

## Advanced Cell Technology's Robust Cell Reprogramming/Transdifferentiation Platform Well Positioned To Capitalize on Emerging Trends in Regenerative Medicine

MARLBOROUGH, MA –August 30, 2010 (Business Wire). Advanced Cell Technology, Inc. “ACT” ([OTCBB:ACTC](#)) provides an update today on its plans to utilize its transdifferentiation platform to enhance regenerative medicine. Transdifferentiation involves reprogramming one type of adult cell, such as skin, into an altogether different type of cell, such as muscle or insulin-producing cells, without having to generate stem cells. This month scientists successfully turned ordinary fibroblasts into beating heart cells (*Cell* 142:375, 2010), providing new evidence that transdifferentiation will play an important role in the field of regenerative medicine. For over a decade ACT has actively continued to develop and innovate in the field of induced transdifferentiation, supported by robust intellectual property and has made significant progress discovering proprietary protocols and factors for inducing reprogramming of somatic cells with defined factors.

“Our field has evolved from considering cell differentiation as an irreversible event to slowly accepting that cell fate is responsive to manipulation even late in differentiation,” said Robert Lanza, M.D., Chief Scientific Officer at ACT. “Although there is a rich history to transdifferentiation, this research was pushed into the background with the advent of iPS cells. Only now is the regenerative medicine industry realizing its therapeutic appeal, and that some of the same techniques used for generating iPS cells can be used to directly reprogram one cell type into another. Even as researchers rush to implement the latest in stem-cell and iPS technologies, there is still a desire to manipulate cell identity without the need to begin with stem cells. Although transdifferentiation won't replace the need for stem cells, it offers another strategy which, like iPS cells, can be used to develop cell products for use in patients when those sources of cells may be safer or better tolerated.”

ACT's efforts in the field of transdifferentiation date back to the late 1990's. In fact, the Company was awarded a seven-figure grant from the National Institute of Standards and Technology (NIST) to identify agents and conditions that predispose, through non-genetic modification, target cells such as fibroblasts to be more amenable to reprogramming factors. These proprietary processes may be particularly significant where the reprogramming factor would be delivered as an extracellular agent rather than through a recombinant expression vector, and consequently removes safety issues otherwise arising from genetically modifying cells as described in the recent transdifferentiation papers by Vierbuchen et al (*Nature* 463, 1035, 2010) and Leda et al (*Cell*, 142, 375, 2010). The Company believes its proprietary technology is a necessary step to a predictable and safe process for the practical reprogramming of cells in a clinical product setting.

“One of the fruits of ACT's early research efforts,” said William M. Caldwell IV, the Company's Chairman and CEO “comes in the form of a robust intellectual property estate generated by the company. We have patent filings with priority dates going back a decade or more, and are positioned to control central factors involved in inducing heart cell formation, including factors described in recent publications. The company has also been diligently protecting its IP relating to novel protocols and agents for predisposing differentiated cells to transdifferentiation. We have a very strong IP position in place through pending and issued patent filings, including a recently-issued broad patent for enhancing the generation of nerve cells from fibroblasts through transdifferentiation. We consider this a requirement to practical and safe use of transdifferentiation in the generation of cellular products for human and veterinarian uses. Persistence in our research programs has permitted ACT to be multi-faceted with several platforms for generating cellular therapies. We believe our

steady, steadfast resolve to develop multiple sources of cells for transplantation will pay off in the long run, both in terms of product pipeline and controlling patent positions.”

**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-QSB for the quarter ended September 30, 2007. 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.*

· Please contact: Rita Parker at 508-756-1212 x654