ONCOSEC MEDICAL Inc
Form 10-K
October 13, 2016

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, 2016

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	**98-0573252**
(State or other jurisdiction	(I.R.S. Employer
of incorporation or organization)	Identification Number)

5820 Nancy Ridge Drive

San Diego, CA 92121

(Address of Principal Executive Offices)(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:	**Name of Exchange on which Registered:**
Common Stock, par value $0.0001 per share	**The NASDAQ Stock Market LLC (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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

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

Large accelerated filer [ ]	Accelerated filer [ ]
Non-accelerated filer [ ] (Do not check if a smaller reporting company)	Smaller reporting company [X]

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, 2016 totaled approximately $20,406,000 based on the closing price of $1.59. As of October 7, 2016, there were 19,159,645 shares of the Company's common stock ($0.0001 par value) outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the 2016 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, 2016, are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein.

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This Annual Report on Form 10-K contains forward-looking statements that involve risks, uncertainties and assumptions. In some cases, you can identify forward-looking statements by terminology such as “may”, “should”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “predicts”, “potential” or “continue” or the negative of these terms or comparable terminology. All statements made in this Annual Report on Form 10-K other than statements of historical fact could be deemed forward-looking statements.

By their nature, forward-looking statements speak only as of the date they are made, are neither statements of historical fact nor guarantees of future performance and are subject to risks, uncertainties, assumptions and changes in circumstances that are difficult to predict or quantify. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks identified in the section entitled “Risk Factors” in Part I, Item IA of this Annual Report, and similar discussions in our other filings with the Securities and Exchange Commission (the “SEC”). If such risks or uncertainties materialize or such assumptions prove incorrect, our results could differ materially from those expressed or implied by such forward-looking statements and assumptions. Risks that could cause actual results to differ from those contained in the forward-looking statements include but are not limited to risks related to: uncertainties inherent in pre-clinical studies and clinical trials; our need to raise additional capital and our ability to obtain financing; general economic and business conditions; our ability to continue as a going concern; our limited operating history; our ability to recruit and retain qualified personnel; our ability to manage future growth; our ability to develop our product candidates and to develop new product candidates; and our ability to protect our intellectual property.

You should not place undue reliance on forward-looking statements. Unless required to do so by law, we do not intend to update or revise any forward-looking statement, because of new information or future developments or otherwise.

As used in this Annual Report on Form 10-K and unless otherwise indicated, the terms “the Company”, “we”, “us” and “our” refer to OncoSec Medical Incorporated.

ImmunoPulse is a registered trademark of the Company in the United States. The Company has filed applications to register ImmunoPulse as well as OncoSec and NeoPulse in the United States and in certain foreign countries. Other registered trademarks used in this Annual Report are the property of their respective owners.

PART I

ITEM 1. BUSINESS

Overview

We are a biotechnology company focused on designing, developing and commercializing innovative gene therapies, therapeutics and proprietary medical approaches to stimulate and guide an anti-tumor immune response for the treatment of cancer. We seek to overcome the problem of tumor-induced immune subversion via intratumoral immunotherapy.

Our Business and Mission

Our mission is to pursue the advancement of immune system-stimulating treatments through the advancement of our proprietary immunotherapy platform which is designed to overcome tumor immune tolerance. Our proprietary intratumoral electroporation-based therapy is a platform which includes immune modulating therapeutic product candidates intended to treat a wide range of solid tumor types, combined with our ImmunoPulse® delivery technology. ImmunoPulse® is an electroporation delivery device that we use in combination with our therapeutic product candidates, including DNA plasmids that encode for immunologically active agents, to deliver the therapeutic directly into the tumor and promote an inflammatory response against the cancer. This unique therapeutic modality is intended to reverse the immunosuppressive microenvironment in the tumor and engender a systemic anti-tumor response against untreated tumors in other parts of the body. Our electroporation delivery device consists of an electrical pulse generator and disposable applicators, which can be adapted to treat different tumor types.

Our Strategy

Traditional modalities for treating cancer have limited clinical efficacy and are frequently associated with significant morbidity. Immunotherapy, a relatively new therapeutic modality, 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 (IL-2) and interleukin-12 (IL-12) have shown early encouraging results in terms of efficacy but with significant mechanism-based toxicity. More recently, monoclonal antibody (mAb) drugs have been developed, which target critical “immune checkpoint” proteins and augment anti-tumor immunity. Monoclonal antibodies such as, anti-CTLA-4 (cytotoxic T-lymphocyte-associated protein-4) and anti-PD-1 (program cell-death-1), have been developed for treatment of several indications, and have already been approved for treatment of metastatic melanoma

and metastatic non-small cell lung cancer. These new immuno-oncology agents have shown tremendous clinical benefit for those patients with late-stage cancer, across multiple tumor types. However, only a subset of patients responds to these therapies.

We have several completed and have ongoing clinical trials for the use of our therapeutic candidates to treat different tumor types with our electroporation delivery device. We also continue to investigate collaboration opportunities that will enable us to identify rational combinations with current and emerging standard-of-care drugs, including immune-modulating checkpoint inhibitors (such as anti-CTLA-4 or anti-PD-1). We expect to continue to conduct additional clinical trials for our product candidates in accordance with the United States Food and Drug Administration (FDA) requirements, some of which may relate to therapeutic candidates for select, rare cancers (orphan indications) that have limited therapeutic options. Our strategy also includes expanding the applications of our technologies through strategic collaborations or evaluation of other opportunities such as in-licensing and strategic acquisitions. We may collaborate with major pharmaceutical and biotechnology companies and government agencies, providing us access to complementary technologies and/or greater resources. These business activities are intended to provide us with mutually beneficial opportunities to expand or advance our product pipeline. We may license our intellectual property to other companies to leverage our technologies for applications that may not be appropriate for our independent product development.

Clinical Program

Our lead product candidate, ImmunoPulse® IL-12, consists of a plasmid construct encoding the proinflammatory cytokine, IL-12, which is delivered into the tumor through in vivo electroporation. A Phase 1 clinical trial in metastatic melanoma using electroporation to deliver plasmid-DNA encoding for the IL-12 cytokine was completed in 2008. The data, published in the Journal of Clinical Oncology (Daud A et al, JCO, 2008) indicate that the *in vivo* gene transfer of IL-12 DNA using electroporation in metastatic melanoma is safe. In addition, anti-tumor activity was observed after a single cycle of treatment, including two complete responses. Importantly, regression in distant, non-injected/non-electroporated lesions was also observed, suggesting that local treatment with ImmunoPulse® IL-12 may lead to a systemic anti-tumor immune response (i.e. an abscopal effect). We are currently pursuing two Phase 2 trials: ImmunoPulse® IL-12 monotherapy in patients with metastatic melanoma and ImmunoPulse® IL-12 plus pembrolizumab in patients with advanced, metastatic melanoma. In addition, we are pursuing ImmunoPulse® IL-12 monotherapy in patients with triple negative breast cancer.

OMS-I100: An Open-Label Phase 2 Trial of ImmunoPulse® IL-12 monotherapy in patients with metastatic melanoma

On December 5, 2014, we released top-line six-month data from the first Phase 2 trial of this product candidate in patients with stage III and IV metastatic melanoma, which was presented in an abstract at the Melanoma Bridge 2014 conference in Naples, Italy. In this Phase 2 study, 30 patients with stage III and IV melanoma received up to four cycles of pIL-12 EP into superficial cutaneous, subcutaneous and nodal lesions on days 1, 5 and 8 of each 12-week cycle. We reported that of the 29 patients who were evaluable, an objective response rate of 31% (9/29) was observed, with 14% (4/29) of patients having a complete response (CR) and 17% (5/29) of patients having a partial response. Regression of distant lesions was seen in 50% (13/26) of patients with evaluable non-injected, non-electroporated lesions. 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 ImmunoPulse® IL-12 is safe and well-tolerated, with no treatment-limiting toxicities. The vast majority of adverse events were localized to the treatment site and were Grade 1 or 2 in severity. Importantly, there was no evidence of systemic toxicities, which is a key feature of the ImmunoPulse® IL-12 intratumoral treatment strategy. In order to continue to acquire clinical and immune correlational data on melanoma patients treated with ImmunoPulse® IL-12, the protocol was amended to enroll up to an additional 30 patients (OMS-I100 Addendum). Enrollment in OMS-I100 Addendum is complete and activities related to closing out this clinical trial is underway, including completion of a clinical study report that will be filed to the FDA.

Long-term, follow-up data of patients who participated in the OMS-I100 trial at the University of California, San Francisco (UCSF) and later went on to receive an anti-PD-1/PD-L1 therapy was presented by Dr. Alain Algazi at the American Association for Cancer Research (AACR) Annual Meeting 2016 in New Orleans. These data suggest that ImmunoPulse® IL-12 may prime and enhance response rates to PD-1/PD-L1 blockade. Fourteen (14) of the 29 patients who completed ImmunoPulse® IL-12 or progressed went on to receive an anti-PD-1/PD-L1 antibody treatment. Overall, 5 of these 14 patients (36%) experienced a CR and 4 patients had a partial response (PR) (29%), for an ORR of 64%. Two patients experienced SD (14%) and three patients had progressive disease (21%) (Algazi et al. 2016; Chen and Daud 2016). The promising single-agent activity observed in the Phase 1 and Phase 2 clinical studies, as well as the potential of an immune-priming effect with ImmunoPulse® IL-12 prior to anti-PD-1/PD-L1 therapy warrants further clinical investigation.

We consider the results of the OMS-I100 Phase 2 study in advanced melanoma, along with the emerging long-term follow-up data, to be significant and thus we are continuing to identify and develop new therapeutic targets that, like IL-12, can (i) be encoded into DNA, (ii) be delivered intratumorally using electroporation, and (iii) have an ability to reverse the immunosuppressive mechanisms of the tumor. We plan to expand our ImmunoPulse® pipeline beyond the delivery of plasmid-DNA encoding for cytokines to include other molecules that may be critical to key pathways associated with tumor immune subversion.

OMS-I140: Triple Negative Breast Cancer — Biomarker-Focused Pilot Study

Worldwide, approximately 170,000 new cases of triple negative breast cancer (TNBC) are diagnosed each year, accounting for approximately 15% of all breast cancer. TNBC frequently affects younger women (less than 40 years old) and is characterized by higher relapse rates when compared with estrogen receptor (ER)-positive breast cancers. TNBC is also associated with an increased risk of recurrence, both locally and in distant sites including the lung and brain. Advanced TNBC remains a significant area of unmet medical need and there is no established standard-of-care. Treatment generally includes chemotherapy, with or without radiation and/or surgery. However, no treatment regimen has clearly demonstrated superiority.

Toward the end of October 2015, we enrolled the first patient in our biomarker-focused pilot study of ImmunoPulse® IL-12 in patients with TNBC. The study is open for enrollment and on-going. The primary objective of the study is to evaluate the potential of ImmunoPulse® IL-12 to promote a pro-inflammatory molecular and histological signature in tumor samples 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 is being conducted at Stanford University and is designed to assess whether ImmunoPulse® IL-12 increases TNBC tumor immunogenicity by driving a pro-inflammatory cascade that leads to increases in cytotoxic tumor-infiltrating lymphocytes (TILs). The presence and number of TILs is thought to be a key requirement for promoting the anti-tumor activity of antibodies like anti-PD-1/PD-L1. By driving cytotoxic immune cells into the tumor, ImmunoPulse® IL-12 may be an ideal candidate to combine with checkpoint blockade therapies which have reported some, but limited activity in TNBC.

CC-15852: An Open-Label Phase 2 Trial of ImmunoPulse® IL-12 plus Pembrolizumab in Patients with Advanced, Metastatic Melanoma

In August 2015, we enrolled the first patient into the Phase 2 investigator sponsored clinical trial led by the University of California, San Francisco to assess the anti-tumor activity, safety, and tolerability of the combination of ImmunoPulse® IL-12, and Merck's approved anti-PD-1 agent, KEYTRUDA® (pembrolizumab), in patients with unresectable metastatic melanoma. The primary endpoint is the best Overall Response Rate (bORR) of the combination regimen in patients whose tumors are characterized by low numbers of tumor-infiltrating lymphocytes (TILs). Recent data suggest that patients whose tumors are not associated with TILs or CD8+ T-cells at the tumor margin are unlikely to respond to anti-PD-1 therapies such as KEYTRUDA®, while those who are PD-L1 positive and have increased TILs are more likely to have a clinical benefit. Therefore, therapies that promote TIL generation and PD-L1 positivity may play an important role in augmenting the clinical efficacy of the anti-PD1/PD-L1 agents. IL-12 is an inflammatory cytokine believed to be a master regulator of the immune system, promoting up-regulation of both the innate and adaptive immune responses and biasing the immune system towards a proinflammatory state. More specifically, IL-12 stimulates the production of another cytokine, interferon gamma (IFN-), which, in turn, results in the stimulation of antigen processing and presentation machinery, leading to increased TILs and anti-tumor cytotoxic T-cell (CTL) activity. The sponsor of this investigator-initiated study, UCSF, expects to enroll up to 42 patients; The study is enrolling and on-going. We currently are on track to complete enrollment by the end of calendar year 2016.

In addition to the three clinical trials described above, we have also pursued Phase 2 clinical trials in patients with merkel cell carcinoma and head and neck cancer.

Our ImmunoPulse® Platform

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 ImmunoPulse® therapeutic approach. The electroporation delivery system consists of an electrical pulse generator and various disposable applicators. While the extent of membrane permeabilization depends on various electrical, physical, chemical, and biological parameters, research with electroporation delivery has demonstrated an improvement of cellular uptake of chemical molecules from 100 to 1,000-fold above baseline. After cessation of the electrical pulse, the membrane re-stabilizes, trapping the molecules within the cell and allowing them to perform their function.

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DNA Delivery With Electroporation — ImmunoPulse®

The greatest obstacles to the wide acceptance and use of DNA-based therapeutics has been the safe, efficient, and economical delivery and expression of plasmid-DNA constructs. We believe that electroporation is uniquely capable of overcoming these obstacles. Together with our partners and collaborators, we plan to be the leader in establishing electroporation-delivered DNA immunotherapies. We believe that electroporation could become the method of choice for plasmid-DNA delivery into cells in many clinical applications.

The ImmunoPulse® approach employs an electroporation system 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 selected tumor. A needle-electrode array then delivers the electrical pulses produced in the pulse generator. OncoSec is developing new technologies called TRACE and Helix to improve electroporation. TRACE, or tissue-based real-time adaptive control electroporation, technology is used to perform electroporation with electrochemical impedance spectroscopy feedback operating in a closed-loop configuration to optimize each pulse duration in real-time. The Helix technology improves the distribution of the therapeutic agent in tissue and achieves delivery to an area that is three times larger than a standard injection needle.

Our ImmunoPulse® product candidates are based on our proprietary DNA based immunotherapy technology, which is designed to stimulate the human immune system, resulting in systemic anti-tumor immune responses. Because our candidate therapeutics are plasmid constructs, we expect to benefit from a simpler, more consistent and scalable manufacturing process in comparison to therapies based on patient-derived cells or recombinant proteins. Our lead product candidate, ImmunoPulse® IL-12, consists of a plasmid construct encoding the proinflammatory cytokine, IL-12, which is delivered into the tumor through in vivo electroporation. ImmunoPulse® IL-12 is being studied in several open-label Phase 2 clinical trials.

Cancer deploys multiple immune-subversive mechanisms in parallel to suppress anti-tumor immune responses and we believe it is unlikely that any single immunotherapy product will suffice to achieve durable responses in most patients and in most tumor types. Therefore, we are conducting research and development on other DNA-encoded, immunologically-active molecules with an aim to produce additional immunotherapeutic drugs capable of breaking the immune system’s tolerance to cancer. We have the opportunity to leverage the flexibility of a DNA plasmid-based technology to rapidly pursue candidate molecules and combinations of therapeutics. We can introduce, for example, pro-inflammatory cytokines and chemokines, immune stimulatory receptors, co-stimulatory molecules, adhesion molecules, and T-cell engagement molecules. We expect that electroporation-mediated intratumoral expression of immunologically-active molecules such as these can reverse the immunosuppressive microenvironment of the tumor and drive systemic anti-tumor immune responses while limiting systemic exposure and toxicities associated with these potent immunologic effector molecules.

Advisory Panels

We have consulted with senior and respected oncology researchers and clinicians to provide counsel as part of our advisory panels for our ImmunoPulse® clinical programs. We expect to continue to establish relationships with scientific, clinical and medical experts in academia, as needed, to assist us on issues related to potential product applications, product development, and clinical testing.

Commercialization

We plan to continue our clinical development strategy for the ImmunoPulse® IL-12 program with Phase 2 and subsequent pivotal clinical trials focused on various cancers, including those that have a demonstrated response to anti-PD-1/PD-L1 checkpoint therapies such as metastatic melanoma and squamous cell carcinoma of the head and neck. We believe that there is a significant unmet medical need for patients who are non-responsive or refractory to anti-PD-1/PD-L1 therapies.

We hope to be first-to-market in treatment for metastatic melanoma for patients who are non-responsive or refractory to currently approved anti-PD-1 checkpoint therapies. We continue to also focus on partnering and commercialization strategies that leverage Phase 2 clinical studies in the United States. Our near term plan is to identify and engage potential partners who are established industry leaders in the field of immuno-oncology, or plan to expand their portfolio in this space.

Competition

We are in a highly competitive industry. We are in competition with traditional and alternative therapies for the indications we are targeting, as well as pharmaceutical and biotechnology companies, hospitals, research organizations, individual scientists and nonprofit organizations engaged in the development of drugs and other therapies for these indications. Our competitors may succeed, and many have already succeeded, in developing competing products, obtaining FDA approval for products, or gaining patient and physician acceptance of products before us for the same markets and indications that we are targeting. Many of these companies, and large pharmaceutical companies in particular, have greater research and development, regulatory, manufacturing, marketing, financial and managerial resources, and experience than we have, and many of these companies may have products and product candidates that are in a more advanced stage of development than our product candidates. If we are not "first to market" for a particular indication, it may be more difficult for us or our collaborators to effectively enter markets unless we can demonstrate our products are clearly superior to existing therapies (see also "Intellectual Property" below).

