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INITIATION REPORT

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July 5, 2017

OncoSec Medical (Nasdaq/ONCS)

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BUY **Finger on the Immuno-Pulse of Oncology**

OncoSec Medical designs, develops and commercializes proprietary therapeutics and medical devices for immuno-oncology applications

Investment Highlights

1) OncoSec Medical is all set to begin its late stage, Phase II PISCES trial this summer. PISCES is a multi-site, single arm, 48-patient registration-directed trial combining the Company's ImmunoPulse IL-12 with Merck's Keytruda to treat advanced stage melanoma patients who have failed or are failing Anti-PD-1 Therapy, such as Keytruda or BMY's Opdivo. OncoSec has already signed a clinical trial collaboration and supply agreement for Keytruda with Merck, and earlier this year received Fast Track Designation for the combination therapy. If all goes well, the Company could circumvent several other potential treatments for melanoma already in Phase III, with a possible approval in 2019 for second-line therapy. Top-line data for PISCES is targeted for the fourth quarter of calendar 2017.

2) In addition to combination therapy for advanced melanoma patients, OncoSec is making solid progress on expanding its oncology pipeline. The Company recently presented positive preclinical data on its gene delivery platform at the AACR annual meeting, and other gene therapy data at the Keystone Symposia. Meanwhile, OncoSec is continuing development of its novel multi-gene constructs – which will be the foundation for new preclinical drug candidates targeting treatment of solid tumors.

3) Not to be forgotten is OncoSec's Tissue Responsive Adaptive Controlled Electroporation (TRACE) drug delivery technology platform, through which the Company has recently initiated a technology access program, or TAP. Already this year, OncoSec has signed two TAP collaborations, one with publicly-traded Jounce Therapeutics and another with privately-held Inhibrx, and more such deals may be forthcoming this year and next. In addition, the Company continues to seek out development or commercialization partnerships for its other R&D pipeline programs, agreements which could also provide positive news flow for potential investors.

Current Price	**$1.16**
Price Target	**$5.00**

Estimates	F2015A	F2016A	F2017E
Revenues($000s)	**$0**	**$0**	**$0**
1Q October	0	0	0 A
2Q January	0	0	0 A
3Q April	0	0	0 A
4Q July	0	0	0 E
EPS (diluted)	**($1.67)**	**($1.63)**	**($1.00)**
1Q October	(0.33)	(0.47)	(0.29) A
2Q January	(0.38)	(0.42)	(0.27) A
3Q April	(0.48)	(0.37)	(0.22) A
4Q July	(0.48)	(0.38)	(0.22) E
EBITDA/Share	($1.42)	($1.24)	($0.77)
EV/EBITDA (x)	N/A	N/A	N/A

Stock Data	
52-Week Range	$0.88-$2.08
Shares Outstanding (mil.)	21.2
Market Capitalization (mil.)	$24.6
Enterprise Value (mil.)	$8.5
Debt to Capital (4/17)	0.0%
Book Value/Share (4/17)	$0.75
Price/Book	1.5 x
Average Trading Volume (3-month)	145,000
Insider Ownership	14.8%
Institutional Ownership	6.2%
Short interest (Millions)	1.8
Dividend / Yield	$0.00/0.0%

Price target and ratings changes over the past 3 yrs:
Initiated - July 5, 2017 - Buy - Price Target $5.00

Conclusion

With a new Phase II registration-directed trial (PISCES) for its combination therapy for advanced melanoma patients set to begin this summer, recent Fast Track Designation and Orphan Drug Designation awards from the FDA, several new technology access partnerships signed, and a solid balance sheet, ONCS shares may soon attract the attention of growth-oriented investors, especially as clinical and business progress continues to be announced throughout 2017. Still, possibly due to its smaller size and lower investor profile, these shares continue to trade at a valuation discount to industry peers in the immune-oncology therapeutic market, and value investors may also soon be attracted to ONCS shares. Thus, we believe ONCS shares may soon follow those of other oncology-oriented biotechnology companies which have recently exhibited strong price appreciation, and therefore we are initiating coverage on ONCS shares with a BUY rating and 12-18 month price target of $5.00 per share.

Company Business/History

OncoSec Medical ("OncoSec") is an emerging drug-medical device company focused on designing, developing and commercializing innovative and proprietary medical approaches for the treatment of solid cancers that have unmet medical needs or where currently approved therapies are inadequate based on their efficacy or side-effects. The Company was incorporated under the laws of Nevada on February 8, 2008 and in March 2011 OncoSec acquired from Inovio Pharmaceuticals (INO, Not Rated) certain assets related to the use of drug-medical device combination products for the treatment of different cancers.

OncoSec seeks to overcome the problem of tumor-induced immune subversion via intratumoral immunotherapy through a focused approach which seeks to stimulate and guide an anti-tumor immune response for the treatment of cancer. The Company's mission is to pursue the advancement of immune system-stimulating treatments through the development of a proprietary immunotherapy platform, which is designed to overcome tumor immune tolerance. The Company's 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 its ImmunoPulse delivery technology. ImmunoPulse is an electroporation delivery device that can be used in combination with OncoSec'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. 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. The Company's electroporation delivery device consists of an electrical pulse generator and disposable applicators, which can be adapted to treat different tumor types.

Market/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.

OncoSec has several completed and ongoing clinical trials for the use of the Company's therapeutic candidates to treat different tumor types with its electroporation delivery device. OncoSec also continues to investigate collaboration opportunities that will enable the Company 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). The Company expects to continue to conduct additional clinical trials for its 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. The Company's strategy also includes expanding the applications of proprietary technologies through strategic collaborations or evaluation of other opportunities such as in-licensing and strategic acquisitions. OncoSec may collaborate with major pharmaceutical and biotechnology companies and government agencies, providing access to complementary technologies and/or greater resources. These business activities are intended to provide the Company with mutually beneficial opportunities to expand or advance the Company's product pipeline. OncoSec may license its intellectual property to other companies to leverage these technologies for applications that may not be appropriate for independent product development.

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 the Company's 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 restabilizes, trapping the molecules within the cell and allowing them to perform their function.

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. OncoSec believes that electroporation is uniquely capable of overcoming these obstacles. Together with the Company's partners and collaborators, OncoSec plans to be the leader in establishing electroporation-delivered DNA immunotherapies. OncoSec believes that electroporation could become the method of choice for plasmid-DNA delivery into cells in many clinical applications.


Ideal technology to deliver a wide variety and combinations of potentially synergistic immune modulators

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.

The Company's ImmunoPulse product candidates are based on the Company's proprietary DNA-based immunotherapy technology, which is designed to stimulate the human immune system, resulting in systemic anti-tumor immune responses. Because the Company's candidate therapeutics are plasmid constructs, OncoSec expects to benefit from a simpler, more consistent and scalable manufacturing process in comparison to therapies based on patient-derived cells or recombinant proteins. The Company's 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 OncoSec believes it is unlikely that any single immunotherapy product will suffice to achieve durable responses in most patients and in most tumor types. Therefore, OncoSec is 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. OncoSec has the opportunity to leverage the flexibility of a DNA plasmid-based technology to rapidly pursue candidate molecules and combinations of therapeutics. OncoSec can introduce, for example, pro-inflammatory cytokines and chemokines, immune stimulatory receptors, co-stimulatory molecules, adhesion molecules, and T-cell engagement molecules. OncoSec expects 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.

Clinical Programs

The Company's 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). OncoSec is 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, OncoSec is pursuing ImmunoPulse IL-12 monotherapy in patients with triple negative breast cancer.

