

Advanced Cell Technology Awarded Broad Patent For Production of Retinal Pigment Epithelial Cells

Key Patent Covers Fundamental Methods for Producing RPE Cells from Embryonic Stem Cells Including IP Used in Phase I Trial to Treat Patients with Stargardt's Macular Dystrophy

June 16, 2010, WORCESTER, MA – Advanced Cell Technology, Inc. (“ACT”; OTCBB: ACTC), a leader in the field of regenerative medicine, announced today that it has been issued U.S. Patent Number 7736896, which is broadly directed to processes developed by ACT scientists for the production of retinal pigment epithelial (RPE) cells from human embryonic stem cells (hESCs). Issued with 35 claims, the patent covers what the company believes are the fundamental methods for producing RPE cells from hESCs in a manner that is suitable for use in human patients. The Company expects to use RPE cells in its Phase I trial to treat patients with Stargardt's Macular Dystrophy (SMD) and in other pre-clinical applications.

“The efficient production of highly pure RPE cell preparations derived from human embryonic stem cells represents the first critical step in the creation of a renewable source of transplantable cells that can be used to target diseases such as Stargardt's Disease and Age-related Macular Degeneration,” said Robert Lanza, M.D., Chief Scientific Officer of ACT. “For many of these patients there are no available treatments. We have demonstrated that our stem cell-derived RPE cells can rescue visual function in animals that otherwise would have gone blind. We are anxious to get our clinical trials underway with the hope that these cells will be similarly efficacious in patients.”

“This broad patent covers technology underlying a number of ACT's important platforms,” said William M. Caldwell IV, Chairman and CEO of ACT. “We are optimistic that the culturing processes covered by this new patent, which produce RPE cells with no contamination by hESCs, should establish a formidable barrier to entry for potential competitors. Our RPE technology is safe, scalable and has tremendous potential for treating many of the 200-plus retinal diseases. This patent should assist us in achieving our objective of becoming one of the dominant players in this potentially very large market.”

The issuance of this patent is the latest in a number of encouraging developments for ACT's RPE program:

- At the end of last year the Company filed an Investigational New Drug Application with the FDA.
- In February of this year the National Institutes of Health (NIH) proposed expanding its definition of hESCs for funding purposes, potentially benefiting the Company's RPE program by including its* proprietary “embryo-safe” Blastomere technology.
- In March of this year ACT's RPE cells were granted Orphan Drug Status by the FDA.
- Within the past week ACT received NIH approval for one of its hESC lines (MA135) which now qualifies it for utilizing it for federally-funded R&D programs.

The Company continues to anticipate approval from the FDA to initiate its Phase I/II human clinical trials in the third quarter of this year, with the expectation of treating the first patients in the fourth quarter. The company then plans to take steps toward initiating another clinical trial relating for the use of RPE cells in the treatment of dry Age-Related Macular Degeneration (AMD). At present there is no approved treatment for dry AMD, a \$20-30 billion potential market.