

PerkinElmer, UCLA and OncoSec Collaborate to Evaluate Patient-Selection Biomarker in Immunotherapy

SAN DIEGO – December 2, 2014 -- OncoSec Medical Inc. (OTCQB: ONCS), a company developing DNA-based intratumoral cancer immunotherapies, announced a collaboration with the University of California, Los Angeles (UCLA) and PerkinElmer, Inc. to help researchers develop biomarker tests to evaluate a patient's immune response to cancer. This research supports the ongoing shift in oncology toward therapeutic strategies that stimulate the patient's own immune defense system to combat cancer. The approach uses PerkinElmer's new imaging-based staining methods to quantitatively evaluate CD8+ T cell density in tumor biopsy research

Dr. Paul Tumei, 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®). Using quantitative image analysis, Tumei et al. demonstrated that the number of CD8+ T cells/mm² at the tumor margin was the feature most predictive of response and non-response to pembrolizumab. To view or purchase the article, please click [here](#). To view a copy of OncoSec's press release regarding this publication, please click [here](#).

Dr. Robert H. Pierce, Chief Scientific Officer at OncoSec Medical and a co-author of the *Nature* study, stated: "Dr. Tumei has demonstrated the potential of applying his highly quantitative approach to assessing the 'stalled' CD8+ lymphocytes, which are the key effector cells driving response to anti-PD-1 therapy. This work has the potential to identify responders from non-responders. Dr. Tumei's work, combined with PerkinElmer's technology, may lead to the development of a critical diagnostic tool for identifying non-responders to anti-PD-1 monotherapy. We believe these non-responders may benefit from a combination approach of ImmunoPulse with checkpoint inhibitors, like anti-PD-1, where ImmunoPulse has the potential to convert non-responders to responders."

PerkinElmer has developed a new 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. OncoSec believes there is a significant unmet medical need to develop combination therapies for patients who do not respond to checkpoint inhibitors, such as anti-PD-1 (or anti-PD-L1) as a monotherapy.

"The analytical needs of both UCLA and OncoSec are well aligned with our unique technical capabilities," said Brian Kim, President, Life Sciences & Technology, PerkinElmer. "This project complements our focus on enabling research to reveal the intricacies of immuno-oncologic interactions. Through this work with UCLA and OncoSec, we think we can make a

meaningful contribution toward assisting researchers in improving outcomes for patients.”

About OncoSec Medical

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 without the systemic toxicities associated with other treatments. OncoSec's lead program evaluating ImmunoPulse for the treatment of metastatic melanoma is currently in Phase 2 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.

About PerkinElmer

PerkinElmer, Inc. is a global leader focused on improving the health and safety of people and the environment. PerkinElmer reported revenue of approximately \$2.2 billion in 2013, has about 7,600 employees serving customers in more than 150 countries, and is a component of the S&P 500 Index. Additional information is available through 1-877-PKI-NYSE, or at www.perkinelmer.com.

This press release contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Any statements in this release that are not historical facts may be considered such “forward-looking statements.” Forward-looking statements are based on management’s current preliminary expectations and are subject to risks and uncertainties, which may cause our results to differ materially and adversely from the statements contained herein. Some of the potential risks and uncertainties that could cause actual results to differ from those predicted include our ability to raise additional 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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