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## ImmunoCellular Therapeutics Announces Achievement of Next Key Milestone in Stem-to-T-Cell Research Immuno-Oncology Program

LOS ANGELES, April 12, 2018 /PRNewswire/ -- ImmunoCellular Therapeutics, Ltd. ("ImmunoCellular" or the Company) (NYSE American: IMUC) announced today that it has been able to verify successful transfer of the selected T cell receptor genetic material into human hematopoietic stem cells. This milestone represents the next important step in validating the Stem-to-T-Cell approach, and is a key component of the proof-of-concept work for this technology. This achievement is a key next step to begin preclinical testing. ImmunoCellular's Stem-to-T-Cell technology is designed to stimulate the patient's immune system to produce an unlimited supply of killer T cells that specifically target and destroy tumor cells with minimal side effects.



At the end of 2017, the research team at ImmunoCellular successfully transfected genetic material into human hematopoietic stem cells. That work was the basis for this most recent achievement. Successful completion of this phase of work enables the Company to begin preclinical testing in animals, which, if successful, could allow ImmunoCellular's Stem-to-T-Cell technology to advance into human clinical testing.

"We are excited to have achieved this critical next milestone in our Stem-to-T-Cell program, and are excited to begin the preclinical animal testing that can lay the foundation for potentially proceeding toward conducting human clinical trials," said Steven J. Swanson, PhD, Senior Vice President, Research. "We and our collaborators are now working to design and implement the necessary animal studies to complete our proof-of-concept work. Our vision is to develop solutions for intractable cancers, extend the lives of cancer patients, and provide hope for a potential cure. We believe that our Stem-to-T-Cell program is potentially a game-changing treatment for cancer, and could be effective in treating many types of cancers."

Anthony J. Gringeri, PhD, President and Chief Executive Officer commented: "We are pleased with the productivity and achievements to date of our research team and the continued generation of scientific validation of our Stem-to-T-Cell program. Continued testing of our novel immuno-oncology technology may elucidate how it can be applied in a real-world therapeutic setting, and lead the way toward conducting clinical trials, including potential exploration of combination with other approaches. From a corporate perspective, we are pleased with our ability to achieve our research goals while continuing to operate in a cost-efficient manner. We are also continuing to explore potential collaborations for our clinical programs and other strategic alternatives for our Company."

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

Based on the technology in-licensed from The California Institute of Technology in 2014 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 the harvesting of stem cells from cancer patients and then cloning into them T cell receptors that are specific for cancer cells. These engineered stem cells can then be reintroduced into the patient and are pre-programed 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.

The Stem-to-T-Cell platform has the potential to address many types of cancer, including both solid and hematological tumors and has the potential to result in a potentially curative therapy for many different types of cancers. The stem cell platform represents a novel and more direct approach to generating killer T cells by using the patient's stem cells as starting material. Thus, ImmunoCellular's Stem-to-T-Cell technology shares some similarities with other immuno-oncology technologies, such as CAR-T, and could potentially be used in combination approaches. Unlike CAR-T therapies which deliver a large bolus of active T cells into the patient's circulation and have been associated with toxicity in some patients, ImmunoCellular's approach enables a more gradual and measured release of killer T cells and has the potential for lower toxicity while also yielding a more sustained response.

## 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. ImmunoCellular's pipeline includes: a Stem-to-T-Cell research program, which engineers hematopoietic stem cells to generate cytotoxic T cells; ICT-121, a patient-specific, dendritic cell-based immunotherapy targeting CD133 found in recurrent glioblastoma; and ICT-140, a patient-specific, dendritic cell-based immunotherapy targeting ovarian cancer. ImmunoCellular recently announced the wind down of its phase 3 trial of ICT-107 in HLA-A2 patients while it pursues a collaborative arrangement or sale of its ICT-107 program. To learn more about ImmunoCellular, please visit [www.imuc.com](http://www.imuc.com).

## Forward-Looking Statements for ImmunoCellular Therapeutics

This press release contains certain forward-looking statements, including statements regarding ImmunoCellular's intentions and current expectations concerning, among other things, ImmunoCellular's ability to advance its Stem-to-T-Cell program to preclinical testing in animals and human clinical testing; ImmunoCellular's ability to finance its ongoing operations; the potential benefits and therapeutic utility of ImmunoCellular's Stem-to-T-Cell program and other product candidates; the likelihood, timing and outcome of ImmunoCellular's possible strategic alternatives; and ImmunoCellular's ability to achieve its other clinical, operational, strategic and financial goals. Forward-looking statements are not guarantees of future performance and are subject to a number of risks and uncertainties, including the availability of resources to continue to develop ImmunoCellular's product candidates and the uncertain timing of completion and success of ImmunoCellular's proof-of-concept work and preclinical trials. Additional risks and uncertainties are described under the heading "Risk Factors" in ImmunoCellular's most recently filed annual report on Form 10-K for the period ended December 31, 2017. 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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