The diagram below conceptually depicts how the Company's ImmunoPulse IL-12 treats cancer, in this case melanoma:

- Interleukin-12 (IL-12) is a potent, well-characterized pro-inflammatory cytokine
- Intratumoral delivery of IL-12 stimulates a safe but powerful systemic immune response
- Remarkably low toxicity for immunotherapeutic drug

Source: OncoSec Medical

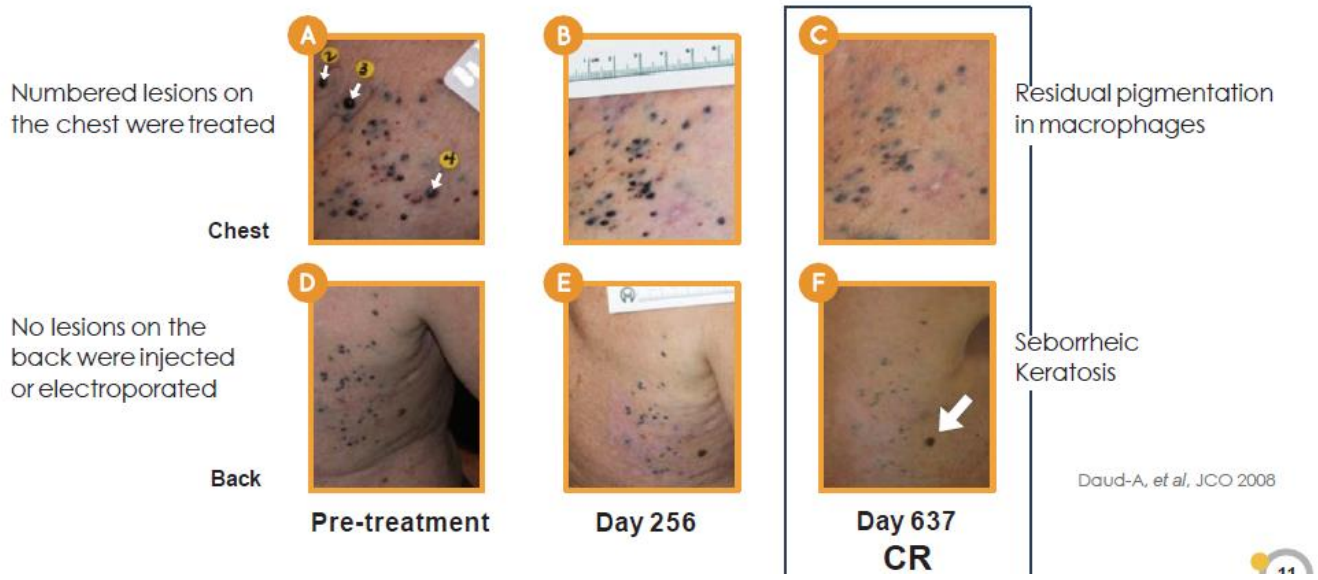
OMS-I100: An Open-Label Phase 2 Trial of ImmunoPulse IL-12 monotherapy in patients with metastatic melanoma

On December 5, 2014, OncoSec 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. OncoSec 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 are 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. The diagrams below depict time-progression of lesion regression after one cycle of local treatment in a Phase 1 study for ImmunoPulse IL-12:



Source: OncoSec Medical

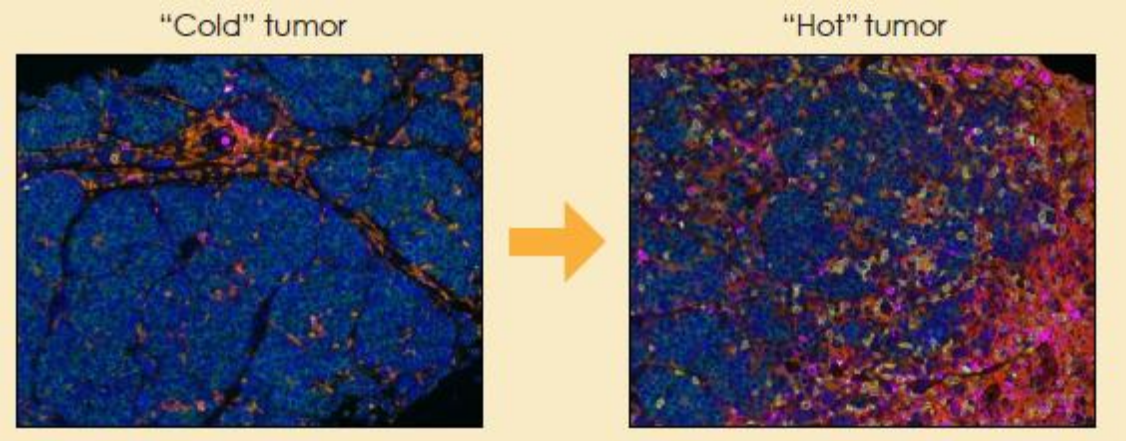
OncoSec considers the results of the OMS-I100 Phase 2 study in advanced melanoma, along with the emerging long-term follow-up data, to be significant and thus the Company is continuing to identify and develop new therapeutic targets that, like IL-12, can (i) be encoded into DNA, (ii) be delivered intratumorally using electroporation, and (iii) have an ability to reverse the immunosuppressive mechanisms of the tumor. OncoSec plans to expand the Company's 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.

Combination Therapy

The majority of patients with solid tumors who have been treated with anti-PD-1/PD-L1 (such as pembrolizumab or nivolumab, Merck's Keytruda and Bristol-Myers Squibb's Opdivo, respectively) therapies do not respond to treatment: this is one of the great challenges in oncology today. OncoSec believes ImmunoPulse IL-12 may address this unmet medical need by increasing the proportion of patients who will respond to anti-PD-1 and other checkpoint therapies. Patients who respond to anti-PD-1 therapies will generally have a "hot" or "inflamed" tumor, defined by key biomarkers, such as:

- High expression of PD-L1 on tumor cells; and
- Density of tumor-infiltrating lymphocytes (TIL)

Biomarkers such as these can help pre-select patients that may respond to anti-PD-1. Combining different treatment modalities to improve patient outcome has been an effective strategy, in which the rationale is to convert patient tumors from "cold" to "hot", as evidenced in the cellular diagrams below:

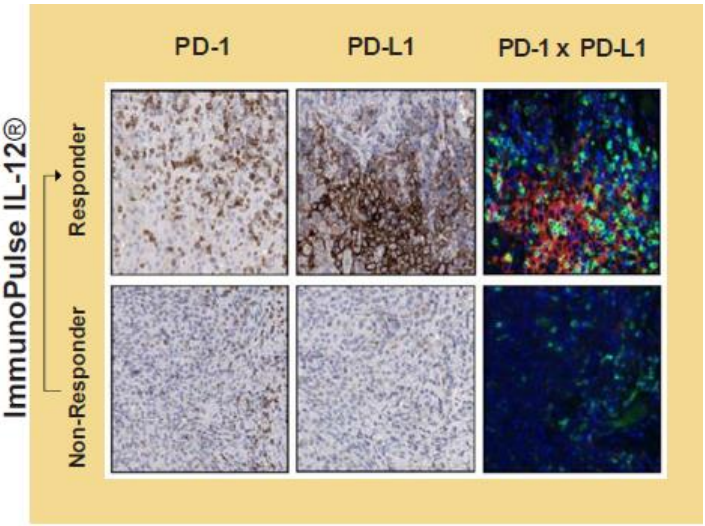


Source: OncoSec Medical

Addressing the unmet need of Anti-PD-1/PD-L1 Non-responders, OncoSec believes that its ImmunoPulse IL-12 therapeutic is able to:

- Enhance immunogenicity and convert T cell-poor (low TIL, or "cold") tumors into T cell-inflamed (high TIL, or "hot") tumors;
- An ongoing Phase II trial with OncoSec's ImmunoPulse IL-12 is the first clinical trial to demonstrate a response in predicted anti-PD-1 non-responder population; and
- ImmunoPulse IL-12 has the potential to be the first approved therapy for patients who do not respond to pembrolizumab or nivolumab.

