General Atomics Court, LLC (incorporated by reference to Exhibit 10.1 of our form 10-Q, filed on December 13, 2019).
10.37	Amendment Agreement, dated as of November 26, 2019, by and between OncoSec Medical Incorporated and Grand Decade Developments Limited, (incorporated by refence to Exhibit 10.1 of our Current Report on Form 8-K, filed with the SEC on November 26, 2019).
10.38	Amendment Agreement, dated as of November 26, 2019, by and between OncoSec Medical Incorporated and Sirtex Medical US Holdings, Inc., (incorporated by refence to Exhibit 10.2 of our Current Report on Form 8-K, filed with the SEC on November 26, 2019).
10.39	First Amendment to the Executive Employment Agreement entered into between the Company and Daniel J. O'Connor, dated November 7, 2017, as filed with the Securities and Exchange Commission on November 9, 2017, as Exhibit 10.1 on Form 8-K, executed on April 15, 2020 (incorporated by reference to Exhibit 10.1 on Form 8-K filed with the SEC on April 20, 2020).
21.1	Subsidiaries of the registrant (incorporated by reference to Exhibit 21.1 of our Annual Report on Form 10-K/A, filed on November 28, 2017)
23.1*	Consent of Independent Registered Public Accounting Firm, Mayer Hoffman McCann P.C.
31.1*	Certification of Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934
31.2*	Certification of Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	XBRL Instant Document
101.SCH*	XBRL Taxonomy Extension Schema Document

101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.
** Furnished herewith.
# Management contract or compensatory plan or arrangement.
† Confidential treatment has been granted or requested with respect to portions of this exhibit pursuant to Rule 24b-2 of the Securities Exchange Act of 1934 and these confidential portions have been redacted from the filing that is incorporated by reference. A complete copy of this exhibit, including the redacted terms, has been separately filed with the Securities and Exchange Commission.

+ Certain confidential portions of this exhibit have been omitted pursuant to Item 601(b) of Regulation S-K.

Exhibit 4.15

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

When used herein, the terms "we," "our," and "us" refer to OncoSec Medical Incorporated

DESCRIPTION OF CAPITAL STOCK

General

Pursuant to our articles of incorporation, we are currently authorized to issue 100,000,000 shares of common stock, par value $0.0001 per share. As of October [__], 2020, there were [__] shares of our common stock outstanding.

Common Stock

Voting Rights

The outstanding shares of our common stock are fully paid and non-assessable. Holders of our common stock are entitled to one vote, in person or by proxy, for each share held of record on all matters submitted to a vote of the stockholders. Except as otherwise provided by applicable law, holders of our common stock are not entitled to cumulative voting of their shares in elections of directors.

Dividends

Subject to the provisions of applicable law, including the Nevada Revised Statutes, the holders of shares of our common stock are entitled to receive, when and as declared by the board of directors, dividends or other distributions (whether payable in cash, property, or securities of OncoSec) out of the assets of OncoSec legally available for such dividends or other distributions. We have never paid cash dividends on our common stock. Moreover, we do not anticipate paying periodic cash dividends on our common stock for the foreseeable future. We intend to use all available cash and liquid assets in the operation and growth of our business. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant.

Other Rights

No stockholder of OncoSec has any preemptive right under our articles of incorporation to subscribe for, purchase, or otherwise acquire shares of any class or series of capital stock of OncoSec. The shares of our common stock are not subject to redemption by operation of a sinking fund or otherwise. In the event of any liquidation, dissolution, or winding up of OncoSec, subject to the rights, if any, of the holders of other classes of our capital stock, the holders of shares of our common stock are entitled to receive any of our assets available for distribution to our stockholders ratably in proportion to the number of shares held by them.

Our common stock is listed on the NASDAQ Capital Market under the symbol "ONCS".

Liability and Indemnification of Directors and Officers

The Nevada Revised Statutes provide us with the power to indemnify any of our directors and officers. The director or officer must have conducted himself/herself in good faith and reasonably believe that his/her conduct was in, or not opposed to, our best interests. In a criminal action, the director or officer must not have had reasonable cause to believe his/her conduct was unlawful.

Under applicable sections of the Nevada Revised Statutes, advances for expenses may be made by agreement if the director or officer affirms in writing that he/she believes he/she has met the standards and will personally repay the expenses if it is determined the officer or director did not meet the standards.

Our bylaws include an indemnification provision under which we must indemnify any of our directors or officers, or any of our former directors or officers, to the full extent permitted by law. We have also entered into indemnification agreements with each of our directors and officers under which we must indemnify them to the full extent permitted by law. If Section 2115 of the California Corporations Code is applicable to us, certain laws of California relating to the indemnification of directors, officer and others also will govern.