Examples of competitive therapies include the following:

Immunotherapy. This therapeutic approach stimulates the patient's own immune system to attack malignant tumor cells, which have managed to circumvent the body's natural immune processes that would normally recognize and destroy these cells before they are able to form growing cancerous tumors. Several methods have been employed to evoke this immune response, including monoclonal antibodies and autologous cell-based vaccines, as well as viral and non-viral targeted delivery of immunotherapeutic agents.

YERVOY® (ipilimumab), approved in 2011, is a monoclonal antibody that acts to block the CTLA-4 receptor (an immune checkpoint receptor) on T-cells. In the presence of CTLA-4 receptor it is believed tumors are able to suppress the immune system from recognizing cancerous cells, however blockade of this receptor with YERVOY® (an anti-CTLA-4 antibody) appears to allow the immune system to generate an antitumor T-cell response.

YERVOY® was the first approved immunotherapy in melanoma, and current research is evaluating the use of other anti-checkpoint monoclonal antibodies.

Other monoclonal antibodies approved that act to block a checkpoint receptor, PD-1, were recently approved by the FDA. KEYTRUDA® (pembrolizumab) and OPDIVO® (nivolumab), were both approved for use in late-stage unresectable metastatic melanoma in 2014 based on the impressive objective response rate data from Phase I and II clinical trials. A third monoclonal antibody like KEYTRUDA and OPDIVO, that targets the PD-1/PD-L1 checkpoint axis, TECENTRIQ (atezolizumab), was approved on May 18, 2016 by the FDA for the treatment of urothelial carcinoma, the most common type of bladder cancer.

Moreover, there are an increasing number of combination immunotherapies being evaluated, including combinations of checkpoint inhibitor therapies. In October 2015, the FDA announced the approval of the first immune checkpoint inhibitor combination of YERVOY® (ipilimumab) plus OPDIVO® (nivolumab) in advanced melanoma. We expect more approvals of this combination, and other novel combinations, to be approved in the

coming years as more and more combinations continue to be investigated.

Provenge®, a product developed and marketed by Dendreon Corporation, and many emerging therapies continue to employ an autologous cell-based mode of delivery, which involves the harvesting of a patient's own cells, growing them in a lab, incubating with a vaccine or immune stimulating agent, and re-administering the resulting product to the patient.

Other cell-based approaches include Tumor Infiltrating Lymphocyte (TIL) and chimeric antigen receptor T-cell (CART) therapies. These therapies continue to be investigated in clinical trials for both solid and hematologic cancers.

Viral vectors, such as adenoviruses and oncolytic viruses, have also been used to deliver immunotherapeutic payloads to fight against cancerous cells, either systemically or through direct injection into the tumor. Clinical trials for this therapeutic delivery method are ongoing with no approved therapies yet to be available in the clinic. Recently, Amgen's tamoligene laherparapvec, or T-VEC, completed its Phase III trial and met its primary endpoint. This data was presented to the Oncologic Drugs Advisory Committee, who voted to recommend approval of this therapy to the FDA. The final decision on approval of this therapy remains with the FDA.

Other non-viral vector methods, that deliver nucleic-acid based therapies, are also currently being developed and employed in ongoing clinical trials. Examples of other non-viral vector methods include, liposome-based delivery systems, bacterial-based delivery systems, and mechanical delivery systems.

Vaccination. The use of peripheral vaccination has long held interest as another potential modality that could prove beneficial in treating and limiting systemic oncologic disease. Several antigen-specific investigational vaccines have been tested in humans in the past, in particular in melanoma, such as MAGE-A3, however none of these have proven to be successful in a large Phase 3 registration trial.

Employees

We have assembled a senior management team with many years of experience and success in biotech/pharma operations, business and commercial development, and capital markets. In addition, we have assembled a clinical and regulatory team experienced in developing and advancing novel therapeutic approaches through clinical testing and regulatory approvals. As of October 7, 2016, we have a total of 46 employees. None of our employees is represented by a labor union or covered by a collective bargaining agreement, and we believe that our relations with our employees are good.

We expect to hire additional staff and to engage consultants in regulatory, compliance, investor and public relations, and general administration as necessary. We also expect to engage experts in healthcare and in general business to advise us in various capacities.

Intellectual Property

Our success and ability to compete depends upon our intellectual property. We have acquired or been issued 28 U.S. patents and have two U.S. patent applications pending. We have filed 14 U.S. provisional patent applications, and have converted three provisional applications into regular utility applications. We will continue to file additional patent applications, when appropriate. We have a total of 13 issued patents and six pending patent applications in other jurisdictions. In addition, we have licensed intellectual property rights that allow us to use certain electroporation technology and methods of delivering DNA-based cytokines as an immunotherapy, including using catheter-based delivery. The bulk of our patents, including fundamental patents directed toward our proprietary technology, expire between 2017 and 2027.

We are party to a cross-license agreement with Inovio Pharmaceuticals, Inc. (“Inovio”), which we entered into concurrently with the closing of our acquisition of certain assets from Inovio in 2011. This agreement provides for the exclusive license to Inovio of patent rights sold to us by Inovio. Inovio is restricted to using these patent rights for the electroporation mediated delivery of gene or nucleic acids, outside of those encoding cytokines. We received a non-exclusive cross-license by Inovio to patent rights related to certain technology patents in exchange for specified sublicensing and other licensing fees and royalties.

Government Regulation

United States

In the United States, our product candidates are subject to extensive regulation by the FDA. Federal and state statutes and regulations, many of which are administered by the FDA, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable FDA or other requirements may subject a company to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve pending applications, a clinical hold, warning letters, recall or seizure of products, partial or total suspension of production, withdrawal of the product from the market, injunctions, fines, civil penalties or criminal prosecution.

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

- completion of pre-clinical testing and formulation studies in compliance with the FDA's good laboratory practice regulations;
- submission to the FDA of an investigational new drug application, or IND, for human clinical testing, which must become 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 drug product for each intended use; and
- submission to the FDA of a new drug application, or NDA, which the FDA must review and approve.

The pre-clinical and clinical testing and approval process requires substantial time, effort, and financial resources, and the receipt and timing of approval, if any, is highly 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 drug to human subjects under the supervision of qualified investigators in accordance with good clinical practice requirements. For purposes of an NDA submission and approval, human clinical trials are typically conducted in the following sequential phases, which may overlap or be combined:

Phase 1: The drug is initially introduced into 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 effectiveness.

Phase 2: The drug 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 II clinical trials may be conducted.

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

Phase 4: In some cases, the FDA may condition approval of an NDA for a product candidate on the sponsor's agreement to conduct additional clinical trials to further assess the drug's safety and effectiveness after NDA approval.

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

Once the submission has been accepted for filing, the FDA begins an in-depth substantive review. Pursuant to the FDA's performance goals, NDA reviews are to be completed within ten months, subject to extensions by the FDA. Before approving an NDA, 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. If the FDA determines that the NDA is not acceptable, then the FDA may outline the deficiencies in the NDA and often will request additional information or additional clinical trials. 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.

Even if regulatory approval of a product candidate is obtained, such approval will usually impose limitations on the indicated uses for which the product may be marketed. Additionally, the FDA may require post-approval testing, such as Phase IV studies, or surveillance programs to monitor the effect of approved products, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

After FDA approval, a product will be subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to drug/device listing, recordkeeping, periodic reporting, product sampling and distribution, manufacturing practices, labeling, advertising and promotion, and reporting of adverse experiences with the product. The FDA may withdraw its approval of a product if compliance with regulatory requirements and manufacturing standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things: restrictions on the marketing or manufacturing of the product; complete withdrawal of the product from the market or product recalls; fines, warning letters or holds on post-approval clinical trials; or injunctions or the imposition of civil or criminal penalties.

International Regulation

When we pursue research and/or commercialization of our product candidates in countries other than the United States, we will need to obtain the necessary approvals by the regulatory authorities of such foreign countries comparable to the FDA before we could commence clinical trials or marketing of our product candidates in those countries, and we would be subject to a variety of foreign regulations regarding safety and efficacy and governing, among other things, clinical trials and commercial sales and distribution of our products. The approval processes and requirements vary by country and can involve additional product testing and additional review periods, and the time may be longer or shorter than that required to obtain FDA approval.

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, as above, 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, any one or more of which could have a material adverse effect on us. Additionally, if we are able to successfully obtain approvals for and commercialize our product candidates, then we may become subject to various federal, state, and local laws targeting fraud, abuse, privacy, and security in the healthcare industry.

Manufacturing

We currently contract with third parties for the manufacture, testing and storage of our plasmid product candidate and intend to continue to do so in the future. We currently assemble certain components of our electroporation systems, which is our delivery mechanism for our biologic to a patient's cell. We utilize the services of contract manufacturers to manufacture the remaining components of these systems and our product supplies for clinical trials and intend to continue to do so in the future. We are ISO 13485 certified and have an audited quality management system. In addition, all manufacturers of our products must comply with cGMP requirements enforced by the FDA through its facilities inspection program.

We do not own and have no plans to build our own clinical or commercial plasmid manufacturing capabilities. The use of contracted manufacturing is relatively cost-efficient and has eliminated the need for our direct investment in manufacturing facilities. Because we rely on contract manufacturers, we employ personnel with extensive technical, manufacturing, analytical and quality experience to oversee contract manufacturing and testing activities, and to compile manufacturing and quality information for our regulatory submissions.

Manufacturing is subject to extensive regulations that impose various procedural and documentation requirements, and which govern record keeping, manufacturing processes and controls, personnel, quality control and quality assurance, among others. Our systems and our contractors are required to be in compliance with these regulations, and this is assessed regularly through monitoring of performance and a formal audit program. We believe that there are alternate sources of raw material supply and finished goods manufacturing that can satisfy our requirements, although we cannot be certain that transitioning to such vendors, if necessary, would not result in significant delay or material additional costs.

Research and Development

We recognized $14.7 million and $13.1 million in research and development expenses in the fiscal years ended July 31, 2016 and 2015, respectively. From our inception through July 31, 2016, we have incurred an aggregate of approximately $39.7 million of research and development expenses, the significant majority of which relate to our development of immuno-oncology therapeutic product candidates, with the use of an electroporation device.

Corporate Information

We were incorporated under the laws of Nevada on February 8, 2008 under the name “Netventory Solutions Inc.” Initially, we provided online inventory services to small and medium sized companies. On March 1, 2011, we changed our name to “OncoSec Medical Incorporated.” In March 2011, we acquired certain assets related to the use of drug-medical device combination products for the treatment of various cancers from Inovio. With this acquisition, we abandoned our efforts in the online inventory services industry and began focusing our efforts in the biotechnology industry. Our corporate headquarters is currently located at 5820 Nancy Ridge Drive, San Diego, CA 92121 and the telephone number is 855-662-6732.

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 Securities and Exchange Commission. Any information that we include on or link to our website is not a part of this report or any registration statement that incorporates this report by reference.

ITEM 1A. RISK FACTORS

Investment in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as all other information included in this Annual Report on Form 10-K, including our financial statements, the notes thereto and the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations. Our business, financial condition, results of operations and stock price could be materially adversely affected by any of these risks.

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

We do not generate any cash from operations and will need to raise additional funds in future periods in order to continue operating our business. We estimate our cash requirements for the next 12 months to be approximately $22.3 million. As of July 31, 2016, we had cash and cash equivalents of approximately $29.0 million.

We have a history of raising funds through offerings of our common stock and warrants to purchase our common stock. We expect to continue to fund our operations primarily through public or private equity financings in the near future, and we may also raise funds through debt financings, grants, corporate collaborations, or licensing arrangements.

We will require additional financing to fund our planned operations, including developing and commercializing our intellectual property, seeking to license or acquire new assets, researching and developing any potential patents, related compounds, and other intellectual property, funding potential acquisitions, and supporting clinical trials and seeking regulatory approval relating to our assets and any assets we may develop or acquire in the future. Additional financing may not be available to us when needed or, if available, may not be available on commercially reasonable terms. If we issue equity or convertible debt securities to raise additional funds, our existing stockholders may experience substantial 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, it may increase our leverage relative to our earnings or to our equity capitalization, requiring us to pay additional interest expense. Obtaining commercial loans, assuming those loans would be available, would increase our liabilities and future cash commitments.

We may not be able to obtain additional financing if the volatile and uncertain conditions in the capital and financial markets, and more particularly the market for early-development-stage biotechnology and life science company stocks, persist. Weak economic and capital markets conditions could result in increased difficulties in raising capital for our operations. We may not be able to raise money through the sale of our equity securities or through borrowing funds on terms we find acceptable. If we cannot raise the funds that we need, we may be unable to continue our operations, and our stockholders could lose their entire investment in our Company.

We may be unable to successfully develop and commercialize the assets we have acquired or develop and commercialize new assets and product candidates.

Our future results of operations will depend to a significant extent upon our ability to successfully develop and commercialize our product candidates, including the assets we acquired from Inovio. In addition, we plan to expand our clinical pipeline and to build our product portfolio through the acquisition or licensing of new assets, product

candidates or approved products. There are numerous difficulties inherent in acquiring, developing and commercializing new products and product candidates, including difficulties related to:

- successfully identifying potential product candidates;
- developing potential product candidates;
- conducting or completing clinical trials, including receiving incomplete, unconvincing, or equivocal clinical trials data;
- obtaining requisite regulatory approvals for such products in a timely manner or at all;
- acquiring, developing, testing, and manufacturing products in compliance with regulatory standards in a timely manner or at all;
- being subject to legal actions brought by our competitors, which may delay or prevent the development and commercialization of new products;
- significant and unpredictable changes in the payor landscape, coverage, and reimbursement for any products we successfully develop and commercialize; and
- delays or unanticipated costs, including those related to the foregoing.

As a result of these and other difficulties, we may be unable to develop potential product candidates using our intellectual property, and our potential products in development may not receive regulatory approvals in a timely manner or at all. If we do not acquire or develop product candidates, if any of our product candidates are not approved in a timely manner or at all, or if any of our product candidates, when acquired or developed and approved, cannot be successfully manufactured and commercialized, our operating results would be adversely affected. In addition, we may not recoup our investment in developing products, even if we are successful in commercializing those products. Our business expenditures may not result in the successful acquisition, development, or commercialization of products that will prove to be commercially successful or result in the long-term profitability of our business.

If the commencement or completion of clinical testing for product candidates based on our technology is delayed or prevented, that could result in increased costs to us and delay or limit our ability to pursue regulatory approval or generate revenues.

Clinical trials are very expensive, time-consuming, and difficult to design and implement. Even if we are able to complete our proposed clinical trials and the results are favorable, clinical trials for product candidates based on our technology will continue for several years and may take significantly longer than expected to complete.

Delays in the commencement or completion of clinical testing could significantly affect our product development costs and business plan. We do not know whether our Phase 2 clinical trials will be completed on schedule, if at all; however, current enrollment in the clinical trials suggest completion in late calendar 2016 or early calendar 2017. We do not know whether any other pre-clinical or clinical trials, including Phase 3 clinical trials, will begin on time or be completed on schedule, if at all. In addition, a number of pre-clinical and clinical trials related to our product candidates are investigator-initiated and sponsored. An investigator-initiated trial is a research effort in which the investigator designs and implements the study and the investigator or the institution acts as the study sponsor. The trial sponsor has control over the design, conduct and timing of such trials, and we have limited or no control over the commencement and completion of such trials.

In addition, to the extent that our strategy focuses on the combination of our product candidates with third parties' anti-PD-1/PD-L1 products or product candidates, certain of our clinical studies may invole the combination of our product candidates with the products or product candidates of third parties. This is true of our combination IST, a Phase 2 investigator sponsored clinical trial led by the University of California San Francisco to assess the combination of ImmunoPulse® IL-12 and Merck's anti-PD-1 antibody KEYTRUDA®. This study raises additional risks due to its reliance on factors outside our control, such as those relating to the availability and marketability of KEYTRUDA®. If we or our clinical investigators are unable to secure a sufficient supply of third-party products or candidates, such as KEYTRUDA®, on commercially reasonable terms, our clinical studies could be delayed or we could be forced to terminate these studies. Such a delay or termination would have a material impact on our development strategy, business, results of operations, financial conditions, and prospects.

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

- obtaining clearance from the Food and Drug Administration, or FDA, or respective international regulatory body equivalents 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, 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 for a variety of reasons, including competition from other clinical trial programs for similar indications;
- retaining patients who have initiated a clinical trial but may be prone to withdraw due to side effects from the therapy, lack of efficacy, personal issues, death, or for any other reason they choose, or who are lost to further follow-up; and
- identifying and maintaining a sufficient supply of third-party products or product candidates, including those produced by third parties, on commercially reasonable terms.

We believe that we have planned and designed an adequate development strategy for our electroporation technology. However, the FDA could determine that it is not satisfied with our plan or the details of our pivotal clinical trial protocols and designs.

Additionally, changes in applicable regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial. If we experience delays in completion of, or if we terminate, any of our clinical trials, the commercial prospects for our product candidates may be harmed, which may have a material adverse effect on our business, results of operations, financial condition and prospects.

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

In order to successfully implement and manage our business plan, we will depend upon, among other things, successfully recruiting and retaining qualified executives, managers, scientists and other employees having relevant experience in the biotechnology industry. Competition for qualified individuals is intense, particularly in our geographical location where there are several larger, more established 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 rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and 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 and find, attract, and retain new qualified personnel on acceptable terms and in a timely manner to coincide with our growth, we may not be able to successful maintain or grow our business and our business operations and prospects could suffer.