The chart below, including cellular photos adapted from *Nature*, 2014 Nov 26, depicts non-responder versus responder results following ImmunoPulse IL-12 therapy:



Source: OncoSec Medical

Further, the chart below outlines statistical non-response rated for Anti-PD-1/PD-L1 mAB therapies for a number of tumor types:

Tumor Type	Anti-PD-1 / PD-L1 mAB Non-Response
Melanoma	~60 – 80%
Triple Negative Breast	~70 – 82%[1]
Renal Cell Carcinoma	~71%
Lung Carcinoma	~79 – 83%
Head and Neck	~80%[2]
Bladder	~84%[3]
Gastric	~69%[2]

[1] PD-L1 selected patients; 18.5% (5/27) ORR using Merck 22C3 assay and pembrolizumab; 33% (3/9) using Genentech's PCD4989g assay and MPL3280A
[2] Patients were preselected by Merck PD-L1 IHC assay
[3] 11% in PD-L1 (Roche) negative: 43% in PD-L1 + population

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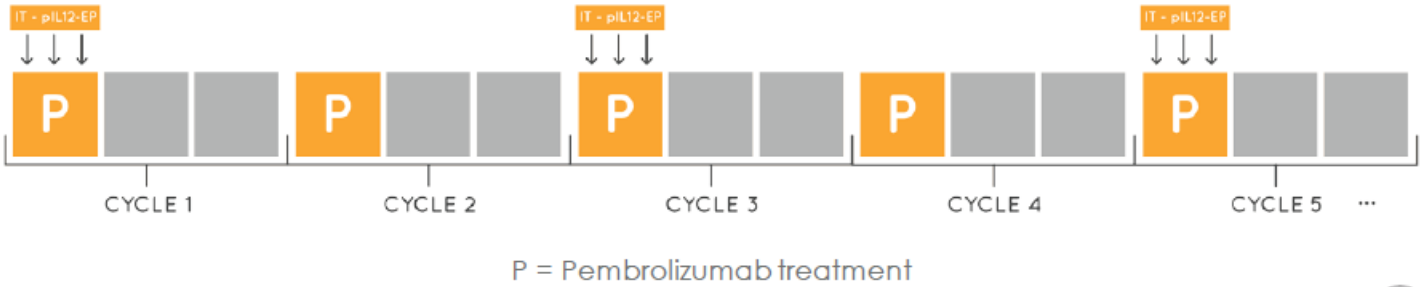
Source: OncoSec Medical

OMS-I102: An Open-Label Phase 2 Trial of ImmunoPulse IL-12 plus Pembrolizumab in Patients with Advanced, Metastatic Melanoma

In August 2015, OncoSec 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-γ), 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 trial design of the Phase II combination study included 3-week treatment cycles with 200 mg pembrolizumab administered as a 30-minute IV infusion and treatment of the patients with ImmunoPulse IL-12 on days 1, 5 and 8 of every other cycle, or every six weeks. The chart below outlines the trial regimen for OMS-I102:



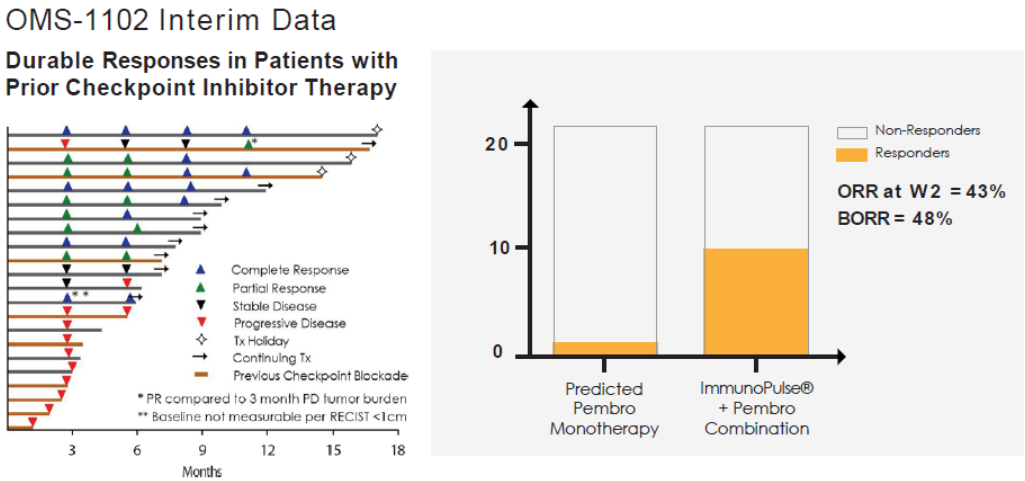
Source: OncoSec Medical

The sponsor of this investigator-initiated study, UCSF, expects to enroll up to 42 patients; the study is enrolling and on-going, as per *ClinicalTrials.gov*.

In February 2017, OncoSec reported new positive interim clinical data from this Phase II trial, indicating that ImmunoPulse IL-12 can increase response rates in patients who are not expected to respond to anti-PD-1 therapy alone. The trial is evaluating the following key endpoints:

1) Best overall response rate (BORR) by Response Evaluation Criteria in Solid Tumors (RECIST) v1.1 and immune-related Response Criteria;
2) Safety and tolerability;
3) Duration of response;
4) 24-week landmark progression-free survival (PFS);
5) Median PFS; and
6) Overall survival (OS).

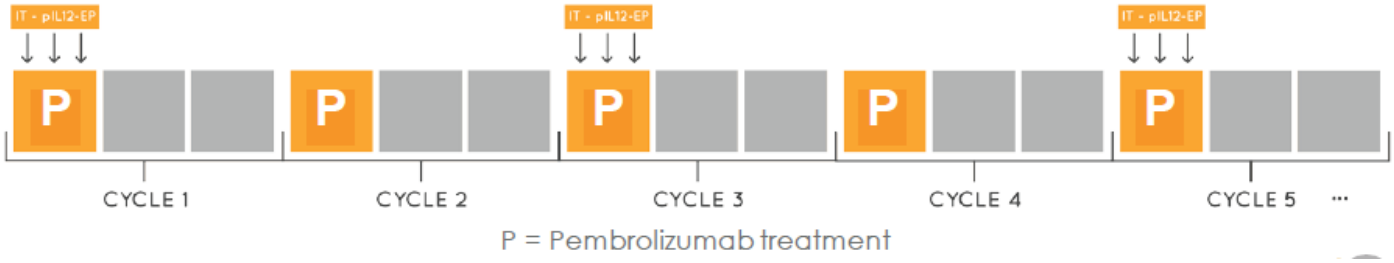
The study results showed an overall response rate (ORR) at 24 weeks of 43% (9/21), and BORR of 48% by RECIST v1.1. There were 24% (5/21) complete responders (CR), 19% (4/22) partial responders (PR), and 9% (2/21) stable disease (SD) for a total disease control rate of 52% (11/21). These data are consistent with, and expand upon, previously reported preclinical and clinical data that provide a strong rationale for combining ImmunoPulse IL-12 with anti-PD-1 blockade. Dr. Alain Algazi of UCSF presented the study findings in an oral presentation titled, "Immune monitoring outcomes of patients with stage III/IV melanoma treated with a combination of pembrolizumab and intratumoral plasmid interleukin 12 (pIL-12)" (Abstract #78), at the ASCO-SITC Clinical Immuno-Oncology Symposium in February 2017 in Orlando, Florida. The OMS-I102 interim data are depicted graphically in the charts below:



