

Advanced Cell Technology's RPE Cells Granted Orphan Drug Status from FDA for Treatment of Stargardt's Macular Dystrophy

First-Ever Designation for Treatment Using Embryonic Stem Cells

WORCESTER -- Advanced Cell Technology, Inc. (OTCBB: ACTC), a biotechnology company applying cellular technology in the field of regenerative medicine, announced today that the U.S. Food and Drug Administration (FDA) has granted orphan drug designation for the company's MA09-hRPE cells for use in the treatment of Stargardt's Macular Dystrophy (SMD). As a result, the company is eligible to receive a number of benefits, including tax credits, access to grant funding for clinical trials, accelerated FDA approval and allowance for marketing exclusivity after drug approval for a period of as long as seven years.

"We are pleased that the FDA has, for the first time, granted orphan drug status for the use of an embryonic stem cell derived therapy in treating an unmet medical need," said Edmund Mickunas, Vice President Regulatory. "We believe that our terminally differentiated RPE cells represent a promising treatment for patients with SMD and expect to be in a position to accelerate clinical development and hopefully make RPE cellular therapy available to the majority of patients sooner."

US orphan drug designation is granted to companies with products aimed at treatment of a rare disease or condition that affects fewer than 200,000 Americans. The National Institutes of Health (NIH) recently proposed broadening the definition of a human embryonic stem cell to include ACT's "single blastomere technology platform" which was used to derive ACT's MA09-hRPE cells. The Company believes that the SMD program should be eligible for federal funding once the change is published in the Federal Register.

Degenerative diseases of the retina are among the most common causes of untreatable blindness in the world, and as many as ten million people in the United States have photoreceptor degenerative disease. While most of these patients have Age-Related Macular Degeneration (AMD), a smaller number have Stargardt's, an Orphan disease and to date an untreatable form of juvenile macular degeneration leading to blindness in a much younger group of patients than are affected by AMD. ACT's treatment for eye disease uses stem cells to re-create a type of cell in the retina that supports the photoreceptors needed for vision. These cells, called retinal pigment epithelium (RPE), are often the first to die off in SMD and AMD, which in turn leads to loss of vision.

While there is currently no treatment for SMD, several years ago ACT and its collaborators discovered that human embryonic stem cells could be a source

of RPE cells. Subsequent studies found that the cells could restore vision in animal models of macular degeneration. In a Royal College of Surgeons (RCS) rat model, implantation of RPE cells resulted in 100% improvement in visual performance over untreated controls, without any adverse effects. The cells survived for more than 220 days and sustained extensive photoreceptor rescue. Functional rescue was also achieved in the 'Stargardt's' mouse with near-normal functional measurements recorded at more than 70 days.

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, 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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