Additionally, although we have employment agreements with each of our executive officers, these agreements are terminable by them at will and we may not be able to retain any one or more of our executives. The loss of the services of any one or more members of our senior management team, including recent changes within our management team, could (i) disrupt or divert our focus from pursuing our business plan while we seek to recruit other executives, (ii) impact the perceptions of our employees, partners and investors, and perceptions of prospective employees, partners and investors, regarding our business and prospects, (iii) cause us to incur substantial costs in connection with managing transitions and recruiting suitable replacements, and (iv) delay or prevent the development and commercialization of our product candidates. These and other potential consequences could cause significant harm to our business, especially to the extent that we are not able to recruit suitable replacements in a timely manner.

Future growth could strain our resources, and if we are unable to manage our growth, we may not be able to successfully implement our business plan.

Our business plan includes the continued growth of our operations, including, but not limited to, the opening of one or more foreign subsidiaries and the expansion of our clinical studies beyond the U.S. Such growth could place a significant strain on our management, administrative, operational, and financial infrastructure. Our future success will depend, in part, upon the ability of our executive officers to manage growth effectively. This will require that we hire and train additional personnel to support our expanding operations. International growth will expose us to more complexity in our regulatory and accounting compliance and will expose us to new risks and challenges inherent in international operations with which we may not be familiar, such as changing taxes or duties, fluctuations in currency exchange rates, changes in applicable laws or policies, and potential for war or civil unrest. In addition, we must continue to improve our operational, financial, and management controls and our reporting systems and procedures, which can be made even more challenging while our operations are growing. If we fail to successfully manage our growth, we may be unable to execute upon our business plan.

Our success depends in large part on our ability to protect our intellectual property using a combination of patents, trade secrets, and confidentiality agreements. Certain of our patents will expire in the near future, and we may have difficulties protecting our proprietary rights and technology and we may not be able to ensure their protection.

Our commercial success will depend in large part on obtaining and maintaining patent, trademark, and trade secret protection of our product candidates and their respective components, including devices, formulations, manufacturing methods, and methods of treatment, as well as successfully defending these patents against third-party challenges. Our ability to stop third parties from making, using, selling, offering to sell, or importing our product candidates is dependent upon the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. As we describe elsewhere in this Annual Report, we have patent protection for components of our ImmunoPulse® product candidates. Our current device portfolio includes US7,412,284 and EP999867, which cover our current clinical device. These patents will expire between 2017 and 2018, at which point we can no longer enforce these against third parties to prevent them from making, using, selling, offering to sell, or importing our current clinical device. This could expose us to substantially more competition and have a material adverse impact on our business and our ability to commercialize or license our technology and products.

In addition, the coverage claimed in a patent application typically is significantly reduced before a patent is issued, either in the United States or abroad. Consequently, any of our pending or future patent applications may not result in the issuance of patents and any patents issued may be subjected to further proceedings limiting their scope and may in any event not contain claims broad enough to provide meaningful protection. Any patents that are issued to us or our future collaborators may not provide significant proprietary protection or competitive advantage and may be circumvented or invalidated. In addition, unpatented proprietary rights, including trade secrets and know-how, can be difficult to protect and may lose their value if they are independently developed by a third party or if their secrecy is lost. Further, because development and commercialization of our potential product candidates can be subject to substantial delays, our patents may expire or provide only a short period of protection, if any, following any future commercialization of products. Moreover, 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. If any of our patents are found to be invalid or unenforceable, or if we are otherwise unable to adequately protect our rights, it could have a material adverse impact on our business and our ability to commercialize or license our technology and products.

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

We have not generated any revenue from operations since our inception. During the fiscal year ended July 31, 2016, we incurred a net loss of approximately $26.9 million. From inception through July 31, 2016, we have incurred an aggregate net loss of approximately $73.5 million. We expect that our operating expenses will continue to increase as we expand our current headcount, further our development activities, and continue to pursue FDA approval for our product candidates.

Because of the numerous risks and uncertainties associated with our product development and commercialization efforts, we are unable to predict the extent of our future losses or when or if we will become profitable, and it is possible we will never commercialize any of our product candidates or become profitable. Our failure to obtain regulatory approval and successfully commercialize any of our product candidates 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.

Regulatory authorities may not approve our product candidates or the approvals we secure may be too limited or too late for us to earn sufficient revenues.

The research, testing, 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 and other countries, which regulations differ from country to country. The FDA and other foreign regulatory agencies can delay approval of or refuse to approve our product candidates for a variety of reasons, including failure to meet safety and efficacy endpoints in our clinical trials. Our product candidates may not be approved even if they achieve their endpoints in clinical trials. Regulatory agencies, including the FDA, may disagree with our or our partners' trial design and our interpretation of data from preclinical studies and clinical trials. Clinical trials of our product candidates may not demonstrate that they are safe and effective to the extent necessary to obtain regulatory approvals. Our clinical trial addendum to assess our ImmunoPulse® IL-12 single-agent therapy in patients with metastatic melanoma recently closed enrollment and we have one biomarker-focused pilot study of ImmunoPulse® IL-12 in patients with triple negative breast cancer open for enrollment. In addition, our combination IST, a Phase 2 investigator sponsored clinical trial led by the University of California San Francisco to assess the combination of ImmunoPulse® IL-12 and Merck's anti-PD-1 antibody KEYTRUDA®, is ongoing and continues to enroll patients. This combination trial raises additional risks due to its reliance on factors outside our control, such as those risks described elsewhere in these Risk Factors relating to the availability and marketability of KEYTRUDA®.

If we cannot adequately demonstrate through the clinical trial process that a therapeutic product we are developing is safe and effective, regulatory approval of that product would be delayed or prevented, which would impair our reputation, increase our costs and prevent us from earning revenues. Success in preclinical testing and early clinical studies does not ensure that later clinical trials will generate adequate data to demonstrate the 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 us, have suffered significant setbacks in clinical trials, even after seeing promising results in earlier clinical trials. Even if a product candidate is approved, it may be approved for fewer or more limited indications than requested 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 would have an adverse effect on our business, reputation and results of operations.

Because of the substantial competition we face, even if we are able to secure regulatory approval of our product candidates, delays in such regulatory approval could delay or even prevent our ability to commercialize our product candidates. Even a failure to secure accelerated regulatory approval under the FDA Accelerated Approval Program, or similar foreign programs, could lead us to reconsider our development strategies and delay or prevent us from commercializing our product candidates.

We must rely on third parties to conduct our clinical trials. 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 clinical research organizations, or CROs, to conduct our clinical trials. We currently rely on these parties for the execution of our clinical and pre-clinical studies, and control only certain aspects of their activities. We, and our CROs, are required to comply with the current FDA Code of Federal Regulations for Conducting Clinical Trials and Good Clinical Practice, or GCP, and International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, or ICH, guidelines. The FDA and similar foreign regulators enforce these GCP regulations through periodic inspections of trial sponsors, principal investigators, CRO trial sites, laboratories, and any entity having to do with the completion of the study protocol and processing of data. If we, or our CROs, fail to comply with applicable GCP regulations, the data generated in our clinical trials may be deemed unreliable and the FDA may require us to perform additional clinical trials before approving our marketing applications. Upon inspection, the FDA and similar foreign regulators may determine that our clinical trials are not compliant with GCP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would increase costs and delay the regulatory approval process.

If any of our relationships with third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs on commercially reasonable terms, on a timely basis, or at all. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates could be harmed, our costs could increase and our ability to generate additional revenues could be delayed.

We have participated in, and continue to participate in, clinical trials conducted under an approved investigator-sponsored investigational new drug (IND) application, and correspondence and communication with the FDA pertaining to these trials will strictly be between the investigator and the FDA.

We have participated in, and continue to participate in, clinical trials conducted under an approved investigator-sponsored investigational new drug (IND) application, including our Phase 2 investigator sponsored clinical trial led by the University of California San Francisco to assess the combination of ImmunoPulse® IL-12 and Merck’s anti-PD-1 antibody KEYTRUDA®. Regulations and guidelines imposed by the FDA with respect to IND applications include a requirement that the sponsor of a clinical trial provide ongoing communication with the agency as it pertains to safety of the treatment. This communication can be relayed to the agency in the form of safety reports, annual reports, or verbal communication at the request of the FDA. Accordingly, it is the responsibility of each investigator (as the sponsor of the trial) to be the point of contact with the FDA. The communication and information provided by the investigator may not be appropriate and accurate, and the investigator has the ultimate responsibility

and final decision-making authority with respect to submissions to the FDA. This may result in reviews, audits, delays, or clinical holds by the FDA ultimately affecting the timelines for these studies and potentially risking the completion of these trials.

We are an early-stage, pre-commercial company with a limited operating history, which may hinder our ability to successfully generate revenues and meet our objectives.

We are an early-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. Although we plan to investigate licensing and partnering opportunities, we are not currently planning on generating any significant near term revenue; therefore, the income potential of our business is unproven. In addition, because of our limited operating history, we have limited insight into trends that may emerge and affect our business. Errors may be made in predicting and reacting to relevant business trends and we will be subject to the risks, uncertainties, and difficulties frequently encountered by early-stage companies in evolving markets. We may not be able to successfully address any or all of these risks and uncertainties. Failure to adequately do so could cause our business, results of operations, and financial condition to suffer or fail.

We have not commercialized any of our product candidates. Our ability to generate revenues from any of our product candidates will depend on a number of factors, including our ability to successfully complete clinical trials, obtain necessary regulatory approvals, and negotiate arrangements with third parties to help finance the development of, and market and distribute, any product candidate that receives regulatory approval. In addition, even if we achieve regulatory approval for one or more of our product candidates, we will be subject to the risk that the marketplace may not accept our products in sufficient levels for us to achieve profitability, or at all.

The biotechnology industry is highly competitive and our competitors tend to be larger and have been in business longer than us.

The biotechnology industry has an intensely competitive environment that will require an ongoing, extensive search for technological innovations and the ability to market products effectively, including the ability to communicate the effectiveness, safety, and value of products to healthcare professionals in private practice, group practices, and payors in managed care organizations, group purchasing organizations, and Medicare & 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 are smaller than almost all of our competitors. Most of our competitors have been in business for a longer period of time than us, have a greater number of products on the market, and have greater financial and other resources than we do. Furthermore, recent trends in this industry are that large drug companies are consolidating 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 products more rapidly than we are able to or may obtain patent protection or other intellectual property rights that limit or block us from developing or commercializing our product candidates. If we are able to obtain regulatory approval of our product candidates or any assets we may acquire in the future, we will face competition from products currently marketed by larger competitors that address our targeted indications. If we directly compete with these very large entities for the same markets and/or products, their financial strength could prevent us from capturing a share of those markets. Our competitors may also develop products that are more effective, more useful, better tolerated, subject to fewer or less severe side effects, more widely prescribed or accepted, or less costly than ours and may also be more successful than us in manufacturing and marketing their products.

We also face competition from product candidates that are or could be under development. 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, patient reimbursement by third-party payors, extent of adverse side effects, and convenience of treatment procedures. We may not be able to effectively compete in one or more of these areas.

If we are unable to compete effectively with the marketed therapeutics of our competitors or if such competitors are successful in developing products that compete with our potential product candidates, our business, results of operations, financial condition, and prospects may be materially adversely affected.

Our failure to successfully develop, acquire, and market additional product candidates or approved products would impair our ability to grow.

Our business plan includes the expansion of our clinical pipeline and our product portfolio through the acquisition, in-license, development and/or marketing of additional products and product candidates. The success of our efforts to expand our clinical pipeline and to build our product portfolio will depend in significant part on our ability to successfully identify, select and acquire promising product candidates and products.

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

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

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

Any collaboration arrangement that we have entered into or may enter into in the future may not be successful, which could adversely affect our ability to develop and commercialize our current and potential future product candidates.

We may seek collaboration arrangements with pharmaceutical or biotechnology companies for the development or commercialization of our current and potential future product candidates, including our pursuit of combination trials to develop and commercialize our product candidates as combination products. 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, maintenance of clinical efficacy, reliability and cost of manufacturing, regulatory approval requirements and standards, and other important factors. Thereafter, such products face continued risk and uncertainty related to manufacturing and supply until the commercial supply chain is validated and proven.

We will face, to the extent that we decide to enter into collaboration agreements, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time-consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements should we choose to enter into such arrangements, or the terms of such arrangements may not be favorable to us. If and when we collaborate with a third party for development and commercialization of a product candidate, we can expect to relinquish some or all of the control over the future success of that product candidate to the third party. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators, who would likely have significant discretion in determining the efforts and resources that they will apply to these collaborations.

Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither party has final decision-making authority. Collaborations with third parties often are terminated or allowed to expire by the third party, which would adversely affect us financially and could harm our business reputation.

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

The FDA provides guidelines with respect to appropriate product promotion and continuing medical and health education activities. Although we endeavor to follow these guidelines, the FDA or the Office of the Inspector General: U.S. Department of Health and Human Services may disagree, and we may 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.

If we and the contract manufacturers upon whom we rely fail to produce our systems and product candidates in the volumes that we require on a timely basis, or fail to comply with stringent regulations, we may face delays in the development and commercialization of our electroporation equipment and product candidates.

We currently assemble certain components of our electroporation systems, which is our delivery mechanism for our biologic to a patient's cell. We utilize the services of contract manufacturers to manufacture the remaining components of these systems and our product supplies for clinical trials. We expect to increase our reliance on third party manufacturers if and when we commercialize our product candidates and systems. The manufacture of our systems and product supplies requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers often encounter difficulties in production, particularly in scaling up for commercial production. These problems include difficulties with production costs and yields, quality control, including stability of the equipment and product candidates and quality assurance testing, shortages of qualified personnel, as well as 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 obligations to us, our ability to provide our electroporation equipment to our partners and products to patients in our clinical trials or to commercially launch a product 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 program, and, depending upon the period of delay, require us to commence new trials at significant additional expense or terminate the trials completely.

In addition, all manufacturers of our products must comply with cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include, among other things, quality control, quality assurance, and the generation and maintenance of records and documentation. Manufacturers of our products may be unable to comply with these cGMP requirements and with other FDA, state, and foreign regulatory requirements. We have little control over our manufacturers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval. If the safety of any product is compromised due to our or our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products, and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay of clinical trials, regulatory submissions, approvals, or commercialization of our products, entail higher costs, or result in our being unable to effectively commercialize our products. Furthermore, assuming we are successful in 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 would lose potential revenues.

We may not be successful in executing our strategy for the commercialization of our product candidates. If we are unable to successfully execute our commercialization strategy, we may not be able to generate significant revenue.

We intend to advance a commercialization strategy that leverages previous in-depth clinical experiences, previous CE (*Conformité Européene*) approvals, and late-stage clinical studies in the United States. This strategy includes seeking approval from the FDA and similar foreign regulators to initiate pivotal registration studies in the United States and abroad, including studies in select rare cancers that have limited, adverse, or no therapeutic alternatives. This strategy also includes expanding the addressable markets for our therapies through the addition of relevant indications. Our commercialization plan also includes partnering and/or co-developing our technology in developing regions, such as Eastern Europe and Asia, where local resources are best leveraged and appropriate collaborators can be secured.

We may not be able to implement a commercialization strategy as we have planned. Further, we have not proven our ability to succeed in the biotechnology industry and are not certain that our implementation strategy, if implemented correctly, would lead to significant revenue. If we are unable to successfully implement our commercialization plans and drive adoption by patients and physicians of our potential future products through our sales, marketing, and commercialization efforts, then we will not be able to generate significant revenue which will have a material adverse effect on our business, results of operations, financial condition, and prospects.

If any product candidate for which we receive regulatory approval does not achieve broad market acceptance or coverage by third-party payors, our revenues may be limited.

The commercial success of any potential product candidates for which we obtain marketing approval from the FDA or other regulatory authorities will depend upon the acceptance of these products by physicians, patients, healthcare payors, and the medical community. Coverage and reimbursement of our approved product by third-party payors is also necessary for commercial success. The degree of market acceptance of any potential product candidates for which we may receive 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 side effects;
- limitations or warnings contained in a product's FDA-approved labeling or other regulator-approved labeling;
- the clinical indications for which the product is approved;
- availability and perceived advantages of alternative treatments;
- any negative publicity related to our or our competitors' products;
- the effectiveness of our or any current or future collaborators' sales, marketing, and distribution strategies;
- pricing and cost effectiveness;
- our ability to obtain sufficient third-party payor coverage or reimbursement; and
- the willingness of patients to pay out-of-pocket in the absence of third-party payor coverage.

Cost containment is a primary trend in the U.S. healthcare industry. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular 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. We cannot assure you that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Coverage and reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval. If coverage and reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop.

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 governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenue we are able to generate from the sale of the product in that country.

Our efforts to educate the medical community and third-party payors on the benefits of any of our potential product candidates may require significant resources and may never be successful. If our potential products do not achieve an adequate level of acceptance by physicians, third-party payors, and patients, physicians may not choose to utilize our product and we may not generate sufficient revenue from these products to become or remain profitable.

In order to market our proprietary products, we may choose to establish our own sales, marketing, and distribution capabilities, and if we have problems establishing these capabilities, the commercialization of our products would be impaired.

We may choose to establish our own sales, marketing, and distribution capabilities to market products to our target markets. Developing these capabilities will require significant expenditures on personnel and infrastructure. While we intend to market products that are aimed at a small patient population, we may not be able to create an effective sales force around even a niche market. In addition, some of our product candidates may require a large sales force to call on, educate, and support physicians and patients. We may desire in the future to enter into collaborations with one or more pharmaceutical companies to sell, market, and distribute such products, but we may not be able to enter into any such arrangement on acceptable terms, if at all. Any collaboration we do enter into may not be effective in generating meaningful product royalties or other revenues for us.

