TScan Therapeutics Announces Upcoming Presentations at the 25th American Society of Gene and Cell Therapy Annual Meeting

May 2, 2022

Company to host a virtual KOL event to discuss highlights from the meeting on Thursday, May 19, 2022, at 4:30 p.m. ET

WALTHAM, Mass., May 02, 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 acceptance of three abstracts at the upcoming American Society of Gene and Cell Therapy (ASGCT) Annual Meeting, being held from May 16-19, 2022, both in Washington D.C. and virtually. Following the meeting, TScan will host a virtual KOL event on Thursday, May 19, 2022, at 4:30 p.m. ET to discuss the presentations and plans for its solid tumor program. Details for joining the live event can be found below.

Poster presentations:

Title: Discovery of TSC-200-A02: A natural HPV16 E7-specific TCR-T cell therapy candidate for the treatment of HPV-positive solid tumors
Presenter: Gavin MacBeath
Poster Number: M-198
Abstract Number: 317
Session: Cancer – Immunotherapy, Cancer Vaccines I
Date & Time: Monday, May 16, 2022 5:30-6:30 p.m. ET
Location: Hall D

Summary: Human papilloma virus (HPV)16 E7 oncoprotein is homogenously expressed in every tumor cell of HPV16 positive tumors, is essential for tumor cell survival, and is not expressed by healthy tissues. Using TScan's proprietary *ReceptorScan* platform, the Company identified a lead TCR. The lead TCR showed comparable preclinical activity to a therapeutic TCR from NCI, that has previously shown a 50% objective response rate in a Phase I clinical trial. No allo-reactivity was observed for the HLAs tested and only a few putative off-targets were identified using our genome-wide *SafetyScan* platform. The lead TCR showed no reactivity to primary healthy tissues expressing these putative off-targets during *in vitro* co-culture experiments indicating minimal off-tumor reactivity risk. To further enhance the function of the therapeutic T cell product, TScan is designing a transposon-based vector that can deliver the TCR gene, along with the genes for CD8α/β and dominant-negative form of TGFβRII, into both $CD4^+$ and $CD8^+$ T cells. The resulting TCR-T cell therapy candidate, TSC-200-A02, is expected to complete IND-enabling studies in the second half of 2022. These results validate the use of *ReceptorScan* and *SafetyScan* as a way to rapidly identify naturally occurring, high affinity TCRs suitable for clinical development.

Title: Multiplexed TCR-T cell therapy: A strategy to enhance the efficacy of engineered T cell therapy
Presenter: Gavin MacBeath
Poster Number: W-221
Abstract Number: 1095
Session: Cancer – Immunotherapy, Cancer Vaccines III
Date & Time: Wednesday, May 18, 2022 5:30-6:30 p.m. ET
Location: Hall D

Summary: Adoptive Cell Transfer with genetically engineered T cells holds great promise for treating solid tumors, but by targeting only one antigen at a time, complete responses have been rare and are often short-lived due to heterogeneous expression of cancer associated antigens and HLA loss-of-heterozygosity. TScan's multiplexed TCR-T cell therapy across multiple target antigens and HLA molecules mimics the natural oligoclonal T cell response to cancer and provides a way to address some of the major challenges associated with resistance to adoptive cell therapy. Using two TCRs to target mixed tumor cell cultures with heterogenous antigen expression, synergistic cytotoxicity was achieved in which the presence of one TCR-T/target cell pair enhanced the activity of the other TCR-T against its target; this effect was mediated via secreted soluble factors. The findings support the hypothesis that multiplexed TCR-T has the potential to overcome antigen heterogeneity not only through independent targeting of different target cells in the same tumor, but also by cytokine-mediated enhancement of each T cell's response.

Oral presentation:

Title: Discovery of a novel C*07:02-restriced epitope on MAGE-A1 and pre-clinical development of an enhanced TCR-T cell therapy candidate for the treatment of solid tumors
Presenter: Gavin MacBeath
Abstract Number: 852
Session: Cell-based Cancer Immunotherapies II
Date & Time: Wednesday, May 18, 2022 5:00-5:15 p.m. ET
Location: Salon G

Summary: Immune checkpoint therapy can enhance anti-tumor activity of T cells, leading to durable responses in a subset of cancer patients. Using the Company's proprietary *TargetScan* platform, the Company identified TCRs and cancer antigens from a head and neck cancer patient who exhibited substantial tumor reduction after only 8 weeks of checkpoint therapy. A TCR directed to a novel C*07:02-restricted epitope of MAGEA1 was identified as a potential driver of the anti-tumor response. These results suggest that *TargetScan* can identify relevant tumor antigens and TCRs from

expanded T cell repertoires of patients exhibiting strong and durable responses to checkpoint therapy, thereby providing suitable TCRs for clinical development. The Company has advanced this TCR-T to IND enabling studies as TSC-204-C07.

A copy of the presentation materials will be added to the "Events and Presentations" section of the Company's Investor Relations website at www.ir.tscan.com once presentations have concluded.

Webcast Details

TScan will host a webcast Thursday, May 19, 2022, at 4:30 p.m. ET. The event will provide a summary of the ASGCT posters and oral presentation as well as a discussion of TScan's solid tumor programs. The featured speaker will be Kai 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. The presentation will be followed by a question-and-answer session.

The live audio webcast and accompanying slides may be accessed through the Events and Presentations page in the Investors section of the Company's website at www.tscan.com. Registration for the event is available here. For those unable to participate in the live webcast, a replay will be available on the Investor section of the Company's website at https://ir.tscan.com/news/events-and-presentations.

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 liquid tumor 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 diverse bank of therapeutic TCRs that recognize diverse targets and are associated with multiple HLA types in order to provide a broad array of therapeutic options for patients with various types 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 and clinical trials, 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, business plans and focus, among other things. 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 Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 9, 2022 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.

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