Source: OncoSec Medical

PISCES (Anti-PD-1 IL-12 Stage III/IV Combination Electroporation Study)

In late February 2017, OncoSec announced that the Company had received Fast Track Designation from the FDA for ImmunoPulse IL-12 for the treatment of metastatic melanoma following progression on pembrolizumab or nivolumab. PISCES will be a Phase 2b, Simon 2-stage, non-comparative, open-label, single-arm, multicenter study of ImmunoPulse IL-12 in combination with an intravenous anti-PD-1 antibody in patients with histological diagnosis of melanoma with progressively locally advanced or metastatic disease defined as Stage III or Stage IV. The primary endpoint for this registration-directed trial will be overall response rate (ORR) at 24 weeks with secondary endpoints of best overall response rate (BORR), duration of response (DOR), median progression-free survival (PFS) and overall survival (OS). This clinical trial is planned to be initiated in mid-2017. The chart below outlines the trial regimen for PISCES, which is very similar to OMS-I102:

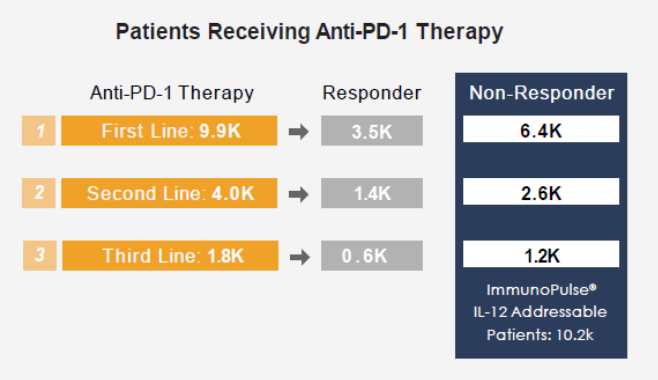


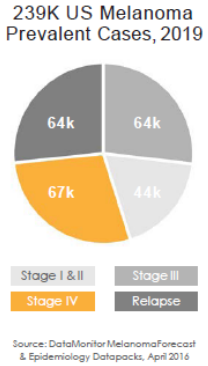
Source: OncoSec Medical

Further, in June 2017, the FDA granted Orphan Drug Designation for OncoSec's pIL-12, otherwise known as tavokinogene telseplasmid, for the treatment of unresectable metastatic melanoma. Tavokinogene telseplasmid is the active biologic agent in OncoSec's lead product candidate, ImmunoPulse IL-12. The Orphan Drug status will provide OncoSec with eligibility for certain development incentives, including tax credits for clinical testing, exemption from a prescription drug user fee, and seven years of market exclusivity. Previously, in May 2017, OncoSec announced that the Company had entered into a clinical trial collaboration and supply agreement with Merck to evaluate the combination therapy of ImmunoPulse IL-12 and Keytruda in PISCES. Under the agreement, OncoSec will sponsor and fund the study and Merck will provide supplies of Keytruda, with additional details of the collaboration not being disclosed. While the Company has not commented on further partnerships with Merck or other potential marketing partners, the diagram below outlines a potential timeline for such a commercialization/marketing agreement:

Source: OncoSec Medical

The Market opportunity for advanced melanoma patients is categorized by a number of patients who have received anti-pd-1 therapy and are non-responders. Of the estimated 239,000 melanoma cases in the US currently, a recent study estimates that a majority of these patients are in the later stages of the disease, i.e. Stage III, Stage IV or relapsing, and of the approximate 16,000 melanoma patients currently receiving Anti-PD-1 therapy, both first line, second line or third line, the Company estimates that slightly over 10,000 patients are non-responders, and therefore good candidates for OncoSec's mono- or combination therapy. The charts below depict potential markets for the Company's immune-oncology therapies, if approved:





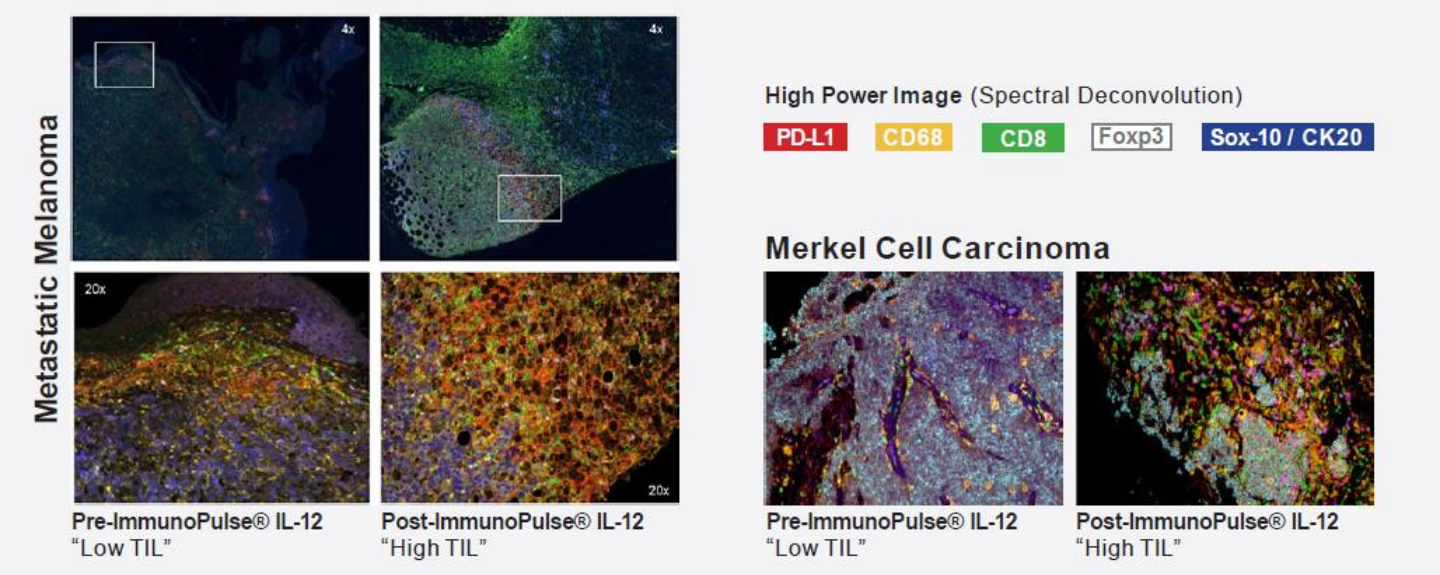
Source: OncoSec Medical

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, OncoSec enrolled the first patient in the Company's 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 antitumor 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 antiPD-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.