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

All biotechnology companies are subject to extensive, complex, costly, and evolving government regulation. For the U.S., these regulations are principally administered by the FDA and to a lesser extent by the United States Drug Enforcement Agency, or DEA, and state government agencies, as well as by various regulatory agencies in foreign countries where products or product candidates are being manufactured and/or marketed. The Federal Food, Drug and Cosmetic Act, the Controlled Substances Act, and other federal statutes and regulations, and similar foreign statutes and regulations, govern or influence the testing, manufacturing, packing, labeling, storing, record keeping, safety, approval, advertising, promotion, sale, and distribution of our products. Under these regulations, we may become subject to periodic inspection of our facilities, procedures, and operations and/or the testing of our product candidates and products by the FDA, the DEA, and other authorities, which conduct periodic inspections to confirm that we are in compliance with all applicable regulations. In addition, the FDA and foreign regulatory agencies conduct pre-approval and post-approval reviews and plant inspections to determine whether our systems and processes are in compliance with cGMP and other regulations. Following such inspections, the FDA or other agency may issue observations, notices, citations, and/or warning letters that could cause us to modify certain activities identified during the inspection. To the extent that we successfully commercialize any product, we may also be subject to ongoing FDA obligations and continued regulatory review with respect to manufacturing, processing, labeling, packaging, distribution, storage, advertising, promotion, and recordkeeping for the product. Additionally, we may be required to conduct potentially costly post-approval studies and report adverse events associated with our products to the FDA and other regulatory authorities. Unexpected or serious health or safety concerns would result in labeling changes, recalls, market withdrawals, or other regulatory actions.

The range of possible sanctions includes, among others, FDA issuance of adverse publicity, product recalls or seizures, fines, total or partial suspension of production and/or distribution, suspension of the FDA’s review of product applications, enforcement actions, injunctions, and civil or criminal prosecution. Any such sanctions, if imposed, could have a material adverse effect on our business, operating results, financial condition, and cash flows. Under certain circumstances, the FDA also has the authority to revoke previously granted drug approvals. Similar sanctions as detailed above may be available to the FDA under a consent decree, depending upon the actual terms of such decree. If internal compliance programs do not meet regulatory agency standards or if compliance is deemed deficient in any significant way, it could materially harm our business.

Moreover, the regulations, policies, or guidance of the FDA or other regulatory agencies may change and new or additional statutes or government regulations may be enacted that could prevent or delay regulatory approval of our product candidates or further restrict or regulate post-approval activities. If we are not able to achieve and maintain regulatory compliance, we may not be permitted to market our potential product candidates, which would adversely affect our ability to generate revenue and achieve or maintain profitability.

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.

Certain federal and state healthcare laws and regulations may be applicable to our business, including:

- the federal Anti-Kickback Statute, which prohibits, among other things, people from soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs;

- federal false claims laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;

- the Patient Protection and Affordable Care Act, or ACA, expands the government's investigative and enforcement authority and increases the penalties for fraud and abuse, including amendments to both the False Claims Act and the Anti-Kickback Statute to make it easier to bring suit under those statutes;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which prohibits executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters and which also imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;

- the Federal Food, Drug and Cosmetic Act, which among other things, strictly regulates drug product marketing, prohibits manufacturers from marketing drug products for off-label use and regulates the distribution of drug samples; and

- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which 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 often are not preempted by Health Insurance Portability and Accountability Act, or HIPAA, thus complicating compliance efforts.

Additionally, the compliance environment is changing, with more states, such as California and Massachusetts, mandating implementation of compliance programs, compliance with industry ethics codes, and spending limits, and

other states, such as Vermont, Maine, and Minnesota requiring reporting to state governments of gifts, compensation, and other remuneration to physicians. Under the ACA, pharmaceutical companies must record any transfers of value made to doctors and teaching hospitals and to disclose such data to the U.S. Department of Health and Human Services, or HHS. These laws all provide for penalties for non-compliance. The shifting regulatory environment, along with the requirement to comply with multiple jurisdictions with different compliance and/or reporting requirements, increases the possibility that a company may run afoul of one or more laws. It also may adversely affect:

- our ability to set a price we believe is fair for our products;
- our ability to generate revenues and achieve or maintain profitability;
- the availability of capital; and
- our ability to obtain timely approval of our products.

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 may be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business.

To the extent that we operate in a foreign country or any product we make is sold in a foreign country, we also may be subject to foreign laws and regulations.

If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly and have a significant adverse effect on us.

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

The clinical use of our product candidates exposes us to the risk of product liability claims. Any side effects, manufacturing defects, misuse, or abuse associated with our product candidates could result in injury to a patient or even death. In addition, a liability claim may be brought against us even if our product candidates merely appear to have caused an injury. Product liability claims may be brought against us by consumers, healthcare providers, pharmaceutical companies, or others coming into contact with our product candidates, among others.

Regardless of merit or potential outcome, product liability claims against us may result in, among other effects, the inability to commercialize our product candidates, impairment of our business reputation, withdrawal of clinical trial participants, and distraction of management's attention from our primary business. If we cannot successfully defend ourselves against product liability claims, we could incur substantial liabilities.

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

From time to time we may consider engaging in strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of products, product candidates or technologies. Any such transaction may require us to incur non-recurring or other charges, may increase our near and long-term expenditures, and may pose significant integration challenges or disrupt our management or business, which could adversely affect our operations and financial results. For example, these transactions may entail numerous operational and financial risks, including, among others, exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to develop acquired products, product candidates, or technologies, difficulty and cost in combining

the operations and personnel of any acquired businesses with our operations and personnel, and inability to retain key employees of any acquired businesses. The pursuit of such transactions could also create a distraction for management and entail increased expenses in connection with the pursuit, evaluation, and negotiation of such transactions. Further, such transactions could result in substantial dilution to our stockholders. Accordingly, although we may not choose to undertake or may not be able to successfully complete any transactions of the nature described above, the pursuit of such transactions, and any transactions that we do complete, could have a material adverse effect on our business, results of operations, financial condition, and prospects.

Our business and operations would 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 interruptions in our operations, and could result in a material disruption of our commercialization activities, development programs and our business operations, in addition to possibly requiring substantial expenditures of resources to remedy. The loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the commercialization of any potential product candidate could be delayed or prevented.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results. As a result, current and potential stockholders could lose confidence in our financial reporting, which would harm our business.

Effective internal controls are necessary for us to provide reliable financial reports. If we cannot provide reliable financial reports, our operating results could be misstated, our reputation may be harmed, and the trading price of our stock could be negatively affected. 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 remediate any significant deficiencies or material weaknesses or to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results, cause us to fail to meet our reporting obligations, or result in material misstatements in our financial statements or other public disclosures. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock.

Maintaining compliance with our obligations as a public company may strain our resources and distract management, and if we do not remain compliant our stock price may be adversely affected.

We are required to evaluate our internal control systems in order to allow management to report on our internal controls as required by Section 404 of the Sarbanes-Oxley Act of 2002, and our management is required to attest to the adequacy of our internal controls. The U.S. Financial Accounting Standards Board and International Accounting Standards Board have been working together since 2002 to achieve convergence of U.S. generally accepted accounting principles, or GAAP, and International Financial Reporting Standards, or IFRS. As GAAP and IFRS converge into a single set of high quality standards, implementing the new standards could require us to make adjustments to our previously reported financial statements and could require us to make significant investments in training, hiring, consulting, and information technology, among other investments. All of these and other reporting requirements and heightened corporate governance obligations that we face, or will face, will further increase the cost to us, perhaps substantially, of remaining compliant with our obligations under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and other applicable laws, including the Sarbanes-Oxley Act and the Dodd-Frank Act of 2010.

We may not be able to realize value from, or otherwise preserve and utilize, our net operating loss (NOL) carryforwards.

Significant equity restructuring often results in an Internal Revenue Section 382 ownership change that limits the future use of net operating loss (NOL) carryforwards and other tax attributes. The Company may have undergone such ownership changes, however, a Section 382 ownership change study has not been conducted; thus, our NOL carryforwards generated prior to the ownership change would be subject to annual limitations, which could reduce, eliminate, or defer the utilization of these losses. Further, the recognition and measurement of our NOL carryforwards

may include estimates and judgments by our management, and the Internal Revenue Service has not audited or otherwise validated the amount of our NOL carryforwards. Additionally, legislative changes could negatively impact our ability to use any tax benefits associated with our NOL carryforwards. If we put in place limitations on ownership of our common stock or adopt a shareholder rights plan to preserve our ability to use NOL carryforwards, this could deter potential buyers of our common stock and adversely impact the trading price of our common stock.

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

We have licensed certain technology and related assets that cover our current therapeutic methods. Patents for technology we have licensed are still pending in certain jurisdictions, and the patent family will expire between 2025 and 2027. Method-of-use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products off-label. Although off-label prescriptions may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to prevent or prosecute.

We have entered into a cross-license agreement for certain electroporation technology with Inovio. Under the terms of the cross-license agreement, Inovio granted to us a non-exclusive, worldwide license to certain electroporation patents held by Inovio. In exchange, we granted to Inovio an exclusive license to our acquired technology in a limited field of use. While we do not currently substantially rely on the intellectual property we have non-exclusively licensed from Inovio, our product candidates may, in the future, utilize this intellectual property. This license is non-exclusive and Inovio may use its technology to compete with us. As there are no restrictions on Inovio’s ability to license their technology to others, Inovio could license to others, including our competitors, the intellectual property rights covered by their license to us, including any of our improvements to the licensed intellectual property. Either party may terminate the cross-license agreement with 30 days’ notice; and, if either party were to terminate the cross-license agreement, they would no longer have the right to use intellectual property that is subject to the cross license.

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

If we choose to go to court to stop a third party from using the inventions claimed by our patents, that third party may ask the court to rule that the patents are invalid and/or should not be enforced. Even if we were successful in stopping the infringing activity, these lawsuits are expensive and could consume time and other resources. In addition, the court could decide that our patents are not valid and that we do not have the right to stop others from making, using, or selling the inventions claimed by the patents.

Additionally, even if the validity of these patents is upheld, the court could refuse to stop a third party's infringing activity on the ground that such activities do not infringe our patents. The U.S. Supreme Court has recently revised certain tests regarding granting patents and assessing the validity of patents, making it more difficult to obtain patents. As a consequence, issued patents may be found to contain invalid claims according to the newly revised standards. Some of our patents may be subject to challenge and subsequent invalidation or significant narrowing of claim scope in a reexamination proceeding, or during litigation, under the revised criteria.

Third parties may claim that we infringe their proprietary rights and may prevent us from manufacturing and selling some of our products.

The manufacture, use and sale of new products that are the subject of conflicting patent rights have been the subject of substantial litigation in the biotechnology industry relating to the validity and infringement of patents or proprietary rights of third parties. Litigation may be costly and time-consuming and could divert the attention of our management and technical personnel. In addition, if we infringe on the rights of others, we could lose our right to develop, manufacture, or market products or could be required to pay monetary damages or royalties to license proprietary rights from third parties. Although the parties to patent and intellectual property disputes in the biotechnology industry have often settled their disputes through licensing or similar arrangements, the costs associated with these arrangements may be substantial and could include ongoing royalties. Furthermore, we cannot be certain that the necessary licenses would be available to us on commercially reasonable terms or at all. These risks may be amplified by our size relative to many of our competitors. As a result, an adverse determination in a judicial or administrative proceeding or failure to obtain necessary licenses could prevent us from manufacturing and selling our products, and could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Our common stock has low trading volume and the price of our common stock has been, and will likely continue to be, highly volatile.

Trading of our common stock is frequently highly volatile, with low trading volume. We have experienced, and are likely to continue experiencing, significant fluctuations in the stock price and trading volume. There is no assurance that a sufficient market will develop in our stock, in which case it could be difficult for stockholders to sell their stock. Furthermore, the volatility of our stock price could negatively impact our ability to raise capital or acquire businesses or technologies.

In addition to the risks and uncertainties described in this section of this Annual Report, other factors affecting the trading price and trading volume of our common stock may include:

- adverse research and development or clinical trial results;
- conducting open-ended clinical trials which could lead to results (success or setbacks) being obtained by the public prior to a formal announcement by us;
- our inability to obtain additional capital;
- announcement that the FDA denied our request to approve our products for commercialization in the United States, or similar denial by other regulatory bodies which make independent decisions outside the United States;
- potential negative market reaction to the terms or volume of any issuance of shares of our stock to new investors or service providers;
- sales of substantial amounts of our common stock, or the perception that substantial amounts of our common stock will be sold, by our stockholders in the public market;
- declining working capital to fund operations, or other signs of apparent financial uncertainty;
- significant advances made by competitors that adversely affect our potential market position; and
- the loss of key personnel and the inability to attract and retain additional highly-skilled personnel.

If we issue additional shares in the future, our existing stockholders will be diluted.

Our articles of incorporation authorize the issuance of up to 160,000,000 shares of common stock with a par value of $0.0001 per share. In addition to capital raising activities, other possible business and financial uses for our authorized common stock include, without limitation, future stock splits, acquiring other companies, businesses, or products in exchange for shares of common stock, issuing shares of our common stock to partners in connection with strategic alliances, attracting and retaining employees by the issuance of additional securities under our various equity compensation plans, or other transactions and corporate purposes that our Board of Directors deems are in the Company's best interest. Additionally, shares of common stock could be used for anti-takeover purposes or to delay or prevent changes in control or management of the Company. We cannot provide assurances that any issuances of common stock will be consummated on favorable terms or at all, that they will enhance stockholder value, or that they will not adversely affect our business or the trading price of our common stock. The issuance of any such shares will reduce the book value per share and may contribute to a reduction in the market price of the outstanding shares of our common stock. If we issue any such additional shares, such issuance will reduce the proportionate ownership and voting power of all current stockholders. Further, such issuance may result in a change of control of our company.

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

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 offerings or who are affiliates, or the perception that such sales may occur, could depress the price of our common stock.

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

Subsequent to July 31, 2016 through the date of filing this Report, we have issued an aggregate of 1,105,593 shares of our common stock related to the exercise of warrants. In addition, we have outstanding (i) options to purchase 3,507,671 shares of common stock, (ii) warrants to purchase 11,903,693 shares of our common stock, including Series B Warrants to purchase 3,339,000 shares of common stock at an exercise price of $0.01 per share, and (iii) 655,000 restricted stock units. In addition, we have as of October 7, 2016, 18,908 shares reserved for future issuance under our 2011 Stock Incentive Plan and 482,211 shares have been reserved for future issuance under our 2015 Employee Stock Purchase Plan. The exercise of options and warrants, the vesting and settlement of restricted stock units, the issuance of additional shares of common stock or other awards under our 2011 Stock Incentive Plan and the sale of any resulting shares of our common stock in connection with the foregoing, could have an adverse effect on the market for our common stock, including the price that an investor could obtain for their shares. Investors may experience dilution

in the net tangible book value of their investment upon the exercise of outstanding options and warrants or the vesting of restricted stock units granted under our stock option plans, and options,restricted stock units and warrants that may be granted or issued in the future. In addition, in future periods, we may elect to reduce the exercise price of outstanding warrants as a means of providing additional financing to us.

If our common stock is delisted from The Nasdaq Capital Market or we are found noncompliant with Nasdaq regulations, our stock's market price and liquidity could be negatively impacted.

Our listing on The Nasdaq Capital Market ("NASDAQ") is contingent upon our meeting all the continued listing requirements. If we are found noncompliant by NASDAQ, or if our common stock is delisted from NASDAQ, our stock price could be negatively impacted, our stock's liquidity could be reduced, and our ability to raise capital in the future may be limited.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Description of Property

On December 31, 2014, we entered into a lease agreement for approximately 34,000 rentable square feet located at 5820 Nancy Ridge Drive, San Diego, California to serve as our new corporate headquarters and research and development laboratory. The term of the lease commenced on October 19, 2015, our move-in date, and expires 120 months after commencement. Base rent is at $2.65 per rentable square feet, subject to a 3% rate increase on each annual anniversary of the first day of the first full month during the lease term. We received a 12-month rent abatement for our first year of occupancy. In addition, we are required to share in certain operating expenses and we delivered a security deposit of approximately $90,000 in conjunction with signing the lease. This lease has not been sublet or renegotiated and we expect to have continued obligations under this lease for the duration of the lease term.

We have also entered into lease arrangements for office space in San Jose, California to support our legal department and we have lease arrangements for vivarium space to support our discovery research.

We believe our current facilities will be adequate to meet our operating needs for the foreseeable future. Should we need additional space, we currently do not foresee any significant difficulties in obtaining any required 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 to any proceedings the adverse outcome of which, individually or in the aggregate, would have a material adverse effect on our financial condition or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Trading Information

Our common stock had been quoted on OTCQB under the symbol ONCS from April 8, 2011 through May 29, 2015. On May 18, 2015, the Company effected a reverse stock split, in which each 20 shares of issued and outstanding common stock were combined into and became one share of common stock and no fractional shares were issued. On May 29, 2015, our common stock began trading on The NASDAQ Stock Market LLC's NASDAQ Capital Market tier, under the symbol ONCS.

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

The following table sets forth the range of reported high and low closing bid quotations for our common stock for the fiscal quarters indicated as reported on the NASDAQ and OTCQB. The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions.

	High	Low
Fiscal 2015		
First Quarter ended October 31, 2014*	$13.00	$7.20
Second Quarter ended January 31, 2015*	$13.20	$7.00
Third Quarter ended April 30, 2015*	$8.60	$5.20
Fourth Quarter ended July 31, 2015*	$8.40	$4.40
Fiscal 2016		
First Quarter ended October 31, 2015	$6.94	$3.37
Second Quarter ended January 31, 2016	$4.42	$1.36
Third Quarter ended April 30, 2016	$3.49	$1.43
Fourth Quarter ended July 31, 2016	$2.05	$1.43

*High and low closing bid quotations have been adjusted for the 1:20 reverse stock split

Our common stock has low trading volume and any reported sale prices may not be a true market-based valuation of our common stock.

