

New Study Shows ImmunoCellular Therapeutics' Lead Investigational Cancer Vaccine ICT-107 Targets Cancer Stem Cells

Breakthrough finding suggests potential of ICT-107 to harness immune system to fight cancer recurrence

LOS ANGELES, CA – January 20, 2010 – ImmunoCellular Therapeutics Ltd. (OTCBB: IMUC), today announced the results of a study in which it was shown that certain specific antigens are highly expressed on cancer stem cells (CSCs). This suggests that IMUC's lead cancer vaccine product candidate ICT-107, which targets those antigens, may effectively target not only the cells that make up the bulk of certain cancerous tumors, but also the CSCs that are widely believed to give rise to them and cause their recurrence.

The CSCs used in IMUC's study were isolated from the tumors of five patients with glioblastoma multiforme (GBM), the most common and aggressive type of brain cancer. These CSCs were found to have significantly higher expressions of three antigens targeted by ICT-107—Her-2/neu, AIM2, and TRP-2—than the cells that make up the bulk of the tumor.

“This new evidence that ICT-107 may arm the immune system against cancer stem cells—in addition to the cells that make up the rest of the tumor—builds on the strong data from our Phase I study of the vaccine in glioblastoma,” said John Yu, MD, IMUC's Chairman and Chief Scientific Officer. “We believe that the ability to target cancer stem cells is critical to preventing disease recurrence.”

Manish Singh, PhD, President and CEO of IMUC, added, “Cancer stem cells are like the roots of weeds—they may be undetectable after the tumor is resected, but if they are not effectively targeted, the tumor will almost certainly come back. We believe the ability of ICT-107 to target cancer stem cells meaningfully differentiates it from other cancer vaccines in development.” In a recent Phase I study of ICT-107 in GBM, newly diagnosed patients who received the vaccine demonstrated a 12-month increase in progression-free survival (PFS) after surgery. This compared favorably with the historical median PFS of 6.9 months observed with standard treatment with surgery, radiation and chemotherapy. Seven of the 16 patients who participated in the study continue to survive with no disease progression after more than two years.

ICT-107 is a dendritic-cell based vaccine that works by activating a patient's immune system against specific tumor-associated antigens. This is accomplished by extracting dendritic cells from a patient, loading them with the antigens, and reintroducing them to the patient's body to trigger an immune response.

The six tumor-associated antigens used in ICT-107 are AIM2, Her-2/neu, gp-100, MAGE-1, TRP-2 and IL13Ra2. These antigens are highly expressed in GBM as well as a number other types of cancer, including breast, pancreatic, colon and melanoma. ICT-107 may, therefore, be applicable to multiple cancer types.

About ImmunoCellular Therapeutics, Ltd.

IMUC is a Los Angeles-based clinical-stage company that is developing immune-based therapies for the treatment of brain and other cancers. The Company recently completed a Phase I trial of its lead product candidate, ICT-107, a dendritic cell-based vaccine targeting multiple tumor associated antigens for glioblastoma. The Company is planning to initiate a multicenter phase II study in the second half of 2010. The Company's "off the shelf" therapeutic vaccine product candidate (ICT-121) targeting cancer stem cells for multiple cancer indications is targeted by IMUC to enter clinical trials for glioblastoma during the second half of 2010. IMUC has entered into a research and license option deal with the Roche Group for one of the Company's monoclonal antibody product candidates for the diagnosis and treatment of ovarian cancer and multiple myeloma, which provides for potential licensing and milestone payments of \$32MM and royalties if the Roche Group exercises its option and commercializes this antibody technology for multiple indications. IMUC is in pre-clinical development of another monoclonal antibody product candidate for the treatment of small cell lung cancer and pancreatic cancer, and is also evaluating its platform technology for monoclonal antibody discovery to target cancer stem cells. To learn more about IMUC, please visit www.imuc.com.

Forward-Looking Statements

This press release contains certain forward-looking statements that are subject to a number of risks and uncertainties, including without limitation, the risks associated with the potential inability to obtain licenses from third parties that will be needed to commercialize ICT-107 in many major commercial territories; the potential inability to secure a partner to fund development and marketing of ICT-107; the risk that future trials of ICT-107, if any, do not confirm the safety and efficacy data generated in the Phase I trial; the uncertainty of outcomes in developing cancer treatments based on destroying cancer stem cells; the need to satisfy performance milestones to maintain the vaccine technology licenses with Cedars-Sinai; the risks associated with obtaining a patent that provides commercially significant protection for ICT-107; and the need for substantial additional capital to fund development of product candidates beyond their initial clinical or pre-clinical stages and to continue IMUC's operations. Additional risks and uncertainties are described in IMUC's most recently filed SEC documents, such as its most recent annual report on Form 10-K, all quarterly reports on Form 10-Q and any current reports on Form 8-K. IMUC undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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