In addition to the four clinical trials described above, OncoSec has also pursued Phase 2 clinical trials in patients with merkel cell carcinoma and head and neck cancer. The illustrations below depict positive effects of ImmunoPulse IL-12 treatment in multiple solid tumor types, including metastatic melanoma and merkel cell carcinoma:



Source: OncoSec Medical

Recent Agreements/Initiatives

In addition to internally-driven clinical trial programs, OncoSec continues to focus on partnering and commercialization strategies that leverage its Phase 2 clinical studies in the United States. The Company's 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. In particular, OncoSec plans to continue a 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. The Company believes that there is a significant unmet medical need for patients who are non-responsive or refractory to anti-PD-1/PD-L1 therapies. Notable recent partnership agreements and initiatives include:

Merck

In May 2017, OncoSec announced the signing of a clinical trial collaboration and supply agreement with Merck (which is known as MSD outside the US and Canada) covering the combination of OncoSec's ImmunoPulse IL-12 with Merck's anti-PD-1 therapy Keytruda in the PISCES Phase IIb clinical trial, which is planned to evaluate the safety and efficacy of the drug combination in patients with metastatic melanoma following disease progression on previous treatment with an anti-PD-1 therapy such as Keytruda or Opdivo. Under the agreement, OncoSec will sponsor and fund the study and Merck will provide Keytruda. While no further financial details related to the agreement were announced, OncoSec's stated goal is to extend these supply agreements into commercial development agreements over the long-term, covering areas such as manufacturing, product stability, packaging and labeling, and marketing, including pricing reimbursement strategy. Just recently, Keytruda became the first therapeutic to win US FDA clearance based on a patient's specific genetic traits, regardless of where in the body the disease originated. (See: *http://www.reuters.com/article/us-merck-co-fda-idUSKBN18J2T9*) This specific FDA clearance was an accelerated approval for solid tumor cancers not eligible for surgery or that have spread in patients identified as having a biomarker called microsatellite instability-high (MSI-H) or mismatch repair deficient (dMMR). Keytruda has also been approved to treat advanced melanoma, advanced Non-Small Cell Lung Cancer, head and neck cancers and classical Hodgkin lymphoma, and most recently to treat bladder cancer.

Heat Biologics

OncoSec Medical and Heat Biologics, Inc. (HTBX, Not Rated) entered into a collaboration in February 2015 to evaluate the combination of the immunotherapy approaches developed by each company. The companies will jointly evaluate the preclinical efficacy of OncoSec's core technology, ImmunoPulse with Heat's proprietary gp-96-Ig based ImPACT immunotherapy platform. Heat has two clinical stage programs based on the ImPACT platform, viagenpumatucel-L (HS-110) in a Phase 2 clinical trial in patients with non-small cell lung cancer and vesigenurtacel-L (HS-410) in a Phase 2 clinical trial in patients with non-muscle invasive bladder cancer.

PerkinElmer

OncoSec Medical announced a collaboration in December 2014 with PerkinElmer, Inc. (PKI, Not Rated) and the University of California, Los Angeles (UCLA) to help researchers develop biomarker tests to evaluate a patient's immune response to cancer. The approach uses PerkinElmer's imaging-based staining methods to quantitatively evaluate CD8+ T cell density in tumor biopsies. Dr. Paul Tumeh, Assistant Professor of Dermatology at UCLA, and colleagues recently published results from this assay in *Nature* (vol.515: pp. 568-571), demonstrating that there is a strong correlation between the density of CD8+ T cells, located at the invasive edge of melanoma lesions, and the probability of response to Merck's pembrolizumab (Keytruda). PerkinElmer has developed a multi-parametric IHC analysis platform consisting of its Vectra automated quantitative pathology imaging system and its Opal multiplex tissue staining assays, which together can help scientists perform biomarker research to potentially develop a predictive assay to identify the non-responder population. It is hoped that work such as that completed by researchers such as Dr. Tumeh and UCLA combined with PerkinElmer's technology may lead to the development of a critical diagnostic tool for identifying non-responders to anti-PD-1 monotherapy.

Plexxikon

In November 2014, OncoSec Medical announced a pre-clinical collaboration with Plexxikon Inc., a member of the Daiichi Sankyo Group (DSNKY, Not Rated) and leader in the discovery and development of novel small molecule and pharmaceuticals, to test the combination of Plexxikon's selective CSF-1R inhibitor with OncoSec's ImmunoPulse IL-12. Plexxikon is currently exploring the role of CSF-1R-targeted immune therapy as a sensitizer to chemo- and radiation-therapy, in addition to its potential to augment response to complementary immunotherapies. CSF-1R has been described as a key cell surface receptor which controls macrophage development and function; and intratumoral macrophages and other related cell types, like myeloid-derived suppressor cells, can be strongly immunosuppressive and block anti-tumor immunity.

Jounce Therapeutics

In June 2017, OncoSec announced a technology access program agreement with Jounce Therapeutics, Inc., (JNCE, Not Rated) a clinical stage biotechnology company focused on the discovery and development of novel cancer immunotherapies and predictive biomarkers for patient enrichment. Under the agreement, Jounce can utilize OncoSec's gene delivery technology to evaluate in

vivo efficacy in murine models of intratumorally-delivered therapeutic candidates. The agreement includes OncoSec's GENESIS research generator and proprietary applicators developed for research use. Jounce's lead product candidate, JTX-2011, is a monoclonal antibody that binds to and activates ICOS and is currently in a Phase 1/2 trial.

Inhibrx, LP

In March 2017, OncoSec announced its first Technology Access Program (TAP) agreement, in this case with privately-held Inhibrx, LP, a La Jolla, California-based clinical stage biologic immunotherapeutic company focused on the treatment of high unmet medical needs in oncology, infectious disease and inflammatory conditions. Inhibrx's proprietary platforms enable fit-for-function biotherapeutics that optimally interface with the biology of each target antigen to focus and conditionally modulate immune activities and mediate enhanced signaling. Therapeutic proteins include multispecific and multivalent molecules designed and crafted using composite modular single domain antibody technology. Inhibrx currently has strategic research collaborations in immuno-oncology with Celgene (CELG, Not Rated) and Five Prime Therapeutics (FPRX, Not Rated) and Alpha-1 disease with the Alpha-1 Project. Under the agreement, Inhibrx will use OncoSec's proprietary gene delivery technologies - the GENESIS research generator and proprietary applicators, for preclinical discovery of antibodies.

Research and Development

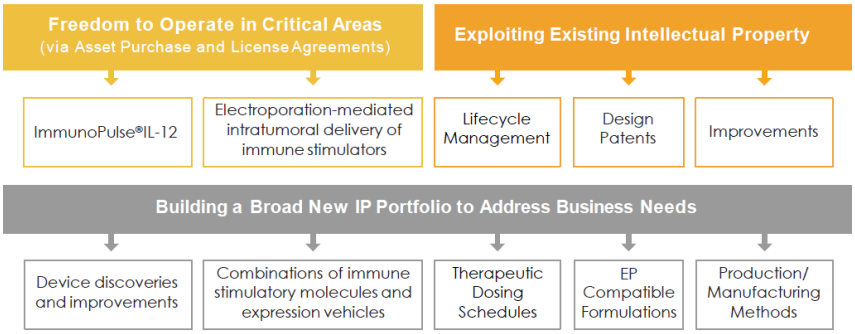
OncoSec Medical maintains an internal research and development team based in San Diego, California. From inception through the end of the most recent fiscal year, July 31, 2016, the Company has incurred an aggregate of approximately $39.7 million of research and development expenses, the significant majority of which relates to the development of immuno-oncology therapeutic product candidates with the use of an electroporation device. For the most recent nine-month period ending April 30, 2017, research and development expenses for the Company were approximately $8.6 million, down 23% from the same period one year ago, due primarily to lower costs related to fewer clinical trials ongoing and fewer patients enrolled in the current ongoing trials, as well as lower personnel costs. The Company anticipates that activity in the R&D area and related costs will increase going forward as the PISCES combination trial is initiated and also as the Company increases its new clinical presence in Australia.