As of October 7, 2016, there were 33 holders of record of our common stock, not including stockholders whose shares are held “in street name.”

Dividends

We have never declared or paid any cash dividends or distributions on our capital stock. We currently intend to retain our 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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and the related notes and other financial information appearing elsewhere in this Annual Report. Except for the historical information contained herein, the following discussion contains forward-looking statements which are subject to known and unknown risks, uncertainties and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. We discuss such risks, uncertainties and other factors throughout this Report and specifically under Item 1A of Part I of this Report, "Risk Factors."

Company Overview

We are a biotechnology company with a proprietary immunotherapy platform (ImmunoPulse®) designed to overcome tumor immune tolerance through electroporation-based local delivery of immune-modulating therapeutic product candidates intended to treat a wide range of tumor types. Our technology encompasses intellectual property relating to our immuno-oncology product portfolio which consists of ImmunoPulse® delivery technology (an electroporation delivery device) that we use in combination with our potential therapeutic product candidates, including DNA plasmids that encode for immunologically active agents, to deliver the therapeutic directly into the tumor and promote an inflammatory response against the cancer. This unique therapeutic modality is intended to reverse the immunosuppressive microenvironment in the tumor and engender a systemic anti-tumor response against untreated tumors in other parts of the body. Our electroporation delivery device consists of an electrical pulse generator and disposable applicators, which can be adapted to treat different tumor types and our lead product candidate, ImmunoPulse® IL-12, is ideal for combination with other therapies, such as anti-PD-1/PD-L1 therapies.

ImmunoPulse® IL-12, consists of a plasmid construct encoding the proinflammatory cytokine IL-12, that is delivered into the tumor through in vivo electroporation, which enhances local delivery and uptake of the therapeutic directly into the tumor. We have completed two Phase 2 studies, OMS-I100 in metastatic melanoma and OMS-I110 in Merkel Cell Carcinoma ("MCC"). The OMS-I100 clinical study demonstrated that multiple treatments of ImmunoPulse® IL-12 were safe and well tolerated, with no treatment-limiting toxicities. This lack of evidence of systematic toxicities led to the OMS-I100 Addendum study, in which the OMS-I100 protocol was amended to enroll up to an additional 30 patients in order to continue to acquire clinical and immune correlational data. Enrolllment in OMS-I100 Addendum

is complete. The data from the OMS-I100 metastatic melanoma clinical trial suggest that ImmunoPulse® IL-12 may prime and enhance response rates to PD-1/PD-L1 blockade and exploratory biomarker analyses from the OMS-I110 MCC clinical trial showed a trend toward increased intratumoral expression of a variety of genes associated with inflammation, which we believe promotes tumor immunogenicity.

The safety and efficacy of intratumoral electroporation with plasmid IL-12 is also being tested in other cancer indications. We have an ongoing pilot study, OMS-I140 in triple negative breast cancer ("TNBC"), which is designed to assess whether ImmunoPulse® IL-12 increases TNBC tumor immunogenicity through increases in cytotoxic tumor-infiltrating lymphocytes ("TILs"). This study is open for enrollment and ongoing. We also have a Phase 2 clinical study in head and neck squamous cell carcinoma ("HNSCC") in which one patient continues to receive treatment; otherwise the HNSCC clinical trial is no longer enrolling patients.

In addition to studying ImmunoPulse® IL-12 as monotherapy, in collaboration with the University of California, San Francisco, (the sponsor of the study) we are investigating the safety and efficacy of ImmunoPulse® IL-12 in combination therapy. CC-15852 is an open label Phase 2 clinical trial of ImmunoPulse® IL-12 plus KEYTRUDA® ("pembrolizumab") in patients with "low TIL", advanced, metastatic melanoma ("combination IST"). This investigator-initated study is enrolling and ongoing.

We began our operations as a biotechnology company in March 2011, following our completion of the acquisition of certain technology and related assets from Inovio Pharmaceuticals, Inc. ("Inovio") pursuant to an asset purchase agreement dated March 14, 2011. On May 18, 2015, we effected a reverse stock split, pursuant to which each 20 shares of issues and outstanding common stock were combined into and became one share of common stock. The accompanying financial statements and related disclosures give retroactive effect to the reverse stock split for the periods presented related to our fiscal period ended July 31, 2015. On May 29, 2015, our common stock began trading on The NASDAQ Stock Market LLC's NASDAQ Capital Market tier, under the symbol ONCS. Prior to operating as a biotechnology company, we were incorporated under the laws of the State of Nevada on February 8, 2008 under the name of Netventory Solutions, Inc.

Recent Equity Financings

May 2016 Registered Direct Offering

On May 26, 2016 our stock price closed at $1.62 and we closed an “at-the-market registered direct offering” (the “May 2016 Offering”) with a single healthcare-dedicated institutional fund for the purchase of (i) 665,049 shares of our common stock, (ii) Series B Warrants to purchase 4,844,593 shares of our common stock at an exercise price of $0.01, and (iii) Series A Warrants to purchase up to an aggregate of 5,509,642 shares of common stock at an exercise price of $1.69 per share with a term of nine (9) years. The warrants are immediately exercisable on the date of issuance. At the closing, the placement agents were also issued warrants to purchase an aggregate of up to five percent (5%) of the aggregate number of shares of common stock and Series B Warrants sold in this offering, or 275,482 shares. The placement agent warrants have an exercise price of $2.26875, are immediately exercisable, and expire on May 24, 2021. The investor paid a purchase price of $1.815 per share of common stock and an accompanying Series A Warrant to purchase one share of common stock and $1.805 per Series B Warrant and accompanying Series A warrant to purchase one share of our common stock. The gross proceeds of the offering were $9.9 million. Net proceeds, after deducting the placement agent’s fee, financial advisory fees, and other estimated offering expenses payable by us, were approximately $9.2 million. We intend to use proceeds from the offering for general corporate purposes, including clinical trial expenses and research and development expenses.

November 2015 Public Offering

On November 9, 2015, we closed a registered direct offering of an aggregate of 2,142,860 shares of our common stock at a purchase price of $3.50 per share and warrants to purchase an aggregate of 1,071,430 shares of our common stock (the “November 2015 Offering”). The warrants have an exercise price of $4.50 per share, are exercisable on May 9, 2016 and expire on May 9, 2021. The gross proceeds to us from the November 2015 Offering was approximately $7.5 million. After deducting for fees and expenses, the aggregate net proceeds from the sale of the common stock in the November 2015 Public Offering were approximately $6.9 million. In connection with the November 2015 Offering, we paid placement agent fees consisting of (i) a cash fee equal to six percent (6%) of the gross proceeds of the offering, as well as a non-accountable expense allowance equal to one percent (1%) of the gross proceeds, and (ii) warrants to purchase up to an aggregate of five percent (5%) of the aggregate number of shares of common stock sold in the offering, or 107,143 shares of our common stock. The warrants issued to the placement agent are exercisable at an exercise price of $4.375 per share, have a term of five (5) years became exercisable on May 9, 2016, and expire on November 9, 2020.

Critical Accounting Policies

Accounting for Long-Lived Assets / Intangible Assets

We assess the impairment of long-lived assets, consisting of property and equipment, and finite-lived intangible assets, whenever events or circumstances indicate that the carry value may not be recoverable. Examples of such circumstances include: (1) loss of legal ownership or title to an asset; (2) significant changes in our strategic business objectives and utilization of the assets; and (3) the impact of significant negative industry or economic trends. If a change were to occur in any of the above-mentioned 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. The factors used to evaluate the future net cash flows, while reasonable, require a high degree of judgment and the results could vary if the actual results are materially different than the forecasts. In addition, we base useful lives and amortization or depreciation expense on our subjective estimate of the period that the assets will generate revenue or otherwise be used by us. If such 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.

Stock-Based Compensation

We grant equity-based awards under our share-based compensation plan and outside of our stock-based compensation plan. We estimate the fair value of stock option awards using the Black-Scholes option valuation model. This fair value is then amortized over the requisite service periods of the awards. 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. We estimate the fair value of restricted stock unit awards based on the closing price of our common stock at the date of grant. Stock-based compensation expense is based on awards ultimately expected to vest, and therefore is reduced by forfeitures. Changes in assumptions used under the Black-Scholes option valuation model could materially affect our net loss and net loss per share.

We have issued equity for services or as consideration within contractual agreements. Stock-based compensation expense related to such equity issuances are based on the closing price of our stock on the date the liability is incurred, with the stock-based compensation adjusted on the date of issuance, based on our stock price on the issuance date.

Recent Accounting Pronouncements

Information regarding recent accounting pronouncements is contained in Note 2 to the Financial Statements, included elsewhere in this report.

Results of Operations

Comparison of Fiscal Years Ended July 31, 2016 and 2015

The audited financial data for the fiscal year ended July 31, 2016 and the audited financial data for the fiscal year ended July 31, 2015 are presented in the following table and the results of these two periods are used in the discussion thereafter.

	July 31, 2016 ($)	July 31, 2015 ($)	Increase/ (Decrease) ($)	Increase/ (Decrease) %	
Revenue	—	—	—	—	
Operating expenses					
Research and development	14,741,694	13,132,898	1,608,796	12	%
General and administrative	12,144,358	8,108,244	4,036,114	50	%
Loss from operations	(26,886,052)	(21,241,142)	5,644,910	27	%
Income tax provision	2,462	1,969	493	25	%
Net loss	(26,888,514)	(21,243,111)	5,645,403	27	%

Research and Development Expenses

Our research and development expenses primarily include expenses related to the development of our therapeutic product candidates, the advancement of electroporation technologies and discovery research for our product pipeline. These expenses also include certain clinical study expenses, intellectual property prosecution and maintenance costs,

and quality assurance expenses. The expenses primarily consisted of salaries, benefits, stock-based compensation costs, outside design and consulting services, laboratory supplies, contract research organization expenses and clinical study supplies. We expense all research and development costs in the periods in which they are incurred.

During our fiscal year ending July 31, 2016 (“Fiscal 2016”), of the $14.7 million of research and development expenses, we incurred (exclusive of personnel costs), engineering costs of approximately $2.8 million, clinical costs of approximately $3.1 million and discovery research costs of approximately $3.8 million.

The approximately $1.6 million increase in research and development expenses for the fiscal year ended July 31, 2016 as compared to the fiscal year ended July 31, 2015 (“Fiscal 2015”) was primarily the result of (i) increased clinical trial expenses of $1.2 million due to (a) the progression of our melanoma extension study which has completed enrollment and (b) progression of the combination IST which continues to enroll patients and is on-going, (ii) increased outside services expenses of approximately $0.9 million related to sponsored research, clinical development consulting and engineering consulting to assist in the research of novel electroporation technologies, combination studies and to facilitate the planning and development of our next generation electroporation device and (iii) increased expenses of approximately $0.9 million related to facility costs as we relocated our labs to our new corporate headquarters, offset by (i) a reduction in intangibles amortization of approximately $0.5 million due to our patents being fully amortized, (ii) a decrease of approximately $0.5 million in engineering and discovery research supplies spend due to moving our labs and refocusing our discovery research priorities, (iii) a decrease of approximately $0.3 million in salary-related costs and (iv) a reduction of $0.1 million in fees and licenses primarily related to patent acquisition. We expect research and development to continue to account for a significant portion of our total expenses in the future as we continue to to develop our product pipeline.

We expect to use our current funds for the advancement of our clinical and R&D milestones. We anticipate our spending on clinical trials and CMC to increase as we continue to define and execute our registration pathway for metastatic melanoma and we anticipate our spending on discovery research and next-generation electroporation technologies to increase as we further pursue novel immuno-therapies and future product candidates.

General and Administrative

Our general and administrative expenses include expenses related to our executive, accounting and finance, compliance, information technology, legal, facilities, human resource, administrative and corporate communications activities. These expenses consist primarily of salaries, benefits, stock-based compensation costs, independent auditor costs, legal fees, consultants, travel, insurance, and public company expenses, such as stock transfer agent fees and listing fees in connection with obtaining our listing on the NASDAQ Capital Market.

The approximately $4.0 million increase in general and administrative expenses for Fiscal 2016, as compared to Fiscal 2015, was primarily the result of (i) an increase in salary-related costs of $0.4 million due to hiring additional personnel to support the growth of operations and non-cash stock-based compensation expense of approximately $3.5 million due to the issuance of restricted stock units and stock option grants to senior management and the Board, (ii) an increase of $0.4 million in overall operational expenses primarily consisting of rent, insurance and internet costs, and (iii) a $0.2 million increase in our audit costs primarily related to internal controls attestation, offset by (i) a decrease of approximately $0.3 million in outside services related primarily to corporate communications and corporate development due to performing these functions in-house, and (ii) a decrease of $0.2 million in conference fees.

We expect to use our current funds to support our corporate infrastructure. We anticipate our corporate headquarters' facility costs to increase based on the terms of our long-term lease agreement and we expect our investor and public relations spend to increase as we continue to grow our institutional shareholder base and keep our shareholders informed.

Liquidity and Capital Resources

Our primary uses of cash have been to finance research and development activities focused on the discovery, the design and the development of innovative and proprietary medical approaches for the treatment of cancer and to strengthen our corporate infrastructure to enable commercialization of potential product candidates.

Working Capital

Our working capital as of July 31, 2016 and 2015 is summarized as follows:

	At July 31, 2016 ($)	At July 31, 2015 ($)
Current assets	29,417,408	33,567,981
Current liabilities	3,466,251	2,861,951
Working capital	25,951,157	30,706,030

Current Assets

Current assets as of July 31, 2016 decreased to approximately $29.4 million from approximately $33.6 million as of July 31, 2015. This decrease was primarily due to the use of cash to fund operations during Fiscal 2016, net of the proceeds received from the November 2015 and May 2016 Public Offerings.

Current Liabilities

Current liabilities as of July 31, 2016 increased to approximately $3.5 million from approximately $2.9 million as of July 31, 2015. This increase was primarily due to an increase in accrued liabilities which was primarily a result of increased enrollment in our melanoma extension and our combination IST clinical trials.

Cash Flow

Cash Flow Used in Operating Activities

Net cash used in operating activities for Fiscal 2016 was approximately $17.8 million, as compared to approximately $17.7 million for Fiscal 2015. Operating activities encompassing research and development and general and administration efforts generated a net loss of $26.9 million, which included non-cash expenses (stock-based compensation and depreciation) and changes in working capital due to the timing of payment of liabilities and the utilization of prepaid assets. Overall our operational cash use increased approximately by $0.1 million from the same period in Fiscal 2015 primarily due to increased facilities costs.

Cash Flow Used in Investing Activities

Net cash used in investing activities for Fiscal 2016 was approximately $1.6 million, as compared to approximately $1.4 million for Fiscal 2015. Investing activities resulted in cash outflows for leashold improvements of $0.1 million and the purchase of property and equipment of $1.5 million. Overall our investing cash use increased by approximately $0.2 million from the same period in Fiscal 2015 primarily due to the acquisition of property and equipment for our new corporate headquarters and lab facility.

Cash Flow Provided by Financing Activities

Net cash provided by financing activities was approximately $16.1 million for Fiscal 2016, as compared to approximately $13.3 million for Fiscal 2015. The net cash provided by financing activities primarily related to the sale of common stock and warrants from our November 2015 Offering and May 2016 Offering. Overall cash provided by financing activities increased approximately $2.8 million due to the net proceeds received from our November 2015 Offering and May 2016 Offering were greater than the net proceeds received from the financing in Fiscal 2015.

Cash Requirements

Our primary objectives for the next twelve-month period are to continue the advancement of our operational milestones, which includes developing a registration pathway for metastatic melanoma (ImmunoPulse® IL-12 in combination with anti-PD-1/PD-Ll), expanding our product pipeline and advancing our device gene electro-transfer technologies for immunotherapy. We will also continuously search for industry experts to expand our management team and further strengthen our company. In addition, we expect to pursue raising sufficient capital to fund our operations and to acquire and develop additional assets and technology consistent with our business objectives.

We currently estimate our operating expenses and working capital requirements for the fiscal year ending July 31, 2017 (“Fiscal 2017”) to be approximately $22.3 million, although we may modify or deviate from our estimates and it is likely that our actual results for certain categories of operating expenses and working capital requirements will vary from the estimates as set forth in the table below (in millions).

Cash Requirements for Fiscal 2017	Amount
Product development	$ 12.3
Employee compensation	5.9
General and administration	3.8

Professional services fees	0.3
Total	$ 22.3

As of July 31, 2016, we had cash and cash equivalents of approximately $29 million. We expect these funds to be sufficient to allow us to continue to operate our business for at least the next 12 months.

During Fiscal 2016, we received a minimal amount of cash related to the exercise of warrants. If the holders of our Series A Warrants and Series B Warrants were to exercise all of the Series A Warrants and Series B Warrants in full on a cash basis, we would receive an aggregate of approximately $9.4 million in proceeds. If the holders of all of our other outstanding warrants to purchase our common stock were to exercise their remaining outstanding warrants in full on a cash basis, we would receive an aggregate of approximately $25.1 million in proceeds. However, the warrant holders may choose not to exercise any of the warrants they hold, may choose to net exercise their warrants as provided in such warrants under certain limited circumstances, or may choose to exercise only a portion of the warrants issued. As a result, we may never receive proceeds from the exercise of such warrants.

Since the inception of our current business in March 2011, we have funded our operations primarily through equity financings, and we expect to continue to pursue capital-raising transactions in future periods. If we obtain additional financing by issuing equity securities or convertible debt, our existing stockholders' ownership will be diluted. Obtaining commercial loans, assuming those loans would be available, will increase our liabilities and future cash commitments and may subject us to financial covenants and other restrictions applicable to our business. We may be unable to maintain operations at a level sufficient for investors to obtain a return on their investments in our common stock. Further, we may continue to be unprofitable.

