December 3, 2020

OncoSec Announces Publication in International Journal of Surgery Case Reports

-- Expanded access program enables patient with immune checkpoint inhibitor resistant metastatic melanoma to be treated with TAVO™ + pembrolizumab

-- Patient with widely disseminated disease achieves responses in visceral tumors after extensive history of treatment failures

PENNINGTON, N.J. and SAN DIEGO, Dec. 3, 2020 /PRNewswire/ -- OncoSec Medical Incorporated (NASDAQ:ONCS) (the "Company" or "OncoSec"), a late-stage biotechnology company developing intratumoral cancer immunotherapies, today announced the online publication of a case study investigating the efficacy of TAVO (tavokinogene telseplasmid), a DNA plasmid-based interleukin-12 (IL-12), in combination with KEYTRUDA® (pembrolizumab) in a patient with checkpoint resistant advanced metastatic melanoma in the *International Journal of Surgery Case Reports*. The publication, authored by Yonatan Dollin, e*t al.,* is titled "Pembrolizumab and tavokinogene telseplasmid electroporation in metastatic melanoma."

Key findings of the case report include:

- All treated lesions resolved
- TAVO and intravenous KEYTRUDA led to a whole-body response
- Lymph node disease in the chest and lungs resolved
- Reduction in size of liver mass and pelvic lymph node disease were observed
- Brain metastasis remained stable

"As a surgical oncologist specializing in cutaneous disease, the powerful response seen in this patient far exceeded our expectations," said Dr. James Nitzkorski, M.D., FACS, Surgical Oncologist at Vassar Brothers Medical Center. "When treating patients who have failed every available therapy with such extensive disease, any survival benefit is meaningful, particularly when quality of life is preserved. A response of more than 18 months with significant disease regression in a patient with brain and liver metastases speaks volumes about the power of this drug. This is yet another example of the cruciality of robust expanded access programs, as they provide hope to patients who often do not meet the stringent inclusion clinical trial requirements."

The patient with stage IIB, pT3b (high-risk primary lesion without evidence of disease in the lymph nodes or distant metastatic disease measuring 2.01-4.00 mm with ulceration) was treated with primary tumor resection and was found to have a negative sentinel node biopsy. She developed regional recurrence that despite therapy continued to progress with skin

metastases and brain and liver lesions as well as disease in the lymph nodes of her lungs and groin. Stereotactic radiosurgery was used for the brain metastasis. TAVO and intravenous KEYTRUDA were used to treat groin lesions under the surface of the skin.

Daniel O'Connor, Chief Executive Officer of OncoSec, added, "We are thankful to have provided clinical benefit to this patient through the expanded access program, since she was not eligible to participate in our KEYNOTE-695 clinical trial due to her rheumatoid arthritis. TAVO and KEYTRUDA led to a complete response in her treated lesions and a response in her distant untreated lesions after she did not receive benefit from anti-PD-1 therapy or OPDIVO® (nivolumab) alone and in combination with YERVOY® (ipilimumab)." The results published here indicate that TAVO has the potential to activate the immune system in patients with cancer refractory to available treatments. We look forward to bringing TAVO to additional patients like this one, who are often ineligible to enroll in larger trials and who have no therapeutic options left if their cancer progresses on available treatments."

The full publication can be accessed here.

About TAVO™

OncoSec's gene therapy technology combines TAVO™ (tavokinogene telseplasmid), a DNA plasmid-based interleukin-12 (IL-12), with an intra-tumoral electroporation gene delivery platform to achieve endogenous IL-12 production in the tumor microenvironment that enables the immune system to target and attack tumors throughout the body. TAVO™ has demonstrated a local and systemic anti-tumor response in several clinical trials, including the pivotal Phase 2b trial KEYNOTE-695 for metastatic melanoma and the KEYNOTE-895 Phase 2 trial in triple negative breast cancer (TNBC). TAVO™ has received Orphan Drug and Fast-Track Designation by the U.S. Food & Drug Administration (FDA) for the treatment of metastatic melanoma following progression on KEYTRUDA® or OPDIVO®.

About OncoSec Medical Incorporated

OncoSec Medical Incorporated (the "Company," "OncoSec," "we" or "our") is a late-stage biotechnology company focused on developing cytokine-based intratumoral immunotherapies to stimulate the body's immune system to target and attack cancer. OncoSec's lead immunotherapy investigational product candidate – TAVO™ (tavokinogene telseplasmid) – enables the intratumoral delivery of DNA-based interleukin-12 (IL-12), a naturally occurring protein with immune-stimulating functions. The technology, which employs electroporation, is designed to produce a controlled, localized expression of IL-12 in the tumor microenvironment, enabling the immune system to target and attack tumors throughout the body. OncoSec has built a deep and diverse clinical pipeline utilizing TAVO™ as a potential treatment for multiple cancer indications either as a monotherapy or in combination with leading checkpoint inhibitors; with the latter potentially enabling OncoSec to address a great unmet medical need in oncology: anti-PD-1 non-responders. Results from recently completed clinical studies of TAVO™ have demonstrated a local immune response, and subsequently, a systemic effect as either a monotherapy or combination treatment approach along with an acceptable safety profile, warranting further development. In addition to TAVO™, OncoSec is identifying and developing new DNA-encoded therapeutic candidates and tumor indications for use with its new Visceral Lesion Applicator (VLA), to target deep visceral lesions, such as liver, lung or pancreatic lesions. For more information, please visit www.oncosec.com. TAVO™ is a trademark of OncoSec Medical Incorporated.

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KEYTRUDA® is a registered trademark of Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc.

OPDIVO® is a registered trademark of Bristol-Myers Squibb Company.

YERVOY® is a registered trademark of Bristol-Myers Squibb Company.

Risk Factors and Forward-Looking Statements
This release, as well as other information provided from time to time by the Company or its employees, may contain forward-looking statements that involve a number of risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Forward-looking statements provide the Company's current beliefs, expectations and intentions regarding future events and involve risks, uncertainties (some of which are beyond the Company's control) and assumptions. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "should," "will" and "would" and similar expressions (including the negative of these terms). Although we believe that expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. The Company intends these forward-looking statements to speak only at the time they are published on or as otherwise specified and does not undertake to update or revise these statements as more information becomes available, except as required under federal securities laws and the rules and regulations of the Securities Exchange Commission ("SEC"). In particular, you should be aware that the success and timing of our clinical trials, including safety and efficacy of our product candidates, patient accrual, unexpected or expected safety events, the impact of COVID-19 on the supply of our candidates or the initiation or completion of clinical trials and the usability of data generated from our trials may differ and may not meet our estimated timelines. Please refer to the risk factors and other cautionary statements provided in the Company's Annual Report on Form 10-K for the fiscal year ended July 31, 2020 and subsequent periodic and current reports filed with the SEC (each of which can be found at the SEC's website www.sec.gov), as well as other factors described from time to time in the Company's filings with the SEC.

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