Manufacturing

OncoSec currently contracts with third parties for the manufacture, testing and storage of the Company's plasmid product candidate, and the Company intends to continue to do so in the future. Certain components of the electroporation systems that serve as the delivery mechanism for a biologic into a patient's cell are currently assembled by the Company. OncoSec utilizes the services of contract manufacturers to manufacture the remaining components of these systems as well as product supplies for clinical trials. The Company is currently ISO 13485 certified and has an audited quality management system; in addition, all manufacturers of the Company's products must comply with cGMP requirements enforced by the FDA through its facilities inspection program. Even though the Company relies primarily on contract manufacturers, they still employ adequate personnel with extensive technical, manufacturing, analytical and quality experience to oversee contract manufacturing and testing activities, and to compile manufacturing and quality information for regulatory submissions. The Company believes that alternate sources of raw material supply and finished goods manufacturing are available that can satisfy regulatory and quality control requirements.

Intellectual Property

OncoSec has acquired or been issued 28 US patents and has two US patent applications pending. In addition, the Company has filed 14 US provisional patent applications, and has converted three provisional applications into regular utility applications. In addition to US intellectual property, the Company has a total of 13 issued patents and six pending patent applications in other jurisdictions. In addition, OncoSec has licensed intellectual property rights that allow the Company to use certain electroporation technology and methods of delivering DNA-based cytokines as an immunotherapy, including using catheter-based delivery. The bulk of the Company's patents, including fundamental patents directed toward proprietary technology, expire between 2017 and 2027. OncoSec is a party to a cross-license agreement with Inovio Pharmaceuticals which was entered into concurrently with the closing of the Company's acquisition of certain assets from Inovio in 2011. This agreement provides for the exclusive license to Inovio of patent rights sold to OncoSec 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. The Company 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. The chart below graphically summarized the Company's Intellectual Property strategy as it builds a broad IP portfolio:



Source: OncoSec Medical

Competition

The Company is in competition with traditional and alternative therapies for the indications that are targeted in its clinical programs, as well as potentially competing with pharmaceutical and biotechnology companies, hospitals, research organizations, individual scientists and nonprofit organizations engaged in the development of drugs and other therapies for these indications. Many of these companies, and large pharmaceutical companies in particular, have greater research and development, regulatory, manufacturing, marketing, financial and managerial resources, and more experience as well, and many of these companies may have products and product candidates that are in a more advanced stage of development than the Company's product candidates.

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. Notably, Bristol-Myers Squibb's 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. Genentech's – a division of Roche (RHBBY, Not Rated) - Tecentriq, a third monoclonal antibody similar to Keytruda and Opdivo, that targets the PD-1/PD-L1 checkpoint axis, 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 plus Opdivo in advanced melanoma. More approvals in other forms of cancer of this combination are expected, as well as approvals for other novel combinations in the coming years as more and more combinations continue to be investigated.

Several other IL-12-based therapeutics are in development for cancer treatment, including EGEN-001 from Celsion (CLSN, Not Rated) and Ad-RTS IL-12 from Ziopharm Oncology (ZIOP, Not Rated). EGEN-001, a locally-delivered lipopolymer-encapsulated IL-12, is currently in a Phase II trial in persistent or recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer, with approximately 22 patients enrolled and 20 patients treated – but three patients had to withdraw due to toxicities - and with no partial or complete responses yet recorded. Ziopharm's Ad-RTS IL-12 is a IL-12-expressing adenoviral vector plus oral activator. This drug is currently in multiple Phase I and Phase II studies in breast cancer, and while the best indications have shown efficacy comparable with OncoSec's ImmunoPulse IL-12, in contrast to ImmunoPulse IL-12, ≥16% systemic Significant Adverse Effects (SAEs) have been observed in all trials. OncoSec's ImmunoPulse IL-12, by contrast, has shown both safety and efficacy, with no systemic SAEs observed in any patients to date.

Provenge, a product developed and marketed by Dendreon Corporation (Private), 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 (AMGN, Not Rated) 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.

Due to recent designation of Fast Track Status for the Company's ImmunoPulse IL-12 program, the Company believes it can carry through with an accelerated approval approach, including a Phase 2 registration-directed trial targeting a second-line therapy for non-responders with potential approval by 2019, to be followed by a more traditional Phase 3 confirmatory trial for expansion into a first-line setting for the broader melanoma market. The table below outlines the positioning of OncoSec's lead ImmunoPulse IL-12 combination therapy program in the Anti-PD-1 non-responder market in melanoma vis-à-vis other potential competitive products:

Therapeutic	Company	Country	Phase	Targeting Anti-PD-1 Non-Responders	Fast Track Designation
Binimetinib	Array BioPharma, Inc.	United States	NDA	No	No
Abraxane	Celgene Corporation	United States	III	No	No
PV-10	Provectus Biopharmaceuticals, Inc.	United States	III	No	No
Epacadostat	Incyte Corporation	United States	III	No	No
Encorafenib	Array BioPharma, Inc.	United States	III	No	No
Darleukin	Philogen S.p.A.	Italy	III	No	No
Tecentriq	Roche Holding AG	Switzerland	III	No	No
Seviprotimut	Polynoma LLC	United States	III	No	No
Masitinib	AB Science S.A.	France	III	No	No
PDR001	Novartis AG	Switzerland	III	No	No
ImmunoPulse®IL-12	OncoSec Medical Inc.	United States	IIb	Yes	Yes

Potential Approval of ImmunoPulse IL-12 as Early as 2019

Source: OncoSec Medical

Recent Results and Balance Sheet/Cash Flow

OncoSec Medical reported improved financial results and positive clinical progress for their third quarter 2017 (ending April 2017) early last month, including a net loss of $4.6 million or ($0.22) per share as compared to a net loss of $6.3 million or ($0.37) per share in the prior year period. The decreased loss in the most recent quarter stemmed primarily from lower R&D expenses, at $2.7 million versus $3.4 million one year ago, due primarily to reduced clinical trial and related trial management costs as the Company reduced the number of its actively enrolling trials to focus on its upcoming combination PISCES trial. General and administrative expenses also decreased during the quarter, to $1.9 million from $2.9 million in the prior year period, due primarily to lower stock compensation expense incurred this year. There were no revenues in either quarterly period, while weighted average shares outstanding increased to 20.7 million in Q3/2017 from 17.0 million in Q3/2016. Significant milestones during the recent quarter included:

- Presented positive topline results from the primary analysis of the Phase II combination trial of ImmunoPulse IL-12 and pembrolizumab in melanoma patients that were predicted to be non-responders to anti-PD-1 at the 2017 ASCO-SITC Clinical Immuno-Oncology Symposium. Data showed an objective response of 43% and a best overall response rate (BORR) of 48% at 24 weeks; ORR of 33% in patients with prior checkpoint therapy;
- Granted FDA Fast Track designation for ImmunoPulse® IL-12 for the treatment of metastatic melanoma following progression on pembrolizumab or nivolumab;
- Completed clinical trial collaboration and supply agreement for pembrolizumab for the Phase II registration-directed trial, referred to as PISCES;

- Granted international nonproprietary name (INN) for pIL-12- "tavokinogene telseplasmid.";
- Initiated Technology Access Program collaborations with Inhibrx and Jounce Therapeutics;
- Presented positive preclinical data demonstrating the latest developments of the Company's gene delivery platform in a murine melanoma model at the American Association of Cancer Research (AACR) Annual Meeting;
- Presented intratumoral electroporation-mediated IL-12 gene therapy data showing enhanced tumor immunogenicity at the Keystone Symposia conference;
- Continued development of novel multi-gene constructs and advancing new preclinical candidates that target multiple cancer immune regulating mechanisms in solid tumors; and,
- Made advancement on tumor targeted delivery technologies focused on treating visceral tumor applications.