Off-Balance Sheet Arrangements

We have no significant 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 expenditures, or capital resources that is material to stockholders.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

We are exposed to changes in interest rates primarily from our certificate of deposit and cash held in interest bearing U.S. savings accounts. Accordingly, we believe that we are not subject to any material risks arising from changes in interest rates or foreign currency exchange rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is incorporated by reference to our Financial Statements and Consolidated Financial Statements and the Report of 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 must reflect 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 conducted an evaluation, with the participation of our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as of July 31, 2016. Based on the foregoing evaluation, our principal executive officer and principal financial officer concluded that, as of July 31, 2016, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act, for our company. With the participation of our Chief Executive Officer and Chief Financial Officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of July 31, 2016. 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. Management has concluded that our internal control over financial reporting was effective as of July 31, 2016, based on those criteria.

Changes in Internal Control Over Financial Reporting

None

ITEM 9B. OTHER INFORMATION

None

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 is hereby incorporated by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year ended July 31, 2016.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is hereby incorporated by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year ended July 31, 2016.

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

The information required by this Item 12 is hereby incorporated by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year ended July 31, 2016.

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

Director independence and other information required by this Item 13 is hereby incorporated by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year ended July 31, 2016.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item 14 is hereby incorporated by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year ended July 31, 2016.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)(1) Financial Statements

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

2. Financial Statement Schedules

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

3. Exhibits

The Exhibits listed in the Exhibit Index, which appears immediately following the signature page and is incorporated herein by reference, are filed or incorporated by reference as part of this Annual Report on Form 10-K.

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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/ Punit Dhillon*
Punit Dhillon
President and Chief Executive Officer

Date: October 13, 2016

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/ Punit Dhillon Punit Dhillon	President, Chief Executive Officer and Director (*Principal Executive Officer*)	October 13, 2016
/s/ Richard Slansky Richard Slansky	Chief Financial Officer (*Principal Financial and Accounting Officer*)	October 13, 2016
/s/ James DeMesa Dr. James DeMesa	Director	October 13, 2016
/s/ Avtar Dhillon Dr. Avtar Dhillon	Director	October 13, 2016
/s/ Anthony Maida, III Dr. Anthony Maida, III	Director	October 13, 2016

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

OncoSec Medical Incorporated

We have audited the accompanying balance sheets of OncoSec Medical Incorporated (the "Company") as of July 31, 2016 and 2015, and the related statements of operations, stockholders' equity, and cash flows for each of the years in the two year period ended July 31, 2016, and the related notes to the financial statements. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of OncoSec Medical Incorporated as of July 31, 2016 and 2015, and the results of its operations and its cash flows for each of the years in the two year period ended July 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

/s/ Mayer Hoffman McCann P.C.
San Diego, California
October 13, 2016

OncoSec Medical Incorporated

Balance Sheets

	July 31, 2016	July 31,2015
Assets		
Current assets		
Cash and cash equivalents	$28,746,224	$32,035,264
Prepaid expenses	656,434	1,511,587
Other current assets	14,750	21,130
Total Current Assets	29,417,408	33,567,981
Property and equipment, net	2,799,930	1,807,982
Other long-term assets	189,309	214,127
Total Assets	$32,406,647	$35,590,090
Liabilities and Stockholders' Equity		
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	$3,223,327	$2,360,505
Accrued compensation related	242,924	501,446
Total Current Liabilities	3,466,251	2,861,951
Other long-term liabilities	887,292	32,518
Total Liabilities	4,353,543	2,894,469
Commitments and Contingencies (Note 9)		
Stockholders' Equity		
Common stock authorized - 160,000,000 common shares with a par value of $0.0001, common stock issued and outstanding — 18,036,263 and 14,820,854 common shares as of July 31, 2016 and July 31, 2015, respectively (1)	25,269	24,947
Additional paid-in capital	88,233,965	71,572,714
Warrants issued and outstanding — 12,859,286 and 1,895,102 warrants as of July 31, 2016 and July 31, 2015, respectively (1)	13,288,527	7,704,103
Accumulated deficit	(73,494,657)	(46,606,143)
Total Stockholders' Equity	28,053,104	32,695,621
Total Liabilities and Stockholders' Equity	$32,406,647	$35,590,090

(1) See Note 1, "Reverse Stock Split"

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

OncoSec Medical Incorporated

Statements of Operations

	Year Ended July 31, 2016	Year Ended July 31, 2015
Revenue	$—	$—
Expenses:		
Research and development	14,741,694	13,132,898
General and administrative	12,144,358	8,108,244
Loss from operations	(26,886,052)	(21,241,142)
Provision for income taxes	2,462	1,969
Net loss	$(26,888,514)	$(21,243,111)
Basic and diluted net loss per common share (1)	$(1.63)	$(1.67)
Weighted average shares used in computing basic and diluted net loss per common share (1)	16,514,737	12,708,974

(1) See Note 1, “Reverse Stock Split”

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

OncoSec Medical Incorporated

Statements of Stockholders' Equity

	Common Stock		Additional Paid-In	Warrants		Accumulated	Total Stockholders'
	Shares (1)	Amount	Capital	Shares (1)	Amount	Deficit	Equity
Balance, July 31, 2014	12,233,203	$24,463	$56,081,475	1,882,399	$7,325,152	$(25,363,032)	$38,068,058
Exercise of common stock warrants	110,752	222	967,945	(110,752)	(192,917)	—	775,250
Exercise of common stock options	308	1	1,737	—	—	—	1,738
Common stock issued for services	7,500	15	57,735	—	—	—	57,750
Public offering on June 9, 2015, net of issuance costs of $1,091,794	2,469,091	246	11,916,093	123,455	571,868	—	12,488,207
Stock-based compensation expense	—	—	2,547,729	—	—	—	2,547,729
Net loss	—	—	—	—	—	(21,243,111)	(21,243,111)
Balance, July 31, 2015	14,820,854	24,947	$71,572,714	1,895,102	$7,704,103	$(46,606,143)	$32,695,621
Exercise of common stock warrants	400,000	40	9,960	(600,000)	(6,000)	—	4,000
Common stock issued for services	7,500	1	55,386	—	—	—	55,387
Public offering on November 9, 2015, net of issuance costs of $613,915	2,142,860	214	5,047,405	1,178,573	1,838,476	—	6,886,095
Public offering on May 26, 2016, net of issuance costs of $767,700	665,049	67	4,468,484	10,629,717	4,715,304	—	9,183,855
Cancellation of expired warrants	—	—	963,356	(244,106)	(963,356)	—	—
	—	—	6,116,660	—	—	—	6,116,660

Stock-based compensation expense							
Net loss	—	—	—	—	—	(26,888,514)	(26,888,514)
Balance, July 31, 2016	18,036,263	$25,269	$88,233,965	12,859,286	$13,288,527	$(73,494,657)	$28,053,104

(1) See Note 1, “Reverse Stock Split”

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

OncoSec Medical Incorporated

Statements of Cash Flows

	Year Ended July 31, 2016	Year Ended July 31, 2015
Operating activities		
Net loss	$(26,888,514)	$(21,243,111)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	355,583	664,596
Stock-based compensation	6,116,660	2,547,729
Stock-based compensation related to stock issuance liability in connection with a contractual agreement	—	55,500
Common stock issued for services	55,387	57,750
Loss on disposal of property and equipment	203,196	4,325
Changes in operating assets and liabilities:		
(Increase) decrease in prepaid expenses	855,152	(1,068,699)
(Increase) decrease in other current	6,380	2,465
(Increase) decrease in other long-term assets	24,818	(187,442)
(Decrease) increase in accounts payable and accrued liabilities	861,634	1,068,652
(Decrease) increase in accrued compensation	(258,522)	459,592
(Decrease) increase in other long-term liabilities	854,773	(12,027)
(Decrease) Increase in accrued income taxes	(800)	(800)
Net cash used in operating activities	(17,814,253)	(17,651,470)
Investing activities		
Purchases of property and equipment	(1,470,635)	(1,412,217)
Leasehold improvements	(80,102)	(18,938)
Net cash used in investing activities	(1,550,737)	(1,431,155)
Financing activities		
Proceeds from issuance of common stock and warrants	17,451,565	13,580,001
Payment of financing and offering costs	(1,381,615)	(1,091,794)
Proceeds from exercise of warrants and stock options	6,000	776,988
Net cash provided by financing activities	16,075,950	13,265,195
Net increase (decrease) in cash	(3,289,040)	(5,817,430)
Cash and cash equivalents, at beginning of year	32,035,264	37,852,694
Cash and cash equivalents, at end of year	$28,746,224	$32,035,264
Supplemental disclosure for cash flow information:		
Cash paid during the period for:		
Interest	$—	$—
Income taxes	$2,462	$1,969
Noncash investing and financing transaction:		
Fair value of placement agent warrants issued in the public offerings	$536,909	$571,868

Noncash expiration of March 2011 and June 2011 warrants	$963,356	$—

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

NOTES TO FINANCIAL STATEMENTS

Note 1—Nature of Operations and Basis of Presentation

OncoSec Medical Incorporated (the "Company") began its operations as a biotechnology company in March 2011, following its completion of the acquisition of certain technology and related assets from Inovio Pharmaceuticals, Inc. ("Inovio") pursuant to an asset purchase agreement dated March 14, 2011. The Company has not produced any revenues, nor has it commenced planned principal operations. The Company's technology includes intellectual property relating to certain delivery technologies including ImmunoPulse®, an electroporation delivery device that is used in combination with the Company's therapeutic product candidates, including DNA plasmids that encode for immunologically active agents, to deliver the therapeutic directly into the tumor and promote an inflammatory response against the cancer. 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's core technology the ImmunoPulse® platform is a unique therapeutic modality intended to reverse the immunosuppressive microenvironment in the tumor and engender a systemic anti-tumor response against untreated tumors in other parts of the body. The Company's lead product candidate, ImmunoPulse® IL-12, consists of a proprietary electroporation delivery device (an electrical pulse generator and disposable applicators) and DNA-encoded interleukin-12 ("IL-12") which can be adapted to treat different tumor types and can be used in combination with anti-PD-1/PD-L1 therapies to drive tumor infiltrating lymphocytes and stimulate anti-cancer immune activity.

The Company recently completed enrollment in a Phase 2 clinical trial of ImmunoPulse® IL-12 in patients with metastatic melanoma and is in collaboration with the University of California, San Francisco ("UCSF"), in which UCSF is the sponsor of a Phase 2 clinical trial of ImmunoPulse® IL-12 plus pembrolizumab (KEYTRUDA®) in patients with advanced, metastatic melanoma. In addition, the Company has a biomarker-focused pilot study in triple negative breast cancer open for enrollment. The Company's research and development activities are subject to significant risks and uncertainties, including potentially failing to secure additional funding to continue the advancement of its product candidates, obtain FDA approval to market and sell one or more of its product candidates and commercialize its product candidates before similar or competing technology is developed by competitors.

On October 28, 2014, OncoSec Medical Therapeutics Incorporated which was incorporated in Delaware on July 2, 2010 and acquired on June 3, 2011 for a total purchase price of $1,000, was dissolved. There were no significant transactions related to this subsidiary since its inception. The Company currently has no subsidiaries.

Reclassifications

Certain amounts in the balance sheet for the year ended July 31, 2015 and the statement of cash flows for the twelve-month period ended July 31, 2015 have been reclassified to conform the presentation of other long-term liabilities to the presentation at July 31, 2016.

Reverse Stock Split

Effective May 18, 2015, the Company implemented a reverse stock split pursuant to which each 20 shares of issued and outstanding common stock held by each stockholder were combined into and became one share of common stock, with such resulting shares rounded up to the next whole share. No fractional shares were issued. All options, warrants and other convertible securities outstanding immediately prior to the reverse split were adjusted by dividing the number of shares of common stock into which the options, warrants and other convertible securities are exercisable or convertible by 20 and multiplying the exercise or conversion price by 20, all in accordance with the terms of the agreements governing such options, warrants and other convertible securities. The accompanying financial statement data for the annual prior periods presented have been retroactively adjusted to reflect the effects of the reverse stock split.

On May 29, 2015, the Company's common stock began trading on The NASDAQ Stock Market LLC's NASDAQ Capital Market tier, under the symbol "ONCS".

Note 2—Significant Accounting Policies

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.

Concentrations and Credit Risk

The Company maintains cash balances at a small number of financial institutions, where 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.

Financial Instruments

The carrying amounts for cash and cash equivalents, prepaid expenses, accounts payable and accrued expenses approximate fair value due to their short-term nature, generally less than three months. 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 separately disclosed.

Warrants

The Company accounts for its warrants as either equity or liabilities 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 will be revalued 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 instruments on the valuation date, as well as assumptions for future financings, expected volatility, expected life, yield, and risk-free interest rate.

Use of Estimates

The accompanying financial statements have been prepared in conformity with U.S. generally accepted accounting principles, which requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Such estimates include stock-based compensation 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 are believed to be

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 these estimates appropriately reflect changes in the business or as new information becomes available. Actual results could differ materially from the estimates.

Intangible Assets

In accordance with the provisions of the applicable authoritative guidance, the Company's long-lived assets and amortizable intangible assets are tested for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable. The Company assesses the recoverability of such assets by determining whether their carrying value can be recovered through undiscounted future operating cash flows, including its estimates of revenue driven by assumed market segment share and estimated costs. If impairment is indicated, the Company measures the amount of such impairment by comparing the fair value to the carrying value. As of July 31, 2015, the Company recognized $0.4 million of amortization in its statement of operations related to the intangible assets acquired from Inovio under the asset purchase agreement dated March 14, 2011. While these assets are fully depreciated, during the years ended July 31, 2016 and 2015, no impairment was recorded.

Property and Equipment

Our 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:

Computers and Equipment	3 to 10 years
Computer Software	1 to 3 years
Leasehold Improvements	Shorter of lease period or useful life

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 respective period. Diluted earnings per share is computed using the weighted average number of common shares outstanding during the period, plus the dilutive effect of potential future issuances of common stock relating to stock options and other potentially dilutive securities using the treasury stock method. In calculating diluted earnings per share, the dilutive effect of stock options is computed using the average market price for the respective period. In addition, the assumed proceeds under the treasury stock method include the average unrecognized compensation expense of stock options that are in-the-money. This results in the "assumed" buyback of additional shares, thereby reducing the dilutive impact of stock options. The Company did not include shares underlying stock options 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.

Potentially dilutive outstanding securities excluded from diluted net loss per common share because of their anti-dilutive effect:

	July 31, 2016	July 31, 2015
Stock Options	3,263,460	1,148,746
Warrants	12,859,286	1,895,102
	16,122,746	3,043,848

Stock-based Compensation

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. This fair value is then amortized over the requisite service periods of the awards. 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. Stock-based compensation expense is based on awards ultimately expected to vest, and therefore is reduced by forfeitures. Changes in assumptions used under the Black-Scholes option valuation model could materially affect the Company's net loss and net loss per share. Stock options granted to non-employees are revalued monthly until fully vested, with any change in fair value expensed.

The Company has issued equity for services or as consideration within contractual agreements. Stock-based compensation expense related to such equity issuances are based on the closing price of the Company's stock on the date the liability is incurred, with the stock-based compensation adjusted on the date of issuance, based on the Company's stock price on the issuance date.

Employee Stock Purchase Program

Pursuant to the Company's December 2015 Annual Shareholders Meeting, the Company's shareholders approved the Company's 2015 Employee Stock Purchase Plan (or, 2015 ESPP). The 2015 ESPP provides an incentive to attract, retain and reward eligible employees to contribute to the growth and profitability of the Company through the opportunity to acquire Company stock at a discount. The ESPP allows for the purchase of Company stock at not less than 85% of the lesser of (a) the fair market value of a share of stock on the beginning date of the offering period or (b) 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 2015 ESPP and subject to the requirements of IRS code section 423. The first 2015 ESPP offering period commenced on February 7, 2016 and lasted approximately six (6) months, with the first purchase date on July 31, 2016.

Under FASB ASC 718 Compensation –Stock Compensation, the Company's 2015 ESPP would be considered a Type B plan 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 2015 ESPP enables the participant to "buy-up" to the plan's share limit, if the stock price is lower on the purchase date.

Because the 2015 ESPP is considered a Type B plan, the fair value of the award would be calculated at the beginning of the offering period as the sum of:

15% of the share price of a nonvested share at the beginning of the offering period,

85% of the fair market value of a six (6)-month call on the nonvested share aforementioned, and

15% of the fair market value of a six (6)-month put on the nonvested share aforementioned.

The fair market value of the 6-month call and 6-month put are based on the Black-Scholes option pricing model, using the following assumptions: six (6) month maturity, 0.45% risk free interest, 81.06% volatility, 0% forfeitures and $0 dividends. Approximately $16,000 was recorded as stock-based compensation during the year end period ended July 31, 2016.

Comprehensive Income (Loss)

Comprehensive income or loss includes all changes in equity except those resulting from investments by owners and distributions to owners. The Company did not have any items of comprehensive income or loss other than net loss from operations for the years ended July 31, 2016 and 2015.

Recent Accounting Pronouncements

Recent pronouncements that are not anticipated to have an impact on or are unrelated to the Company's financial condition, results of operations, or related disclosures are not discussed.

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, which is intended to define management's responsibility to evaluate whether there is substantial doubt about an organization's ability to continue as a going concern and to provide related footnote disclosures. This ASU provides guidance to an organization's management, with principles and definitions that are intended to reduce diversity in the timing and content of disclosures that are commonly provided by organizations today in the financial statement footnotes. The amendments are effective for annual periods ending after December 15, 2016, and interim periods within annual periods beginning after December 15, 2016. Early application is permitted for annual or interim reporting periods for which the financial statements have not previously been issued. The Company does not intend to early adopt this standard. The adoption of this standard will not have an impact on the financial condition of the Company.

