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Robert H. Pierce, MD, Chief Scientific Officer of OncoSec Medical, Invited to Present at 11th Annual PEGS Conference in Boston

Preliminary Results Suggest ImmunoPulse™ IL-12 May Generate Increased TILs and CD8+ T-Cell Infiltration in Merkel Cell Carcinoma and Melanoma Patients

SAN DIEGO, May 7, 2015 /PRNewswire/ -- OncoSec Medical Inc. ("OncoSec") (OTCQB: [ONCS](#)), a company developing DNA-based intratumoral cancer immunotherapies, presented preliminary findings indicating that ImmunoPulse™ IL-12 can increase tumor infiltrating lymphocytes (TILs) in patients with Merkel cell carcinoma and melanoma. ImmunoPulse™ IL-12, which employs intratumoral electroporation to enhance delivery of DNA-based interleukin-12 (IL-12), is designed to promote anti-tumor activity. These interim findings are consistent with preclinical data and support a rationale for combining ImmunoPulse™ IL-12 with anti-PD-1 and other checkpoint therapies.

Dr. Pierce was an invited speaker at the 11th Annual PEGS Conference in Boston. In his presentation, entitled: "Taking the Fight to the Tumor - A Rationale for Intratumoral Therapy in Combination with Anti-PD1 Blockade," Dr. Pierce described a role for intratumoral immunotherapy as a powerful means to reveal critical "private" tumor antigens and drive anti-tumor CD8+ responses. Specifically, Dr. Pierce described new cases from the single-agent ImmunoPulse™ IL-12 Phase I melanoma trial and Phase II Merkel cell carcinoma trial, which showed intratumoral electroporation of DNA-based IL-12 drove a CD8+ TIL response.

"Although preliminary, these observations from tumor samples obtained from patients with melanoma and Merkel cell carcinoma participating in our clinical trials point toward activation of anti-cancer immunity, providing additional evidence that OncoSec's intratumoral immunotherapies may play an important role in the future of cancer treatment," said Punit Dhillon, President and CEO of OncoSec. "We look forward to presenting further results at upcoming scientific conferences as we continue to analyze data from these trials."

OncoSec's collaborators at the University of Washington, Paul Nghiem, MD, PhD, and Shailender Bhatia, MD, are conducting an exploratory analysis of samples collected from patients in the Phase II single-agent study in Merkel cell carcinoma, which completed enrollment in January of this year. Final clinical results from the Phase II Merkel cell carcinoma study are expected later this year.

"While we continue to analyze the tumor samples from these trials, the preliminary findings are exciting and point to ImmunoPulse™ IL-12 doing what it's supposed to do: enhance immunogenicity and drive an anti-tumor TIL response," said Dr. Pierce. "Combined with the

preclinical data on IL-12 electroporation and our gene expression data from melanoma samples, I am increasingly confident that intratumoral expression of IL-12 is pushing the immune system in the right direction."

About Phase II Merkel Cell Carcinoma Study

This Phase II open-label, trial in Merkel cell carcinoma is evaluating the safety, preliminary intratumoral activity, and IL-12 protein expression following intratumoral injection of DNA-based IL-12 followed by electroporation in 15 patients with local and distant Merkel cell carcinoma. Other exploratory endpoints of the study include intratumoral biomarkers of inflammation. Enrollment in the study is complete.

About Phase I Melanoma Study

This Phase I open label dose escalation trial of DNA-based IL-12 electroporation was carried out to assess safety and explore anti-tumor activity in 24 patients with metastatic melanoma. Patients were treated at seven dose levels, with minimal systemic toxicity. Transient pain (Grades 1 and 2) associated with the electroporation procedure was the most frequently reported adverse event. Post-treatment biopsies showed plasmid increases in IL-12 protein levels as well as marked tumor necrosis and lymphocytic infiltrate. Two (10%) of 19 patients with nonelectroporated distant lesions that did not receive other systemic therapy had a complete response to therapy, including metastatic disease, whereas eight additional patients (42%) showed disease stabilization.

About PEGS: The Essential Protein Engineering Summit

PEGS is the premier event for antibody and protein science research, and the biologics industry with more than 1,800 participants in attendance from over 30 countries. This year's summit takes place in Boston from May 4-8, 2015 and features 21 conferences and 40 roundtable sessions. For more information, please visit www.pegsummit.com.

About OncoSec Medical Inc.

OncoSec Medical Inc. is a biopharmaceutical company developing its investigational ImmunoPulse™ intratumoral cancer immunotherapy. OncoSec Medical's core technology is designed to enhance the local delivery and uptake of DNA IL-12 and other DNA-based immune-targeting agents. Clinical studies of ImmunoPulse™ have demonstrated an acceptable safety profile and preliminary evidence of anti-tumor activity in the treatment of various skin cancers, as well as the potential to initiate a systemic immune response limiting the systemic toxicities associated with other treatments. OncoSec's lead program evaluating ImmunoPulse™ for the treatment of metastatic melanoma is currently in Phase II development, and is being conducted in collaboration with several prominent academic medical centers. As the company continues to evaluate ImmunoPulse™ in its current indications, it is also focused on identifying and developing new immune-targeting agents, investigating additional tumor indications, and evaluating combination-based immunotherapy approaches. For more information, please visit www.oncosec.com.

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funding, our ability to acquire, develop or commercialize new products, uncertainties inherent in pre-clinical studies and clinical trials, unexpected new data, safety and technical issues, competition, and market conditions. These and additional risks and uncertainties are more fully described in OncoSec Medical's filings with the Securities and Exchange Commission. Undue reliance should not be placed on forward-looking statements, which speak only as of the date they are made. OncoSec Medical disclaims any obligation to update any forward-looking statements to reflect new information, events or circumstances after the date they are made, or to reflect the occurrence of unanticipated events.

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