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OncoSec Announces Positive Clinical Data of the KEYNOTE-695 Trial Assessing TAVO-EP in Combination with Pembrolizumab (Keytruda®) in Patients with Advanced Melanoma Refractory to anti-PD-1 Treatment

PENNINGTON, N.J. and SAN DIEGO, Nov. 11, 2022 /PRNewswire/ -- OncoSec Medical Incorporated (NASDAQ: ONCS) (the "Company" or "OncoSec"), a clinical-stage biotechnology company developing intratumoral immunotherapies that stimulate the patient's immune system to target cancer cells and eradicate disease, today announced data from the Phase 2 KEYNOTE-695 clinical trial. This global, open-label single-arm trial is evaluating TAVO™, OncoSec's proprietary IL-12 encoding plasmid delivered by intratumoral electroporation (TAVO™-EP), in combination with pembrolizumab in patients with unresectable or metastatic (Stage III/IV) melanoma who had progressed on immediate prior anti-PD-1 antibody therapy (pembrolizumab or nivolumab). The last patient started treatment in December 2020, and clinical database lock occurred in October 2022.

The key secondary endpoint of KEYNOTE-695 was met. Investigator assessment of overall response rate (ORR) per RECIST v1.1, from 101 efficacy evaluable patients, with at least one post-baseline tumor assessment, showed a confirmed ORR of 18.8% (95% confidence interval: 11.7, 22.8), which exceeds the pre-specified clinically meaningful ORR of ≥17% (95% CI: 10.2, 25.8).

Three patients achieved a complete response (CR) and 16 patients had a partial response (PR). Of note, 2 patients with CR had discontinued treatment with immediate prior nivolumab/ipilimumab. The disease control rate (CR + PR + stable disease) was 40.6%. The investigator-assessed durable response rate of ≥24 weeks was 15.8%, the median duration of response had not been reached. The median overall survival was 22.7 months (95% CI: 14.4, 35.5) after a median follow-up period of 33.4 months. The trial enrolled and collected safety data on 105 patients who had received at least 12 weeks of anti-PD-1 treatment and had confirmed disease progression. The combination therapy was generally well tolerated with no Grade 4/5 treatment-related adverse events (TRAEs). Grade 3 TRAEs were observed in 4.8% of patients.

Top-line results of the primary endpoint of the KEYNOTE-695 trial, ORR by blinded, independent central review (BICR) based on RECIST v1.1, are expected to be announced in the first quarter of 2023.

"Patients with PD-1 refractory melanoma have limited treatment options. Therefore, we are encouraged by the observed response to treatment with TAVO™-EP and pembrolizumab in

this difficult to treat patient segment," said Robert Arch, Ph.D., Chief Executive Officer of OncoSec. "In addition to the ORR of 18.8% in the full trial population of KEYNOTE-695, we are intrigued by the observed 19.5% investigator-assessed ORR, including 2 CRs and 6 PRs, in a subset of 41 patients who had prior exposure to ipilimumab (anti-CTLA-4 antibody) in addition to anti-PD-1 therapy. The data of TAVO™-EP combination treatment in patients who had failed multiple checkpoint inhibitors is encouraging and speaks to the differentiation of our TAVO™-EP approach from checkpoint inhibitors and other immunotherapies. I want to thank all patients who participated in the trial and our team at OncoSec that remains focused on developing TAVO™-EP as a novel intratumoral treatment approach for cancer patients with unmet medical needs."

Adil Daud, MD, Professor; UCSF Helen Diller Family Comprehensive Cancer Center commented on the data: "Patients with unresectable advanced melanoma who have progressed on prior anti-PD-1 therapy are not expected to gain benefit from retreatment with anti-PD-1 therapy. Therefore, the KEYNOTE-695 data highlight the value of intratumoral IL-12 as treatment for patients with checkpoint inhibitor refractory melanoma. Importantly, TAVO™-EP in combination with pembrolizumab in this highly refractory patient population with no standard-of-care treatment options showed durable responses and good tolerability. These data suggest that TAVO™-EP combined anti-PD-1 antibodies could make a major difference for a group of patients with a high unmet medical need."

About OncoSec Medical Incorporated

OncoSec Medical Incorporated (the "Company," "OncoSec," "we" or "our") is a biotechnology company focused on developing intratumoral immunotherapies to stimulate the patient's immune system to target cancer cells and eradicate disease. 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 therapeutic approach TAVO™-EP, which employs electroporation, is designed to produce a localized expression of IL-12 in the tumor microenvironment and, thereby, stimulate the immune system to target and attack tumors. OncoSec's clinical pipeline is utilizing TAVO™ as a potential treatment for multiple cancer indications either as a monotherapy or in combination with checkpoint inhibitors; with the latter potentially enabling OncoSec to address a great unmet medical need in oncology: anti-PD-1 non-responders. Results from completed clinical trials of TAVO™ have demonstrated a local immune response, and subsequently, a systemic effect as either a monotherapy or combination treatment approach along with a well-tolerated safety profile, warranting further development of TAVO™-EP. For more information, please visit www.oncosec.com.

TAVO™ is a trademark of OncoSec Medical Incorporated.

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 timing of release of top-line results of the primary endpoint of the KEYNOTE-695 trial, ORR by BICR based on RECIST v1.1 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, 2022 and any 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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