In February 2016, the FASB issued new lease accounting guidance in Accounting Standards Update No. 2016-02, Leases (Topic 842). Under the new guidance, lessees will be required to recognize for all leases (with the exception of short-term leases) at the commencement date (1) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and (2) a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. Lessor accounting, however, remains largely unchanged. In addition, the new lease guidance simplified the accounting for sale and leaseback transactions primarily because lessees must recognize lease assets and lease liabilities. Lessees will no longer be provided with a source of off-balance sheet financing. The new lease guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted, however, the Company

does not intend to early adopt. The Company believes that adoption of this new guidance will not have a material impact on the Company’s financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The amendments cover both public and private companies that issue share-based payment awards to their employees. Under the amendment several aspects of the accounting for share-based payment award transactions are simplified, including: (a) income tax consequences; (b) classification of awards as either equity or liabilities; and (c) classification on the statement of cash flows. For public companies, the amendments are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early application is permitted, however, the Company does not intend to early adopt and the Company does not believe that adoption of these clarifying amendments will have a material impact on the Company’s financial statements.

In August 2016, the Financial Accounting Standards Board (or, FASB) issued new cash flow statement guidance in Accounting Standards Update (or, ASU) No. 2016-15, Statement of Cash Flow (Topic 230): Clarification of Certain Cash Receipts and Cash Payments. The new guidance specifically addresses diversity of presentation and classification with regard to:

Debt Prepayment or Debt Extinguishment Costs;

Settlement of Zero-Coupon Debt Instruments or Other Debt Instruments with Coupon Interest Rates That Are Insignificant in Relation to the Effective Interest Rate of the Borrowing;

Contingent Consideration Payments Made after a Business Combination;

Proceeds from the Settlement of Insurance Claims;

Proceeds from the Settlement of Corporate-Owned Life Insurance Policies, including Bank-Owned;

Life Insurance Policies;

Distributions Received from Equity Method Investees;

Beneficial Interests in Securitization Transactions; and

Separately Identifiable Cash Flows and Application of the Predominance Principle.

The amendments are effective for fiscal year beginning after December 15, 2017 and interim periods within those fiscal years and amendments should be applied using a retrospective transition method to each period presented. However, prospective application as of the earliest practicable date is permitted for some issues. Early adoption is permitted, however, the Company does not intend to early adopt. The Company also believes that adoption of this guidance will not have a material impact on the Company’s financial statements.

Note 3—Cash and Cash Equivalents and Liquidity

The Company considers all liquid investments with maturities of ninety days or less when purchased to be cash equivalents. As of July 31, 2016 and July 31, 2015, cash and cash equivalents were principally comprised of cash in savings and checking accounts.

The Company’s activities to date have been supported primarily by equity financing. It has sustained losses in previous reporting periods with an inception to date loss of $73.5 million as of July 31, 2016.

As of July 31, 2016, the Company had cash and cash equivalents of approximately $28.7 million. The Company believes its cash resources are sufficient to meet its anticipated needs during the next twelve months. The Company will require additional financing to fund its future planned operations, including research and development and clinical trials and commercialization potential product candidates. In addition, the Company will require additional financing in order to seek to license or acquire new assets, research and develop any potential patents and the related compounds, and obtain any further intellectual property that the Company may seek to acquire. Additional financing may not be available to the Company when needed or, if available, it may not be obtained on commercially reasonable terms. If the Company is not able to obtain the necessary additional financing on a timely basis, the Company will be forced to delay or scale down some or all of its development activities or perhaps even cease the operation of its business. Historically, the Company has funded its operations primarily through equity financings and it expects that it will continue to fund its operations through equity and debt financing. If the Company raises additional financing by issuing equity securities, its existing stockholders' ownership will be diluted. Obtaining commercial loans, assuming those loans would be available, will increase the Company's liabilities and future cash commitments. The Company also expects to pursue non-dilutive financing sources. However, obtaining such financing would require significant efforts by the Company's management team, and such financing may not be available, and if available, could take a long period of time to obtain.

Note 4—Fair Value of Financial Instruments

Financial assets and liabilities are measured at fair value, which is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The following is a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

Level 1 — Quoted prices in active markets for identical assets or liabilities.

Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

At July 31, 2016 and 2015 approximately $90,000 was recorded in other long-term assets relating to a long-term certificate of deposit, which is classified within Level 1.

Note 5—Balance Sheet Details

Property and Equipment

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

	July 31, 2016	July 31, 2015
Computers and Equipment	$2,866,879	$1,589,914
Computer Software	211,228	18,701
Leasehold Improvements	80,102	112,469
Construction In Progress	85,402	417,440
Property and Equipment, gross	3,243,611	2,138,524
Accumulated Depreciation	(443,681)	(330,542)
	$2,799,930	$1,807,982

Depreciation expense recorded for the years ended July 31, 2016 and 2015 was approximately $356,000 and $200,000, respectively. During the year ended July 31, 2016, leasehold improvements related to the Company's former corporate headquarters of approximately $112,000 were written off upon moving to the new corporate headquarters.

Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities are comprised of the following:

	July 31, 2016	July 31, 2015
Research and Development Costs	$2,389,711	$1,865,087
Professional and Other Outside Service Fees	707,070	213,122
Office Equipment (not-capitalized)	794	69,900
Other	125,752	212,396

	$3,223,327	$2,360,505

Accrued Compensation

Accrued compensation is comprised of the following:

	July 31, 2016	July 31, 2015
Separation Costs	$134,993	$353,909
Relocation Costs	—	76,884
Stock issuance liability	—	55,500
Accrued payroll	93,021	—
401K costs	14,365	14,329
Other	545	824
	$242,924	$501,446

Separation costs relate to agreements with certain of the Company's former executive officers—see Note 9, Commitments and Contingencies for further information.

Other Long-Term Liabilities

Other long-term liabilities are comprised of the following:

	July 31, 2016	July 31, 2015
Deferred Rent	$887,292	$32,518
	$887,292	$32,518

At July 31, 2016, deferred rent is primarily comprised of the Company's rent liability on its new Corporate headquarters (or, Nancy Ridge), whereas in the prior year ended period deferred rent was primarily comprised of the Company's rent liability on its previous corporate headquarters (or, Summers Ridge). (See Note 9 Commitments and Contingencies for more information on the Nancy Ridge lease.) The Company terminated its Summers Ridge lease early and has no further obligations on that lease as of July 31, 2016.

Note 6—Common Stock Transactions

May 2016 Registered Direct Offering

On May 26, 2016 the Company's stock price closed at $1.62 and the Company closed an "at-the-market registered direct offering" (or, May 2016 Offering) with a single healthcare-dedicated institutional fund for the purchase of (i) 665,049 shares of common stock, (ii) Series B Warrants to purchase 4,844,593 shares of common stock at an exercise price of $0.01, and (iii) Series A Warrants to purchase up to an aggregate of 5,509,642 shares of common stock at an exercise price of $1.69 per share with a term of nine (9) years. The investor paid a purchase price of $1.815 per share of common stock and an accompanying Series A Warrant to purchase one share of common stock and $1.805 per Series B Warrant and accompanying Series A warrant to purchase one share of common stock. The Series B warrants were issued to prevent the beneficial ownership of the purchaser (together with its affiliates and certain related parties) of the Company's common stock from exceeding 4.99%. The Series B warrants expire upon their exercise in full. Both the Series A and Series B warrants are immediately exercisable on the date of issuance. The fair value of the Series A and Series B warrants issued to the purchaser in connection with the May 2016 registered direct offering, based on their fair value relative to the common stock issued, was $4.4 million (based on the Black-Scholes Option Pricing Model assuming no dividend yield, a 9 year life, volatility of 100.03%, and a risk-free interest rate of 1.74%), of which $48,446 of the relative fair market value was ascribed to the Series B warrants, based on the number of warrants issued at its exercise price of $0.01 per share. The Company completed an evaluation of the Series A and Series B warrants issued to the purchaser and determined that the Series A and Series B warrants should be classified as equity within the balance sheet.

At the closing of the May 2016 Offering, the placement agents were also issued warrants to purchase an aggregate of up to five percent (5%) of the aggregate number of shares of common stock and Series B warrants sold in this offering, or 275,482 shares. The placement agent warrants have an exercise price of $2.26875, are immediately exercisable and expire on May 24, 2021. The fair value of the placement agent warrants was $0.3 million (based on the Black-Scholes Option Pricing Model assuming no dividend yield, a 5 year life, volatility of 94.36%, and a risk-free interest rate of 1.38%). The Company completed an evaluation of these warrants and determined the warrants should be classified as equity within the balance sheet.

The gross proceeds of the offering were $9.9 million. Net proceeds, after deducting the placement agent's fee, financial advisory fees, and other estimated offering expenses payable by the Company, were approximately $9.2 million. The Company intends to use proceeds from the offering for general corporate purposes, including clinical trial expenses and research and development expenses.

November 2015 Public Offering

On November 9, 2015, the Company closed a public offering of an aggregate of 2,142,860 shares of common stock and warrants to purchase an aggregate of 1,071,430 shares of common stock at a purchase price of $3.50 per unit. Each purchaser was issued a warrant to purchase up to that number of shares of the Company's common stock equal to 50% of the shares issued to such purchaser. The warrants to the purchasers have an exercise price of $4.50 per share, became exercisable six months after issuance, and expire on May 9, 2021. The fair value of the warrants to the purchasers, based on their fair value relative to the common stock issued, was approximately $1.6 million (based on the Black-Scholes Option Pricing Model assuming no dividend yield, a 5.05 year life, volatility of 88.63%, and a risk-free interest rate of 1.75%). The Company completed an evaluation of these warrants and determined the warrants should be classified as equity within the balance sheet.

The Company agreed to pay an aggregate cash fee for placement agent and financial advisory services equal to six percent (6%) of the gross proceeds of the November 2015 public offering, as well as a non-accountable expense allowance equal to one percent (1%) of the gross proceeds of the offering and certain other expense reimbursements. In addition, placement agents were also issued warrants to purchase an aggregate of up to five percent (5%) of the aggregate number of shares of common stock sold in the offering, or 107,143 shares. The Placement Agent Warrants have substantially the same terms as the Warrants, except that they have an exercise price of $4.375 and expire on November 9, 2020. The fair value of the placement agent warrants was $0.2 million (based on the Black-Scholes Option Pricing Model assuming no dividend yield, a 5 year life, volatility of 89.08%, and a risk-free interest rate of 1.75%). The Company completed an evaluation of these warrants and determined the warrants should be classified as equity within the balance sheet.

The gross proceeds of the offering were $7.5 million. Net proceeds, after deducting the placement agent's fee, financial advisory fees, and other offering expenses payable by the Company, were approximately $6.9 million. The Company intends to use proceeds from the offering for general corporate purposes, including clinical trial expenses and research and development expenses.

June 2015 Public Offering

On June 8, 2015, the Company closed a registered direct public offering of an aggregate of 2,469,091 shares of the Company's common stock at a purchase price of $5.50 per share. The gross proceeds were approximately $13.6 million. After deducting for fees and expenses, the aggregate net proceeds from the sale of the common stock were approximately $12.5 million. In connection with the June 2015 public offering, the Company paid placement agent fees and issued the placement agents warrants to purchase up to an aggregate of 5% of the aggregate number of shares of common stock sold in the offering, or 123,455 shares of the Company's common stock. The placement agent warrants are exercisable at $6.88 per share as of December 8, 2015 and will expire on May 12, 2019. The fair value of the placement agent warrants was approximately $0.6 million (based on the Black-Scholes Option Pricing Model assuming no dividend yield, a 5 year life, volatility of 88.40% and a risk free interest rate of 1.72%). The placement agent warrants and the shares of the Company's common stock underlying the placement agent warrants have not been registered under the Securities Act. The Company completed an evaluation of these warrants and determined the warrants should be classified as equity within the balance sheet.

Outstanding Warrants

At July 31, 2016, the Company had outstanding warrants to purchase 12,859,286 shares of common stock, with exercise prices ranging from $0.01 to $24.00, all of which were classified as equity instruments. These warrants expire at various times between September 2016 and May 2025, with the exception of the Series B Warrants, as aforementioned, which expire upon their exercise in full. At July 31, 2016, 4,244,593 Series B Warrants were available to exercise.

Dividends

The Company has not adopted any policy regarding payment of dividends and no dividends have been paid during the periods presented.

Note 7 — Stock-Based Compensation

2011 Stock Incentive Plan (as amended)

The OncoSec Medical Incorporated 2011 Stock Incentive Plan (as amended and approved by the Company's stockholders), (or 2011 Plan), authorizes the Board of Directors to grant equity awards, inclusive of stock options and restricted stock units, to employees, directors, and consultants for up to 4,000,000 shares of common stock. The 2011 Plan includes an automatic increase of its available share reserve on the first business day of each calendar year by the lesser of 3% of the shares of the Company's common stock outstanding as of the last day of the immediately preceding calendar year, 500,000 shares, or such lesser number of shares as determined by the Board of Directors and the 2011Plan allows for an annual fiscal year per-individual grant of up to 500,000 shares. 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 stock at the date of grant. Options vest over a period specified in individual option agreements entered into with grantees, and are exercisable for a maximum period of ten years after the date of grant. 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 no less than 110% of the fair value of the Company's stock on the date of grant.

Stock Options

During the fiscal year ended July 31, 2016, the Company granted options to purchase 1,995,750, 655,500 and 78,000 shares of the Company's common stock to employees, directors and consultants under the 2011 Plan, respectively. The options issued to employees under the 2011 Plan have a ten-year term, vest over three years, and have exercise prices ranging from $1.64 to $6.21. The options issued to directors have a ten-year term, vest quarterly in equal increments over one year and have exercise prices ranging from $2.02 to $5.76. The options issued to consultants have one- to three-year terms, vest in accordance with the terms of the applicable consulting agreement, and have exercise prices ranging from $2.02 to $5.76.

During the fiscal year ended July 31, 2015, the Company granted options to purchase 491,001, 37,500 and 80,000 shares of the Company's common stock to employees, directors and consultants under the 2011 Plan, respectively. The options issued to employees under the 2011 Plan have a ten-year term, vest over a range of one to three years, and have exercise prices ranging from $5.60 to $10.60. The options issued to directors have a ten-year term, vest quarterly in equal increments over one year and have an exercise price of $7.60. The options issued to consultants have one- to three-year terms, vest in accordance with the terms of the applicable consulting agreement, and have exercise prices ranging from $6.01 to $7.80.

The following assumptions were used to calculate the fair value of stock-based compensation related to stock options during the years ended:

	July 31, 2016		July 31, 2015	
Expected volatility	83.57% - 98.23	%	86.02% - 117.50	%
Risk-free interest rate	0.71% - 2.01	%	0.36% - 2.13	%
Expected forfeiture rate	0.00	%	0.00	%
Expected dividend yield	—		—	
Expected term	2.08 – 10 years		1.6 – 6.5 years	

Expected price volatility is the measure by which the Company's stock price is expected to fluctuate during the expected term of an option. The Company exited shell status on March 24, 2011 and its stock became available for trading on April 8, 2011. In situations where a public entity has limited historical data on the price of its publicly traded shares and no other traded financial instruments, authoritative guidance is provided on estimating this assumption by basing its expected volatility on the historical, expected, or implied volatility of similar entities whose share option prices are publicly available. In making the determination as to similarity, the guidance recommends the consideration of industry, stage of life cycle, size and financial leverage of such other entities. The Company's expected volatility is derived from the historical daily change in the market price of its common stock since its stock became available for trading, as well as the historical daily changes in the market price of its peer group, based on weighting, as determined by the Company.

The expected term of the options represents the period that stock-based awards are expected to be outstanding based on the simplified method provided in ASC Topic 718, which averages an award's weighted-average vesting period and contractual term for share options and warrants. The Company will continue to use the simplified method until it has the historical data necessary to provide a reasonable estimate of expected life in accordance with ASC Topic 718, as amended by SAB 110. For the expected term of options issued to employees and directors, the Company used the simplified method. The Company expects to continually evaluate its historical data as a basis for determining the expected terms of options granted under the 2011 Plan. The Company's estimation of the expected term for stock options granted to parties other than employees or directors is the contractual term of the option award.

For the purposes of estimating the fair value of stock option awards, the risk-free interest rate used in the Black-Scholes calculation is based on the prevailing U.S. Treasury yield. 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.

Stock-based compensation expense recognized in the Company's statements of operations is based on awards ultimately expected to vest, reduced for estimated forfeitures. Authoritative guidance requires forfeitures to be estimated at the time of grant, and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Because the Company records stock-based compensation monthly and utilizes cliff vesting and/or monthly vesting, the Company has estimated the forfeiture rate of its outstanding stock options as zero since the Company can adjust stock-based compensation due to terminations in the month of termination.

Stock-based compensation expense (resulting from stock options awarded) recorded in the Company's statement of operations for the years ended July 31, 2016 and 2015, respectively, was approximately $6.1 million and $2.7 million, respectively. During the fiscal years ended July 31, 2016 and 2015, approximately $1.0 million and $1.1 million of this amount, respectively, was recorded to research and development, and approximately $5.1 and $1.6 million, respectively, was recorded in general and administrative in the Company's statement of operations. See Note 9, Commitments and Contingencies, regarding the impact of stock option modifications (due to a separation package) on stock-based compensation expense for the year ended July 31, 2015.