Operating cash burn for OncoSec Medical in the third quarter was approximately $4.5 million, and at the end of the third quarter (April 2017) the Company had $16.1 million cash on hand.

The Company's balance sheets for the periods Q4/16 ending July 2016 and Q3/17 ending April 2017 are shown below:

Balance Sheets
($000s)

Assets:	**7/31/16**	**4/30/17**
Current Assets		
Cash and equivalents	$28,746	$16,106
Prepaid expenses and other current assets	671	987
Total current	29,417	17,093
Property and equipment, net	2,800	2,494
Other long-term assets	189	384
Total Assets	$32,407	$19,972
Liabilities:		
Current liabilities		
Accounts payable and accrued expenses	$3,223	$2,644
Accrued compensation	243	168
Total current	3,466	2,812
Other long-term liabilities	887	1,197
Total liabilities	4,354	4,009
Stockholders' equity	28,053	15,962
TOTAL LIAB & EQ	$32,407	$19,972

Outlook/Growth Drivers

OncoSec management has provided preliminary financial guidance regarding upcoming quarters, at least in terms of operating cash burn, stating that the Company's quarterly cash usage of $4.5 million may soon rise once the PISCES Combination trial begins enrollment. However, impact on the current quarter, Q4/17 (ending July) is expected to be fairly small, and thus we are estimating that the Company will incur a loss of $4.7 million, or ($0.22) per share for the quarter, very comparable to results in Q3/17. For next fiscal year, 2018E beginning August 1st, we are estimating that OncoSec will post a loss of $22.0 million, or ($1.02) per share, as compared to a loss of $20.3 million or ($1.00) per share forecast in 2017E. The Company is not expected to accrue any revenues for either 2017E or 2018E. At current and near-term expected rate of operating cash burn, OncoSec is expected to have adequate cash reserves to fund operations through the middle of fiscal 2018E or

into the early part of calendar 2018E. Development and other milestones to look for from OncoSec for the rest of this calendar year and into next year include:

1) Enrollment opened for Phase IIb PISCES clinical trial for melanoma patients that progress on anti-PD-1 therapies – mid-2017;
2) Availability of top-line data for PISCES - Targeted for fourth quarter of 2017;
3) Patients predicted to be non-responders treated with the combination of tavokinogene telseplasmid and pembrolizumab – H2/17;
4) Assessment of long-term follow-up data from first cohort of patients (n=22) enrolled in Phase II Investigator Sponsored Trial assessing combination of ImmunoPulse® IL-12 and pembrolizumab in melanoma patients – H2/2017;
5) Establishment of key collaborations and expansion of the use of OncoSec's technology through the technology access program using the novel Tissue Responsive Adaptive Controlled Electroporation (TRACE) enabled delivery technology – H2/17 through 2018; and
6) Evaluation of strategic partnerships and licensing opportunities to advance pre-clinical and clinical pipeline – 2018-19

Management

Punit Dhillon is Co-Founder, Director, President, & CEO of OncoSec. He was formerly Vice President of Finance and Operations at Inovio Pharmaceuticals, where he successfully helped the company raise over $160 million through multiple financings and several licensing deals including early stage deals with Merck and Wyeth. Mr. Dhillon is also the founder of BeCancerPositive.org, an online community where people can share their experiences with cancer and inspire hope for others. He holds a Bachelor of Arts with Honors in Political Science and a minor in Business Administration from Simon Fraser University in Burnaby, British Columbia**.**

Richard Slansky serves as Chief Financial Officer of OncoSec. Prior to joining the Company, he was a financial and operational consultant for several companies, and also served as the CFO of GenMark Diagnostics, (GNMK, Not Rated), an early stage molecular diagnostic company focused on infectious disease tests, and also held executive, financial, and operating positions at Digirad, SpaceDev, and Calbiochem. He holds a bachelor's of science degree in economics from the University of Pennsylvania's Wharton School of Business and a master's degree in business administration from the University of Arizona.

Sheela Mohan-Peterson serves as Legal and Compliance Officer of OncoSec. Prior to joining the Company, she held executive positions at Merck, Schering-Plough, DNAX Institute, Roche Bioscience and Incyte Genomics and holds a Bachelor's Degree in Biology from Washington University in St. Louis, Missouri and a Master's Degree in Molecular Biology from Rutgers University.

Dr. Sharron Gargosky serves as Chief Clinical and Regulatory Officer of OncoSec. Dr. Gargosky has over 20 years of experience in research and development at firms including Prima Biomed, Ltd., Pharmacia, Medicis, and Hyperion Therapeutics. Dr. Gargosky received her Ph.D. from the University of Adelaide, Australia and completed her postdoctoral fellowship at Stanford University.

In addition to Punit Dhillon, OncoSec's of Directors also includes **Dr. Avtar Dhillon**, co-founder and Chairman of the Company, and currently on the Board of Directors of BC Advantage Funds of British Columbia; **Dr. Anthony E. Maida**, currently Senior Vice President – Clinical Research for Northwest Biotherapeutics; and **Dr. Jim DeMesa, a** practicing physician and the former President, CEO, and Director of Migenix. OncoSec's

four-member Melanoma Advisory Board includes **Dr. Axel Hauschild** of the University Hospital Schleswig-Holstein in Kiel, Germany; **Dr. Sanjiv S. Agarwala** of St. Luke's Cancer Center, Bethlehem, Pennsylvania and Temple University School of Medicine; **Dr. Vernon K. Sondak** from the H. Lee Moffitt Cancer Center and Research Institute in Tampa, Florida and the Departments of Oncologic Sciences and Surgery at the University of South Florida's Morsani College of Medicine; and **Dr. Adil Daud**, a Professor of Medicine at the University of California, San Francisco.

Stock Valuation/Comparables

We have compiled a ten-stock comparison group for OncoSec comprised primarily of immuno-oncology therapeutic or similar market companies, including Celsion (CLSN, Not Rated), Curis (CRIS, Not Rated), CytRx (CYTR/Not Rated), Galena Biopharma (GALE, Not Rated), ImmunoCellular Therapeutics (IMUC, Not Rated), Northwest Bio (NWBO, Not Rated), Osiris Therapeutics (OSIR, Not Rated), Provectus (PVCT, Not Rated), Rigel (RIGL, Not Rated) and Vical (VICL, Not Rated). Since ONCS is not forecast to accrue revenues or positive earnings for 2017E or 2018E, we are employing a market capitalization metric to value ONCS, comparing average market cap for our target company with our group of biotechnology stocks with similar stage R&D pipelines and potential markets for their therapeutics, in particular melanoma but in some cases other areas of oncology. On average, our comparable stock group shows valuation multiples of a little over $104 million in market capitalization, representing a significant premium to ONCS's current market cap, and thus, employing the average market cap of $104 million for ONCS, we have derived a valuation and long-term price target of $5.00 for ONCS shares. Therefore, we are initiating shares of ONCS with a Buy rating and 12-18 month price target of $5.00 per share.