At present, there is no pending litigation or proceeding involving any of our directors or officers for which indemnification is sought, nor are we aware of any threatened litigation that is likely to result in claims for indemnification. We also maintain insurance policies that indemnify our directors and officers against various liabilities, including liabilities arising under the Securities Act, which may be incurred by any director or officer in his or her capacity as such.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event a claim for indemnification against such liabilities (other than payment by us for expenses incurred or paid by a director, officer or controlling person of ours in successful defense of any action, suit, or proceeding) is asserted by a director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction, the question of whether such indemnification by it is against public policy in the Securities Act and will be governed by the final adjudication of such issue.

Anti-Takeover Provisions of Nevada State Law

Some features of the Nevada Revised Statutes, which are further described below, may have the effect of deterring third parties from making takeover bids for control of us or may be used to hinder or delay a takeover bid. This would decrease the chance that our stockholders would realize a premium over market price for their shares of common stock as a result of a takeover bid.

Acquisition of Controlling Interest

The Nevada Revised Statutes contain provisions governing acquisition of a controlling interest (an interest of 20% or greater) of a Nevada corporation which has 200 or more stockholders of record, 100 of whom have a Nevada address. These provisions provide generally that any person or entity that acquires a certain percentage of the outstanding voting shares of a Nevada corporation may be denied voting rights with respect to the acquired shares, unless certain criteria are satisfied. As of October [__], 2020, we have less than 200 stockholders of record, as such these provisions are not currently applicable. Furthermore, our amended and restated bylaws provide that these provisions will not apply to us or to any existing or future stockholder or stockholders.

Combination with Interested Stockholder

The Nevada Revised Statutes contain provisions governing the combination of a Nevada corporation that has 200 or more stockholders of record with an interested stockholder. These provisions may have the effect of delaying or making it more difficult to affect a change in control of our company. As of October [__], 2020, we have less than 200 stockholders of record. As such, we are not currently affected by the provisions of the Nevada Revised Statutes as described below.

A corporation affected by these provisions may not engage in a combination within three years after the interested stockholder acquires his, her or its shares unless the combination or purchase is approved by the board of directors before the interested stockholder acquired such shares. Generally, if approval is not obtained, then after the expiration of the three-year period, the business combination may be consummated with the approval of the board of directors before the person became an interested stockholder or a majority of the voting power held by disinterested stockholders, or if the consideration to be received per share by disinterested stockholders is at least equal to the highest of:

- the highest price per share paid by the interested stockholder within the three years immediately preceding the date of the announcement of the combination or within three years immediately before, or in, the transaction in which he, she or it became an interested stockholder, whichever is higher;
- the market value per share on the date of announcement of the combination or the date the person became an interested stockholder, whichever is higher; or
- if higher for the holders of preferred stock, the highest liquidation value of the preferred stock, if any.

Generally, these provisions define an interested stockholder as a person who is the beneficial owner, directly or indirectly of 10% or more of the voting power of the outstanding voting shares of a corporation, and define combination to include any merger or consolidation with an interested stockholder, or any sale, lease, exchange, mortgage, pledge, transfer or other disposition, in one transaction or a series of transactions with an interested stockholder of assets of the corporation having:

- an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation;
- an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation; or
- representing 10% or more of the earning power or net income of the corporation.

Articles of Incorporation and Bylaws

There are no provisions in our articles of incorporation or our amended and restated bylaws that would delay, defer or prevent a change in control of our company and that would operate only with respect to an extraordinary corporate transaction involving our company or any of our subsidiaries, such as merger, reorganization, tender offer, sale or transfer of substantially all of its assets, or liquidation.

Transfer Agent

The transfer agent for our common stock is Nevada Agency and Transfer Company. The transfer agent's address is 50 West Liberty Street, Suite 880, Reno, Nevada 89501.

DESCRIPTION OF WARRANTS

General

We may issue warrants for the purchase of our debt securities or common stock, or any combination thereof, in one or more series together with other securities or separately.

DESCRIPTION OF DEBT SECURITIES

We may offer debt securities which may be senior, subordinated or junior subordinated and may be convertible. The terms of the debt securities will include those stated in the indenture and those made part of the indenture by reference to the Trust Indenture Act of 1939, as in effect on the date of the indenture. We have filed a copy of the form of indenture as an exhibit to our Form S-3 Registration Statement on June 23, 2020. The indenture will be subject to and governed by the terms of the Trust Indenture Act of 1939.

Debt Securities

The aggregate principal amount of debt securities that may be issued under the indenture is unlimited. The debt securities may be issued in one or more series as may be authorized from time to time pursuant to a supplemental indenture entered into between us and the trustee or an order delivered by us to the trustee.