A summary of the Company's stock option activity for the years ended July 31, 2016 and 2015 is as follows:

	Option Shares Outstanding	Weighted-Average Exercise Price	Aggregate Intrinsic Value ($000's)
Balance at July 31, 2014 (1)	588,045	$ 11.20	$ 844
Granted (1)	608,501	7.45	1
Exercised (1)	(308)	5.60	1
Forfeited / Cancelled / Expired (1)	(47,474)	12.29	46
Balance at July 31, 2015	1,148,764	$ 9.20	$ 216
Granted	2,729,250	4.84	—
Exercised	—	—	—
Forfeited / Cancelled / Expired	(614,554)	7.49	33
Balance at July 31, 2016	3,263,460	5.88	9
Exercisable at July 31, 2016	1,824,862	$ 6.60	$ 3

(1) Recast to reflect the 1-for-20 reverse stock split effected May 2015

Range of Exercise Prices	Number of Shares Outstanding	Weighted Average Contractual Life (in years)	Number Of Shares Exercisable	Weighted Average Remaining Contractual Life (in years)
$1.64 - $16.10 (1)	3,263,460	8.6	1,824,862	8.3

(1) Recast to reflect the 1-for-20 reverse stock split effected May 2015

The weighted-average grant date fair value of stock options granted during the years ended July 31, 2016 and 2015 was $3.45 and $5.57, respectively. As of July 31, 2016, there was approximately $5.0 million of unrecognized non-cash compensation cost related to unvested options, which will be recognized over a weighted average period of 1.8 years. The weighted-average fair value of stock options vested during the years ended July 31, 2016 and 2015 was $5.69 and $7.12.

Restricted Stock Unit Awards

In March 2016, the Company granted 555,000, 100,000 and 25,000 restricted stock unit awards (or, RSUs) to motivate and retain certain employees, directors and consultants, respectively, under the 2011 Plan. All RSUs vest in full 3 years following the date of grant. The Company's closing common stock price on the date of issue was $2.02 per share, which is the RSUs fair market value per unit. Stock-based compensation expense related to RSUs for the year end period ended July 31, 2016 was approximately $184,000, approximately $41,000 of which was recorded to research and development and $143,000 was recorded to general and administrative. As of July 31, 2016, 655,000 RSUs are outstanding.

2015 Employee Stock Purchase Plan

The Company's 2015 ESPP is authorized to issue 500,000 shares of the Company stock. The first offering period of the 2015 ESPP closed at the end of July 2016 and 17,789 shares were purchased by participants at a purchase price of $1.44, which represented a 15% discount off of the Company's closing stock price at the beginning of the offering period. At July 31, 2016, 482,211 shares are available for issuance under the 2015 ESPP.

Common Stock Reserved for Future Issuance

The following table summarizes common stock reserved for future issuance at July 31, 2016:

Common Stock options outstanding (within the 2011 Plan and outside of the terms of the 2011 Plan)	3,263,460
Common Stock reserved for restricted stock unit release	655,000
Common Stock authorized for future grant under the 2011 Plan	330,408
Common Stock reserved for warrant exercise	12,859,286
Commons Stock reserved for future ESSP issuance	482,211
Total common stock reserved for future issuance	17,590,365

Note 8—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 those 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's practice is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company had an accrual of $0 for interest or penalties on the Company's balance sheet at July 31, 2016 and July 31, 2015 and has not recognized any interest and/or penalties in the statement of operations for the year ended July 31, 2016 and 2015.

The Company is subject to taxation in the United States, California, New York, North Carolina and Washington. The Company's tax years for 2008 and forward and 2011 and forward are subject to examination by the United States federal tax authorities and California tax authorities, respectively, due to the carry forward of unutilized net operating losses and research and development credits.

At July 31, 2016, the Company had federal and California income tax net operating loss carryforwards of approximately $61,202,000 and $56,349,000, respectively. In addition, the Company has federal and California research and development tax credit carryforwards of approximately $871,000 and $916,000, respectively. The Company also has California Hiring Credits of approximately $9,300. The federal net operating loss, research tax credit carryforwards and California net operating loss carryforwards will begin to expire in 2027 unless previously utilized. The California research and development credit carryforwards will carry forward indefinitely until utilized. The Company has not completed a study to assess whether an ownership change has occurred, as defined by IRC Section 382/383 or whether there have been multiple ownership changes 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 a change did occur, the federal and state net operating loss carry-forwards and research and development credits that can be utilized in the future will be significantly limited. There can be no assurance that the Company will ever be able to realize the benefit of some or all of the federal and state loss carryforwards or the credit carryforwards, either due to ongoing operating losses or due to ownership changes, which limit the usefulness of the loss carryforwards.

Significant components of the Company's deferred tax assets as of July 31, 2016 and 2015 are listed below:

	2016	2015
Net operating loss carryforwards	$23,568,000	$15,460,000
Credits	1,440,000	1,082,000
Start-up costs	51,000	56,000
Accumulated Depreciation	341,000	591,000
Other	3,850,000	1,691,000
Net deferred tax assets	29,250,000	18,880,000
Valuation allowance for deferred tax assets	(29,250,000)	(18,880,000)
Net deferred taxes	$—	$—

A valuation allowance of $29,250,000 and $18,880,000 at July 31, 2016 and 2015, respectively, has been recognized to offset the net deferred tax assets as realization of such assets is uncertain.

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

	2016	2015
Federal tax benefit at the expected statutory rate	34.00 %	34.00 %
State income tax, net of federal tax benefit	(0.00)%	(0.01)%
Non-deductible expenses	(2.21)%	(1.34)%
Change in valuation allowance	(32.83)%	(34.55)%
Other	1.03 %	1.89 %
Income tax benefit - effective rate	(0.01)%	(0.01)%

Note 9—Commitments and Contingencies

In the ordinary course of business, the Company may become a party to lawsuits involving various matters. The Company is unaware of any such lawsuits presently pending against it which individually or in the aggregate, are deemed to be material to the Company’s financial condition or results of operations.

Effective November 1, 2015, the Company entered into a 12-month lease agreement for office space in Campbell, California to support its legal department. The base rent is $2,008 per month.

On December 31, 2014, the Company entered into a lease agreement for approximately 34,000 rentable square feet located at 5820 Nancy Ridge Drive, San Diego, California to serve as the Company's new corporate headquarters and research and development laboratory. The lease term commenced on October 19, 2015 and expires 120 months after commencement. The Company has an option to extend the lease for an additional 5 years, if notice is given within 12 months prior to the expiration of the lease term. The Company also has the right to terminate the lease after the expiration of the 84th month after the lease commencement so long as the Company delivers to the landlord a written notice of its election to exercise its termination right no less than 12 months in advance. The lease agreement provides for base rent at $2.65 per rentable square feet, subject to a 3% rate increase on each annual anniversary of the first day of the first full month during the term of the lease agreement. Upon commencement of the lease, 12 months of rent abatement is provided. Under the terms of the lease, the Company is also required to share in certain monthly operating expenses of the premises and in December 2014 the Company delivered a security deposit of approximately $90,000.

Total rent expense for the years ended July 31, 2016 and 2015 was approximately $1.4 million and $0.3 million, respectively.

At July 31, 2016, future minimum lease payments under the non-cancelable operating leases are approximately as follows:

Year Ending July 31,	Operating Lease
2017	$959,000
2018	1,145,000
2019	1,173,000
2020	1,208,000
2021	1,245,000
Thereafter	5,598,000
Total minimum payments	$11,328,000

On March 6, 2015, the Company entered into two research and development services agreements, one with Rev.1 Engineering Inc., (or, Rev.1) and the other with Merlin CSI, LLC (or, Merlin). Each company had been engaged to perform research, development, testing, and regulatory filing services related to an engineering project. During Fiscal 2016, the Company terminated both the Rev.1 and Merlin agreements and no longer has any obligations to either company under their respective agreement. As a result of terminating the Rev.1 agreement, the Company forfeited the remaining deposit with Rev.1, which resulted in the Company recording approximately $0.2 million of expense upon its release of the deposit.

The Company has entered employment agreements with each of its executive level officers. Generally, the terms of each agreement are such that if the officer is terminated other than for cause, death or disability, or if the case of termination of employment with the Company is for good cause, the officer shall be entitled to receive severance payments equal to either 6 or 12 months of his/her then-current annual base salary plus any accrued bonus and 6 or 12 months of benefits coverage.

On April 15, 2016, the Company and the Company's former Chief Scientific Officer (or, CSO) entered into a separation, release and consulting agreement, in which the CSO would voluntarily resign from the Company on June 18, 2016 and become a consultant of the Company. The terms of the agreement afforded no severance pay related to the termination of employment; however, the terms of the agreement provide for a fee of $30,000 per month for consulting services. The consulting agreement will terminate automatically on June 18, 2017, unless renewed by a written agreement of both parties or earlier terminated as provided within the agreement. On the date of termination of employment, the Company recorded a liability of $360,000 in its balance sheet as the consulting services to be performed are not substantive and the offsetting charge was recorded in research and development as other outside service fees. As of July 31, 2016, the Company has paid $30,000 against the liability.

On December 27, 2015, the Company and the Company's former Chief Medical Officer (or, CMO) entered into a separation and release agreement pursuant to which the Company agreed to pay the former CMO $286,000, less applicable withholdings, in the form of salary continuation in accordance with the Company's customary payroll practices. In addition, the CMO would be eligible to receive a bonus for calendar year 2015, should the Company's Board of Directors or Compensation Committee thereof choose to grant discretionary bonuses to the Company's officers. At the separation date, the Company recorded a liability of $286,000 in its balance sheet and the offsetting charge was recorded in research and development as salary expense. As of July 31, 2016, the Company has paid approximately $150,000 against the liability and no bonuses were granted or paid related to calendar 2015.

On June 24, 2015, the Company and the Company's former Chief Financial Officer (or, CFO) entered into a separation and release agreement pursuant to which the Company agreed to pay the former CFO $309,833, less applicable withholdings, in the form of salary continuation in accordance with the Company's customary payroll practices and a pro rata bonus for fiscal year 2015 equal to $35,100. The Company agreed to pay for 12 months of benefits coverage and accelerated the vesting of 31,586 stock options as of the date of termination and to extend the exercise period for one year post-termination for all vested stock options. The Company accounted for the stock option modification pursuant to ASC Topic 718. Based on a Black-Scholes Option Pricing Model (assuming a term of 1 year, no dividend yield, volatility of 74.61% and a risk free interest rate of .30%), the Company recorded at July 31, 2015 approximately $41,000 of additional stock-based compensation expense in its statement of operations related to the stock option modification. The additional stock-based compensation was categorized as general and administrative expense. At July 31, 2015, the Company recorded a liability of approximately $354,000 in its balance sheet and the offsetting charge was recorded in general and administrative as salary expense. As of July 31, 2016, all monetary obligations have been paid in full and all related options have terminated as they were not exercised during the post-termination period.

Note 10—401(k) Plan

Effective May 15, 2012, the Company adopted a defined contribution savings plan pursuant to Section 401(k) of the Internal Revenue Code. The plan is for the benefit of all qualifying employees and permits voluntary contributions by employees up to 100% of eligible compensation, subject to the Internal Revenue Service imposed maximum limits. The terms of the plan allow for discretionary employer contributions. 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 statement of operations and totaled approximately $236,000 and $133,000 for the years July 31, 2016 and 2015, respectively.

Note 11—Quarterly Financial Data (Unaudited)

The following financial information reflects all normal recurring adjustments, which are, in the opinion of management, necessary for a fair statement of the results of the interim periods. Summarized quarterly data for fiscal 2016 and 2015 are as follows:

	Year ended July 31, 2016			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Selected quarterly financial data:				
Revenue	$—	$—	$—	$—
Loss from operations	(7,035,219)	(7,037,720)	(6,251,119)	(6,561,994)
Net loss	$(7,037,391)	$(7,037,720)	$(6,251,409)	$(6,561,994)

Net loss applicable to common stockholders	$(7,037,391)	$(7,037,720)	$(6,251,409)	$(6,561,994)
Basic and diluted net loss per share	$0.47	$0.42	$0.37	$0.39

	Year ended July 31, 2015			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Selected quarterly financial data:				
Revenue	$—	$—	$—	$—
Loss from operations	(4,060,206)	(4,618,237)	(5,986,286)	(6,576,413)
Net loss	$(4,061,116)	$(4,618,237)	$(5,987,345)	$(6,576,413)
Net loss applicable to common stockholders	$(4,061,116)	$(4,618,237)	$(5,987,345)	$(6,576,413)
Basic and diluted net loss per share (1) (2)	$0.33	$0.38	$0.48	$0.48

(1) Loss per share is computed independently for each of the quarters presented.

Therefore, the sum of the quarterly net loss per share will not necessarily equal the total for the year.

(2) Recast to account for the 1-for-20 reverse stock split effected May 2015.

EXHIBIT INDEX

The following exhibits are being filed with this Annual Report on Form 10-K.

Exhibit Number	Description of Exhibit
3.1	Certificate of Incorporation of Netventory Solutions, Inc. (incorporated by reference to our Registration Statement on Form S-1, filed on September 3, 2008)
3.2	Amended and Restated Bylaws (incorporated by reference to our Current Report on Form 8-K, filed on March 6, 2012)
3.3	Articles of Merger dated February 9, 2011 (incorporated by reference to our Current Report on Form 8-K, filed on March 3, 2011)
3.4	Certificate of Change dated February 9, 2011 (incorporated by reference to our Current Report on Form 8-K, filed on March 3, 2011)
3.5	Certificate of Correction dated March 9, 2011 (incorporated by reference to our Current Report on Form 8-K, filed on March 14, 2011)
3.6	Certificate of Change dated May 12, 2015 (incorporated by reference to our Current Report on Form 8-K, filed on May 15, 2015)
10.1*	Asset Purchase Agreement, dated March 14, 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*	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)
10.3#	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)
10.4#	Employment Agreement with Veronica Vallejo dated May 18, 2011 (incorporated by reference to our Quarterly Report on Form 10-Q, filed on June 14, 2011)
10.5#	Amendment No. 1 to Employment Agreement, dated August 2, 2013, by and between OncoSec Medical Incorporated and Veronica Vallejo (incorporated by reference to our Current Report on Form 8-K, filed on August 8, 2013)
10.6#	

	2014 Stock Option Award Agreement, dated March 7, 2014, by and between the Company and Punit Dhillon (incorporated by reference to our Current Report on From 8-K, filed on March 13, 2014)
10.7#	2014 Stock Option Award Agreement, dated March 7, 2014, by and between the Company and Veronica Vallejo (incorporated by reference to our Current Report on From 8-K, filed on March 13, 2014)
10.8#	Executive Employment Agreement, dated December 11, 2013, by and between the Company and Robert Pierce (incorporated by reference to our Current Report on From 8-K, filed on December 17, 2013)
10.9#	Inducement Stock Option Award Agreement, dated December 11, 2013, by and between the Company and Robert Pierce (incorporated by reference to Exhibit A to the Executive Employment Agreement filed as Exhibit 10.8 hereto)
10.10#	Executive Employment Agreement, dated September 16, 2014, by and between the Company and Mai Hope Le (incorporated by reference to our Current Report on Form 8-K, filed on September 19, 2014)
10.11#	Form of Indemnification Agreement (incorporated by reference to our Current Report on Form 8-K, filed on October 29, 2015)
10.12#	Executive Employment Agreement and Inducement Stock Option Award 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
10.13#	Form of Executive Employment Agreement, effective November 1, 2015, by and between the Company and Sheela Mohan-Peterson (incorporated by reference to our Quarterly Report on Form 10-Q, filed on December 8, 2015)
10.14#	Separation and Release Agreement, effective December 31, 2015, by and between the Company and Mai Hope Le, MD (incorporated by reference to our Current Report on Form 8-K, filed on December 29, 2015)
10.15#	Separation and Release Agreement, effective June 18, 2016, by and between the Company and Robert Pierce, MD (incorporated by reference to our Current Report on Form 8-K, filed on April 15, 2016)
10.16#	Form of Executive Employment Agreement and Inducement Stock Option Award Agreement, effective September 1, 2016, by and between the Company and Sharron Gargosky, PhD (incorporated by reference to our Current Report on Form 8-K, filed September 6, 2016)
10.17	Form of Securities Purchase Agreement, dated as of June 3, 2015, by and among the Company and the purchaser identified on the signature pages thereto (incorporated by reference to our Current Report on Form 8-K, filed on June 4, 2015)
10.18	Sponsored Research Agreement, dated as of June 4, 2013 by and among OncoSec Medical Incorporated, Old Dominion University and The Frank Reidy Research Center for Bioelectrics (incorporated by reference to our Quarterly Report on Form 10-Q, filed December 16, 2013)
10.19	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on June 5, 2014)
10.20	Amendment to Asset Purchase Agreement, dated September 28, 2011 by and between OncoSec Medical Incorporated and Inovio Pharmaceuticals, Inc. (incorporated by reference to our Current Report on Form 8-K, filed on October 3, 2011)
10.21	Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on October 3, 2011)
10.22	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on March 29, 2012)
10.23	Second Amendment to Asset Purchase Agreement, dated March 24, 2012, by and between OncoSec Medical Incorporated and Inovio Pharmaceuticals, Inc. (incorporated by reference to our Current Report on Form 8-K, filed on March 29, 2012)
10.24	Common Stock Purchase Warrant (issued to Inovio Pharmaceuticals on March 24, 2012) (incorporated by reference to our Current Report on Form 8-K, filed on March 29, 2012)
10.25	

	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on December 19, 2012)
10.26#	OncoSec Medical Incorporated 2011 Stock Incentive Plan, as amended and restated (incorporated by reference to our Registration Statement on Form S-8, filed on July 28, 2014, File No. 333-197678)
10.27	Form of Common Stock Purchase Warrant (incorporated by reference to our Current Report on Form 8-K, filed on September 19, 2013)
10.28	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)
10.29	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K, filed on June 4, 2015)

Exhibit Number	Description of Exhibit
10.30	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)
10.31	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)
10.32	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)
10.33	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)
10.34	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)
10.35	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)
10.36	Placement Agency Agreement, dated as of May 22, 2016, by and between the Company and H.C. Wainright & Co., LLC (incorporated by reference to Exhibit 10.2 our Current Report on Form 8-K, filed on May 24, 2016)
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

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.