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ImmunoCellular Therapeutics Enters into Research Agreement with Stanford University to Advance Stem-to-T-Cell Program

LOS ANGELES, Feb. 16, 2016 /PRNewswire/ -- ImmunoCellular Therapeutics, Ltd. ("ImmunoCellular") (NYSE MKT: IMUC) today announced it has entered into an agreement with Stanford University for an option to evaluate and license intellectual property related to the identification of T cell receptors (TCRs) developed in the laboratory of Prof. Mark Davis, Director, Stanford Institute for Immunity, Transplantation and Infection, and The Burt and Marion Avery Family Professor of Immunology at Stanford University School of Medicine.



Creation of a pure population of T cells, based on targeted screening for specific features, such as affinity to tumor antigens and anti-tumor activity, enables isolation of a single population of TCRs, which can then be sequenced. The DNA from these isolated TCRs can be transferred into stem cells, such as hematopoietic stem cells that are harvested from a cancer patient, with the goal of creating a population of antigen-specific killer T cells that can target and kill tumors. Gaining access to this cutting-edge TCR identification technology has the potential to advance ImmunoCellular's Stem-to-T-cell program and accelerate the Company's ability to develop preclinical therapeutic candidates.

"ImmunoCellular's Stem-to-T-cell program is a valuable asset that has the potential to advance cancer immunotherapy to the next level," said Steven Swanson, PhD, ImmunoCellular Senior Vice President, Research. "Our strategy is to integrate complementary breakthrough technologies by using modified stem cells from the patient to develop antigen-specific killer T cells that can directly attack and potentially eradicate tumors and prevent their recurrence. The option to license Stanford's technology in this area is a major milestone along the path of advancing a pipeline of novel immune-oncology products."

"We are pleased that our Stem-to-T-cell program is leveraging the work of prestigious academic and medical institutions that include some of the major leaders in cancer stem cell research," said Andrew Gengos, ImmunoCellular Chief Executive Officer. "We intend to continue to expand our program with additional high value collaborations and bring additional promising technologies into ImmunoCellular."

About ImmunoCellular's Stem-to-T-Cell Program

ImmunoCellular's dendritic cell-based immunotherapy platform and its Stem-to-T-cell platform represent complementary approaches that lead to the same result: to kill the tumor by creating a population of antigen specific T cells that can specifically recognize and kill cancer cells as well as cancer stem cells.

Dendritic cell-based immunotherapies creates a dendritic cell outside of the patient's body, using the patient's own white blood cells which, when reintroduced into the patient's body, are programmed to find the killer T cells and essentially teach them what to look for in the cancer and kill cancer cells.

In contrast, based on the technology in-licensed from The California Institute of Technology last year, ImmunoCellular's Stem-to-T-cell program starts with hematopoietic stem cells, harvested from the patient, which are then engineered outside of the patient's body such that when they are reintroduced, they divide into themselves, and into daughter cells which are antigen-specific killer T cells.

ImmunoCellular's Stem-to-T-cell program is designed to harness the power of the immune system in highly directed and specific ways to engineer highly antigen-specific tumor killing. At the core of the Stem-to-T-cell technology is harvesting stem cells from cancer patients and then cloning into them T cell receptors that are specific for cancer cells. These engineered stem cells will then be reintroduced into the patient and are pre-programmed to produce daughter cells that are antigen specific killer T cells that are capable of identifying, binding to, and killing cancer cells. Because stem cells are immortal, these reengineered stem cells could provide a natural and perpetual source of T cells that can target and destroy cancer cells in the patient.

An important component of the Stem-to-T-cell program is identification and selection of a T cell receptor that is capable of binding to tumor cells. It is this T cell receptor that will be transferred into the hematopoietic stem cell, and that allows the stem cell to produce cytotoxic T cells that can bind and kill tumor cells.

About ImmunoCellular Therapeutics, Ltd.

ImmunoCellular Therapeutics, Ltd. is a Los Angeles-based clinical-stage company that is developing immune-based therapies for the treatment of brain and other cancers. The phase 3 registrational trial of lead product candidate, ICT-107, a dendritic cell-based immunotherapy targeting multiple tumor-associated antigens on glioblastoma stem cells, is open for patient screening. ImmunoCellular's pipeline also includes: ICT-121, a dendritic cell immunotherapy targeting the CD133 antigen on stem cells in recurrent glioblastoma; ICT-140, a dendritic cell immunotherapy targeting antigens on ovarian cancer stem cells; and the Stem-to-T-cell research program which engineers the patient's hematopoietic stem cells to generate antigen-specific cancer-killing T cells.

Forward-Looking Statements for ImmunoCellular Therapeutics

This press release contains certain forward-looking statements, including statements regarding the development and commercialization of ICT-107, initiation of a phase 3 study of ICT-107, the advancement of the ICT-121 phase 1 trial, the development of the Company's preclinical Stem-to-T-cell and related research and collaborative program efforts and its ability to achieve other clinical, operational and financial goals. These statements are based on ImmunoCellular's current expectations and involve significant risks and uncertainties, including those described under the heading "Risk Factors" in ImmunoCellular's most recently filed quarterly report on Form 10-Q and annual report on Form 10-K. Except as required by law, ImmunoCellular undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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