



TScan Therapeutics Announces Publication in *Cell* Highlighting the Discovery of Tumor Antigens and TCRs for the Treatment of Solid Tumors Using Foundational Screening Technology

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TScan screening technology used to identify the targets of expanded T cell clones in the tumors of patients with head and neck cancer responding to neoadjuvant immunotherapy

*TCR for C*07:02-restricted epitope on MAGE-A1 forms the basis of TScan's TSC-204-C07 TCR-T therapeutic candidate for the treatment of solid tumors*

Paper published in collaboration with lead authors Kai W. Wucherpfennig, M.D., Ph.D., Director, Center for Cancer Immunology Research, Dana-Farber Cancer Institute and Jonathan D. Schoenfeld, Associate Professor, Radiation Oncology, Harvard Medical School

WALTHAM, Mass., July 11, 2022 (GLOBE NEWSWIRE) -- TScan Therapeutics, Inc. (Nasdaq: TCRX), a clinical-stage biopharmaceutical company focused on the development of T cell receptor (TCR) engineered T cell therapies (TCR-T) for the treatment of patients with cancer, today announced the publication of a peer-reviewed article titled, "[Tissue-resident Memory and Circulating T cells are Early Responders to Pre-surgical Cancer Immunotherapy](#)" in the journal *Cell*. The data highlight the ability of TScan's unbiased, genome-wide screening technology to identify novel target antigens and highly active TCRs for adoptive T cell cancer therapies, including the TCR that has now become the Company's therapeutic candidate TSC-204-C07 for MAGE-A1.

This publication details the characterization of tumor-infiltrating and circulating T cells in oral cancer patients treated with neoadjuvant anti-PD-1 or anti-PD-1/CTLA-4 in a Phase 2 open-label randomized clinical trial conducted by the Dana-Farber Cancer Institute, Brigham and Women's Hospital and Harvard Medical School¹. Single cell analysis revealed that tumor-infiltrating CD8 T cells that expanded upon treatment with checkpoint blockade exhibited specific and identifiable gene expression signatures. Analysis of the TCRs of these expanded T cells using TScan's screening technology revealed several novel targets. In one responding patient, two different T cell clones recognized the same novel C*07:02-restricted epitope on the cancer/testis antigen MAGE-A1, and both TCRs exhibited strong anti-cancer activity. One of these TCRs forms the basis of TScan's therapeutic candidate TSC-204-C07 for MAGE-A1, with an IND filing planned for the second half of 2022.

"We are very pleased that our screening technology successfully identified the targets of expanded T cell clones in these responding patients," said Gavin MacBeath, Ph.D., Chief Scientific and Operations Officer. "This validates the founding principle of TScan – that we can use our technology to understand how T cells recognize and eliminate cancer cells in patients responding to immunotherapy, and then apply these learnings to design and develop novel TCR-engineered T cell therapies."

"This publication builds on our recent presentation at ASGCT, where we outlined our approach to treating solid tumors," said David P. Southwell, President and Chief Executive Officer. "This specific TCR-T cell therapy candidate, TSC-204-C07, is highly active in preclinical models. We look forward to bringing it to patients in the first half of next year, along with TSC-200-A2, our first TCR candidate for HPV-16. This will enable us to begin in 2023 to execute on our strategy to develop multiplexed TCR-T cell therapy for a wide range of solid tumor malignancies."

The *Cell* article was published in collaboration with lead authors Kai W. Wucherpfennig, M.D., Ph.D. Chair, Cancer Immunology and Virology and Director, Center for Cancer Immunology Research at the Dana-Farber Cancer Institute, Professor of Neurology, Brigham and Women's Hospital and Harvard Medical School, and Associate Member, Broad Institute of MIT and Harvard, along with Jonathan D. Schoenfeld, Associate Professor, Radiation Oncology, Harvard Medical School and Radiation Oncologist at both Brigham and Women's Hospital and the Dana-Farber Cancer Institute. In total, 29 patients with untreated squamous cell carcinoma of the oral cavity were enrolled in this Phase 2 study between 2016 and 2019.

About TScan Therapeutics, Inc.

TScan is a clinical-stage biopharmaceutical company focused on the development of T cell receptor (TCR) engineered T cell therapies (TCR-T) for the treatment of patients with cancer. The Company's lead leukemia TCR-T therapy candidates, TSC-100 and TSC-101, are in development for the treatment of patients with hematologic malignancies to eliminate residual leukemia and prevent relapse after hematopoietic stem cell transplantation. The Company is also developing multiplexed TCR-T therapy candidates for the treatment of various solid tumors. The Company has developed and continues to build its ImmunoBank, the Company's repository of therapeutic TCRs that recognize diverse targets and are associated with multiple HLA types in order to provide customized multiplexed TCR-T therapies for patients with a variety of solid tumors.

Forward-Looking Statements

This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, express or implied statements regarding current and future research and development plans or expectations, the structure, timing and success of the Company's planned preclinical development, submission of INDs, the potential benefits of any of the Company's proprietary platforms or current or future product candidates in treating patients, and the Company's goals, strategy, and focus. TScan intends such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terms such as, but not limited to, "may," "might," "will," "objective," "intend," "should," "could," "can," "would," "expect," "believe," "anticipate," "project," "target," "design," "estimate," "predict," "potential," "plan," "on track," or similar expressions or the negative of those terms. Such forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions, and uncertainties. The express or implied forward-looking statements

included in this release are only predictions and are subject to a number of risks, uncertainties and assumptions, including, without limitation: the beneficial characteristics, safety, efficacy, therapeutic effects and potential advantages of TScan's TCR-T therapy candidates; TScan's expectations regarding its preclinical studies being predictive of clinical trial results; the timing of the initiation, progress and expected results of TScan's preclinical studies, clinical trials and its research and development programs; TScan's plans relating to developing and commercializing its TCR-T therapy candidates, if approved, including sales strategy; estimates of the size of the addressable market for TScan's TCR-T therapy candidates; TScan's manufacturing capabilities and the scalable nature of its manufacturing process; TScan's estimates regarding expenses, future milestone payments and revenue, capital requirements and needs for additional financing; TScan's expectations regarding competition; TScan's anticipated growth strategies; TScan's ability to attract or retain key personnel; TScan's ability to establish and maintain development partnerships and collaborations; TScan's expectations regarding federal, state and foreign regulatory requirements; TScan's ability to obtain and maintain intellectual property protection for its proprietary platform technology and our product candidates; the sufficiency of TScan's existing capital resources to fund its future operating expenses and capital expenditure requirements; and the effect of the COVID-19 pandemic, including mitigation efforts and political, economic, legal and social effects, on any of the foregoing or other aspects of TScan's business or operations; and other factors that are described in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of TScan's most recent Annual Report on Form 10-K and any other filings that TScan has made or may make with the SEC in the future. Any forward-looking statements contained in this release represent TScan's views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Except as required by law, TScan explicitly disclaims any obligation to update any forward-looking statements.

This press release contains hyperlinks to information that is not deemed to be incorporated by reference in this press release.

¹Schoenfeld J et al (2020) *JAMA Oncol*, **6**, 1563

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