General

One or more series of debt securities may be sold as "original issue discount" securities. These debt securities would be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at the time of issuance is below market rates. One or more series of debt securities may be variable rate debt securities that may be exchanged for fixed rate debt securities.

United States federal income tax consequences and special considerations, if any, applicable to any such series will be described in the applicable prospectus supplement.

Debt securities may be issued where the amount of principal and/or interest payable is determined by reference to one or more currency exchange rates, commodity prices, equity indices or other factors. Holders of such debt securities may receive a principal amount or a payment of interest that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending upon the value of the applicable currencies, commodities, equity indices or other factors.

The term "debt securities" includes debt securities denominated in U.S. dollars or, if specified in the applicable prospectus supplement, in any other freely transferable currency or units based on or relating to foreign currencies. We expect most debt securities to be issued in fully registered form without coupons and in denominations of $2,000 and any integral multiples thereof.

Global Securities

The debt securities of a series may be issued in whole or in part in the form of one or more global securities that will be deposited with, or on behalf of, a depositary identified in the prospectus supplement. Global securities will be issued in registered form and in either temporary or definitive form. Unless and until it is exchanged in whole or in part for the individual debt securities, a global security may not be transferred except as a whole by the depositary for such global security to a nominee of such depositary or by a nominee of such depositary to such depositary or another nominee of such depositary or by such depositary or any such nominee to a successor of such depositary or a nominee of such successor. The specific terms of the depositary arrangement with respect to any debt securities of a series and the rights of and limitations upon owners of beneficial interests in a global security will be described in the applicable prospectus supplement.

Governing Law

The indenture and the debt securities shall be construed in accordance with and governed by, the laws of the State of New York.

DESCRIPTION OF UNITS

We may issue units composed of any combination of our common stock, warrants and debt securities. We will issue each unit so that the holder of the unit is also the holder of each security included in the unit. As a result, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We may evidence units by unit certificates that we issue under a separate agreement. We may issue the units under a unit agreement between us and one or more unit agents. If we elect to enter into a unit agreement with a unit agent, the unit agent will act solely as our agent in connection with the units and will not assume any obligation or relationship of agency or trust for or with any registered holders of units or beneficial owners of units. We will indicate the name and address and other information regarding the unit agent in the applicable prospectus supplement relating to a particular series of units if we elect to use a unit agent.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the incorporation by reference in Registration Statement No. 333-233447 on Form S-3, Registration Statement No. 333-213036 on Form S-3, Registration Statement No. 333-227910 on Form S-8, Registration Statement No. 333-224186 on Form S-8, Registration Statement No. 333-218674 on Form S-8, Registration Statement No. 333-197678 on Form S-8, Registration Statement No. 333-194570 on Form S-8, Registration Statement No. 333-192995 on Form S-8, Registration Statement No. 333-188726 on Form S-8, Registration Statement No. 333-176537 on Form S-8, Registration Statement No. 333-202752 on Form S-8, Registration Statement No. 333-209154 on Form S-8, Registration Statement No. 333-209948 on Form S-8 and Registration Statement No. 333-238823 on Form S-8, of our report dated October 28, 2020, with respect to the consolidated financial statements of OncoSec Medical Incorporated for each of the years in the two year period ended July 31, 2020, included in this Annual Report on Form 10-K of OncoSec Medical Incorporated for the year ended July 31, 2020.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
October 28, 2020

Exhibit 31.1

CERTIFICATIONS

I, Daniel J. O'Connor, certify that:

1. I have reviewed this Annual Report on Form 10-K of OncoSec Medical Incorporated;

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.

October 28, 2020

/s/ Daniel J. O'Connor

Daniel J. 'Connor
President and Chief Executive Officer
(*Principal Executive Officer*)

Exhibit 31.2

CERTIFICATIONS

I, Robert J. DelAversano, certify that:

1. I have reviewed this Annual Report on Form 10-K of OncoSec Medical Incorporated;

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.

October 28, 2020

/s/ Robert J. DelAversano
Robert J. DelAversano
Principal Accounting Officer and Controller
(Interim Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned, Daniel J. O'Connor, President & Chief Executive Officer of OncoSec Medical Incorporated (the "Company") hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Annual Report on Form 10-K of the Company for the period ended July 31, 2020 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: October 28, 2020

By: */s/ Daniel J. O'Connor*
Daniel J. O'Connor
President and Chief Executive Officer
(*Principal Executive Officer*)

Exhibit 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned, Robert J. DelAversano, Principal Accounting Officer and Controller (Principal Accounting Officer) of OncoSec Medical Incorporated (the "Company") hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Annual Report on Form 10-K of the Company for the period ended July 31, 2020 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: October 28, 2020

By: */s/ Robert J. DelAversano*
Robert J. DelAversano
Principal Accounting Officer and Controller
(*Interim Principal Financial Officer*)