OncoSec Medical Enrolls First Patient in Squamous Cell Carcinoma of the Head and Neck Phase II Clinical Trial

SAN DIEGO, June 16, 2015 /PRNewswire/ -- OncoSec Medical Inc. ("OncoSec") (NASDAQ: ONCS), a company developing DNA-based intratumoral cancer immunotherapies, announced today that the company has enrolled the first patient into OMS-I130, a Phase II clinical trial of ImmunoPulse™ IL-12 in patients with treatment-refractory, metastatic and unresectable squamous cell carcinoma of the head and neck (HNSCC). ImmunoPulse™ IL-12, which employs intratumoral electroporation to enhance delivery of DNA-based interleukin-12 (IL-12), is designed to promote an anti-tumor immune response.

"This study will address one of the great unmet medical needs in oncology today: the number of patients who do not respond to anti-PD-1 treatment," said Mai H. Le, MD, Chief Medical Officer of OncoSec. "As we expand the application of ImmunoPulse™ IL-12 beyond cutaneous cancer indications, we anticipate that it will augment the anti-tumor immune response in HNSCC and increase the number of patients who will respond to anti-PD-1 therapy."

Robert H. Pierce, MD, Chief Scientific Officer of Oncosec and a member of the anti-PD-1 Biomarker Team while at Merck, added, "Key biomarker data was recently presented at the 2015 American Society of Clinical Oncology (ASCO) annual meeting, showing that a specific NanoString®-based gene expression profile characterizes anti-PD-1 response in HNSCC. Importantly, at OncoSec, we have observed the ability of ImmunoPulse™ IL-12 to promote this NanoString® gene expression signature in melanoma, and we anticipate that this will be observed in HNSCC as well."

The lead investigators for OMS-I130 are Tanguy Seiwert, MD, from the University of Chicago and lead author of the presentation outlining the key gene signature for anti-PD-1 responders with HNSCC, and Alain Algazi, MD, from the University of California, San Francisco.

"Median overall survival in recurrent and metastatic HNSCC is less than one year even with aggressive, multi-agent chemotherapy. Immune checkpoint inhibitors, including anti-PD-1 antibodies, can achieve durable remissions in some patients, but these therapies are ineffective in the majority of patients because tumor-fighting immune cells and signals are missing from the tumor," said Dr. Algazi. "ImmunoPulse™ IL-12 allows tumors to produce key immune signals and attract these immune cells, which can potentially provide the missing link that will allow the majority of patients to achieve long-term remission."

OMS-I130 is a single-arm, open-label study evaluating the safety and anti-tumor activity of
intratumoral DNA-based IL-12 with electroporation in approximately 30 patients with
treatment-refractory metastatic and unresectable HNSCC. The key endpoints include:
objective response evaluations by RECIST v1.1 and immune-related Response Criteria
(irRC); biomarker comparisons of pre- and post-treatment tumor biopsies, including
NanoString® gene expression profiling and immunohistochemistry for tumor-infiltrating
lymphocytes (TILs); duration of response to treatment; overall survival; progression-free
survival; and safety.

To learn more about the trial, visit www.oncosec.com. Additional details can also be found
at www.clinicaltrials.gov.

About Squamous Cell Carcinoma of the Head and Neck
Squamous cell carcinoma (SCC) of the head and neck is one of most common causes of
cancer-associated mortality worldwide. While the incidence of SCC of the head and neck
(HNSCC) that is attributable to traditional risk factors, smoking and alcohol abuse, is
decreasing, the incidence of SCC of the oropharynx due to HPV infection is on the rise.¹

HNSCC can be treated with surgery, radiation, or chemoradiation in 60-90 percent of
patients, but a substantial number of patients will develop recurrent or distant metastatic
disease after locoregional therapy. These recurrences are associated with a poor overall
prognosis², and the median overall survival in patients with metastatic HNSCC is under a
year even with intensive combination chemotherapy.³

The limited efficacy of standard of care treatment options means that 11,500 patients die
every year from squamous cell carcinoma of the oral cavity and the oropharynx in the
United States alone.¹ There is a clear medical need in head and neck cancers for more
effective treatment options to minimize toxicity and improve efficacy.

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.

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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