

ACT Poised to Obtain and Control Key Patents to Generating iPS Cells

MARLBOROUGH, MA –August 16, 2010 (Business Wire). Advanced Cell Technology, Inc. (“ACT”; [OTCBB:ACTC](#)) announced today that it is positioned to obtain significant patents relating to cellular reprogramming and the generation of induced pluripotent stem (iPS) cells. iPS cells are similar to embryonic stem (ES) cells, except they are generated from adult cells – such as skin – using certain reprogramming factors, without the controversial use of embryos. Although human iPS cells were first produced in 2007, ACT has been working on inducing pluripotency, with positive results, for more than a decade. The Company’s efforts go back to the 1990s, providing (through existing patent filings and continuations) some of the earliest priority dates in the field.

“ACT is pursuing claims (published and unpublished) that, if granted, would dominate the use of what the rest of the research community is now coming to understand are the key regulators of induced pluripotency,” said William M. Caldwell IV, the Company’s Chairman and CEO. “With a very strong intellectual property portfolio in place, including a recently-issued broad patent for production of retinal pigment epithelial cells, we are continuing to pursue an aggressive patent filing strategy. We have filed multiple patent applications to cover reagents and processes related to induced pluripotency, as well as the resulting cell compositions. Importantly, we do not want to impede the development of iPS cell research by others in this field, and prefer to work cooperatively to stimulate innovation and to help to drive the realization of iPS cell technology for new therapies.”

Over a decade ago, ACT scientists and others showed that adult somatic cells could be reprogrammed back to a pluripotent state using somatic cell nuclear transfer (SCNT). However, in 2006, Yamanaka and colleagues reported a new and less controversial method of reprogramming somatic cells to pluripotency using viral expression of transcription factors (Oct4, Sox2, Klf4, and c-Myc). Subsequent studies confirmed that human cells could also be reprogrammed to the pluripotent state using similar reprogramming factors. Unfortunately, these cells are unsuitable for human clinical use since the use of genome-integrating viruses could cause mutagenesis and unpredictable genetic dysfunction.

Earlier this year, a number of groups, including scientists at ACT, showed that a range of therapeutic cell types obtained from iPS cells exhibit abnormal expansion and early aging. The research compared a variety of replacement cell types derived from human induced pluripotent stem cells (iPSCs) to their embryonic stem (ES) cell counterparts. The research showed that the iPSCs can generate blood, vascular and retinal cells with characteristics similar to those from ES cells, but with a dramatically decreased efficiency.

“There’s great excitement about iPS cells,” said Robert Lanza, M.D., Chief Scientific Officer at ACT. “But no one wants to hear about the problems. However, for over a decade, we have been working on methods for reprogramming cells that eliminate the risks associated with genetic manipulation, and which provide a potentially safe source of stem cells for translation into the clinic. We believe that

our protocols for reprogramming cells are scalable and safe, and that in the coming years, will play an important role in helping patients suffering from a range of debilitating diseases.”

About Advanced Cell Technology, Inc.

Advanced Cell Technology, Inc. is a biotechnology company applying cellular technology in the field of regenerative medicine. For more information, visit <http://www.advancedcell.com>.

Forward-Looking Statements

Statements in this news release regarding future financial and operating results, future growth in research and development programs, potential applications of our technology, opportunities for the company and any other statements about the future expectations, beliefs, goals, plans, or prospects expressed by management constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements that are not statements of historical fact (including statements containing the words “will,” “believes,” “plans,” “anticipates,” “expects,” “estimates,” and similar expressions) should also be considered to be forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from those indicated by such forward-looking statements, including: limited operating history, need for future capital, risks inherent in the development and commercialization of potential products, protection of our intellectual property, and economic conditions generally. Additional information on potential factors that could affect our results and other risks and uncertainties are detailed from time to time in the company’s periodic reports, including the report on Form 10-K for the year ended December 31, 2009. Forward-looking statements are based on the beliefs, opinions, and expectations of the company’s management at the time they are made, and the company does not assume any obligation to update its forward-looking statements if those beliefs, opinions, expectations, or other circumstances should change. Forward-looking statements are based on the beliefs, opinions, and expectations of the company’s management at the time they are made, and the company does not assume any obligation to update its forward-looking statements if those beliefs, opinions, expectations, or other circumstances should change.

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