Risk Factors

In addition to normal economic and market risk factors that impact most equities and the common risks shared by OncoSec Medical with other companies in the industry, we believe an investment in ONCS involves the following risks:

- **Reliance on key management** – At present, ONCS relies on several key members of its management team who either founded the Company or have been in key executive positions for an extended period of time. Should one or more of these key executives leave the Company, ONCS could find it difficult to replace their long-standing knowledge of operations and industry expertise.
- **Reliance on partnerships –** To date, ONCS has signed a number of development partnerships and joint ventures for its immuno-oncology therapeutics and platform technologies. Thus, in the future certain factors related to product marketing and/or new product development may be determined by third parties and out of the control of Company management.
- **Limited stock liquidity** – Trading volume in ONCS stock is comparatively light and these shares have a relatively limited history of trading compared with other healthcare stocks. As such, news regarding ONCS, its target market, partners and/or competitors could lead to significant volatility in the stock price.
- **Competitive markets** – The Company and its partners compete in its target therapeutic markets with a number of companies, many of which are considerably larger than the Company. There can be no assurance that the Company and its partners will be able to successfully compete and launch new products into these competitive markets in the future.
- **FDA and regulatory risks** – ONCS and its partners are subject to regulatory review for ongoing therapeutic products research and development, principally the US Food and Drug Administration's approval and review processes. In addition, the quality assurance and manufacture of the Company's

therapeutic products are subject to ongoing oversight and regulation, and any negative correspondence from the FDA or other regulatory agencies could have an adverse effect on the ongoing operations of the Company.

- **Lack of historic profitability** - ONCS has not achieved operating profitability since its founding, and according to our forecasts may not be expected to do so in the near future. Although the Company maintains adequate cash reserves at the present time, there can be no assurance the Company will not need to raise additional working capital in the future should operating losses continue.
- **Need to defend patents and other intellectual property** – ONCS currently holds approximately 28 US and 13 International patents on its products and technologies, some of which expire in the near future. The Company may be required to defend its patents in the US and overseas in the future, and there can be no assurance these defenses will be successful.

Companies mentioned in this report:

Merck (MRK, Not Rated)
Inovio (INO, Not Rated)
Bristol-Myers Squibb (BMY, Not Rated)
Heat Biologics (HTBX, Not Rated)
Jounce Therapeutics (JNCE, Not Rated)
PerkinElmer (PKI, Not Rated)
Plexxikon (Daiichi Sankyo Group (DSNKY, Not Rated))
Celsion (CLSN, Not Rated)
Ziopharm Oncology (ZIOP, Not Rated)
Dendreon (Sunpower, Private)
Roche (RHBBY, Not Rated)
Amgen (AMGN, Not Rated)
GenMark Diagnostics, (GNMK, Not Rated)
Celsion (CLSN, Not Rated)
Curis (CRIS, Not Rated)
CytRx (CYTR,Not Rated)
Galena Biopharma (GALE, Not Rated)
ImmunoCellular Therapeutics (IMUC, Not Rated)
Northwest Bio (NWBO, Not Rated)
Osiris Therapeutics (OSIR, Not Rated)
Provectus (PVCT, Not Rated)
Rigel (RIGL, Not Rated)
Vical (VICL, Not Rated)
Celgene (CELG, Not Rated)
Five Prime Therapeutics (FPRX, Not Rated)

Robert M. Wasserman

OncoSec Medical, Inc.
Consolidated Statements of Income
(In 000s, except per share data)

FYE July	2014	2015	1Q16 October	2Q16 January	3Q16 April	4Q16 July	2016	1Q17 October	2Q17 January	3Q17 April	4Q17E July	2017E	2018E
Revenue	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Expenses													
Research and development	5,796	13,133	3,659	4,114	3,377	3,592	14,742	3,100	2,883	2,656	2,700	11,338	12,000
General and administrative	6,153	8,108	3,376	2,924	2,874	2,970	12,144	2,502	2,505	1,905	2,000	8,912	10,000
Total operating expenses	11,950	21,241	7,035	7,038	6,251	6,562	26,886	5,602	5,387	4,561	4,700	20,250	22,000
Income (loss) before income taxes	($11,950)	($21,241)	($7,035)	($7,038)	($6,251)	($6,562)	($26,886)	($5,602)	($5,387)	($4,561)	($4,700)	($20,250)	($22,000)
Income tax provision (benefit)	(62)	2	2	0	0	0	2	1	0	0	0	1	0
Net income (loss)	($12,012)	($21,243)	($7,037)	($7,038)	($6,251)	($6,562)	($26,889)	($5,604)	($5,387)	($4,561)	($4,700)	($20,252)	($22,000)
Basic income per share	($1.26)	($1.67)	($0.47)	($0.42)	($0.37)	($0.38)	($1.63)	($0.29)	($0.27)	($0.22)	($0.22)	($1.00)	($1.02)
Diluted income per share	($1.26)	($1.67)	($0.47)	($0.42)	($0.37)	($0.38)	($1.63)	($0.29)	($0.27)	($0.22)	($0.22)	($1.00)	($1.02)
Basic shares outstanding	9,527	12,709	14,863	16,762	16,971	17,463	16,515	19,021	19,733	20,704	21,200	20,165	21,500
Diluted shares outstanding	9,527	12,709	14,863	16,762	16,971	17,463	16,515	19,021	19,733	20,704	21,200	20,165	21,500
Key ratios:													
Revenue growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R&D/revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
G &A/revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tax Rate	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Deprec, amort & non-cash comp.	2,620	3,215	1,650	1,575	1,750	1,497	6,472	1,150	1,635	900	950	4,635	4,000
Cash Flow/share	($0.99)	($1.42)	($0.36)	($0.33)	($0.27)	($0.29)	($1.24)	($0.23)	($0.19)	($0.18)	($0.18)	($0.77)	($0.84)
EBITDA/share	($0.98)	($1.42)	($0.36)	($0.33)	($0.27)	($0.29)	($1.24)	($0.23)	($0.19)	($0.18)	($0.18)	($0.77)	($0.84)

Balance Sheets
($000s)

Assets:	7/31/16	4/30/17
Current Assets		
Cash and equivalents	$28,746	$16,106
Prepaid expenses and other current assets	671	987
Total current	29,417	17,093
Property and equipment, net	2,800	2,494
Other long-term assets	189	384
Total Assets	$32,407	$19,972
Liabilities:		
Current liabilities		
Accounts payable and accrued expenses	$3,223	$2,644
Accrued compensation	243	168
Total current	3,466	2,812
Other long-term liabilities	887	1,197
Total liabilities	4,354	4,009
Stockholders' equity	28,053	15,962
TOTAL LIAB & EQ	$32,407	$19,972

Quarterly Earnings Comparisons

	October	January	April	July	Total
Revenues (in $Mill)					
2014					0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017E	0	0	0	0	0
Earnings per Share (diluted)					
2014					(1.26)
2015	(0.33)	(0.38)	(0.48)	(0.48)	(1.67)
2016	(0.47)	($0.42)	(0.37)	($0.38)	(1.63)
2017E	(0.29)	($0.27)	(0.22)	($0.22)	(1.00)

Source: Dawson James Securities, Inc. estimates; Company documents

Important Disclosures:

Price Chart:

Price target and ratings changes over the past 3 years:
Initiated – Buy - July 5, 2017 – Price Target $5.00

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Ratings Definitions:

1) **Buy**: the analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
2) **Neutra**l: the analyst believes the price of the stock is fairly valued for the next 12-18 months;
3) **Sel**l: the analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	7	64%	2	29%
Market Perform (Neutral)	0	0%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Ratings Suspension*	4	36%	4	100%
Total	11	100%	6	55%

*Suspensions are ratings under review for possible change due to unusual market-moving news, and/or analyst departure/change

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