May 7, 2008

University Of Edinburgh Human Embryonic Stem Cell Program Awarded UK Grant Funding

Geron Corporation announced two grant awards to the University of Edinburgh from the UK Stem Cell Foundation, with funding from the Medical Research Council and Scottish Enterprise.

The awards, totalling £3.6 million (US$7.2 million) over two years, follow on from a collaboration set up in August 2006 between Geron and the University of Edinburgh to develop hESC-derived hepatocytes for the treatment of liver failure and for use in cell-based assays, as well as to develop osteoblasts and chondrocytes for the treatment of musculoskeletal disorders such as osteoporosis, bone fractures and osteoarthritis.

The grants relate to preclinical safety and efficacy studies of three therapeutic cell types derived from human embryonic stem cells (hESCs). The projects are led by Dr. Brendon Noble and Prof. John Iredale at the University of Edinburgh's MRC Centre for Regenerative Medicine.

"These are the first grants we have awarded that use human embryonic stem cells," said Sir Richard Sykes, Chairman of the Board of Trustees, UK Stem Cell Foundation. "Our remit is to support high quality translational projects whose direct aim is rapid and safe progression towards clinical application. These research groups combine scientific and clinical expertise within a centre of excellence for stem cell research at the University of Edinburgh and are therefore well positioned for achieving success."

"The UK continues to demonstrate international leadership in supporting development of embryonic stem cell technology," said David Greenwood, Geron's executive vice president and chief financial officer. "Because of the receptiveness in the UK, we have major collaborations in place at the University of Edinburgh, the University of Birmingham and Oxford."

"This funding and our continued collaboration with Geron will advance two important translational programs within the MRC Centre for Regenerative Medicine," commented Professor Sir John Savill, Head of College of Medicine and Veterinary Medicine at the University of Edinburgh. "The government has made a major investment in creating the Centre and this grant will allow us to progress toward our goal of delivering new treatments for debilitating diseases."

Programs Funded by the Grant

Hepatocytes

Currently, the only treatment for chronic end-stage liver failure is whole organ liver transplantation, a costly procedure limited by the severe shortage of donor organs. A potential alternative therapy being explored within the collaboration is the use of hepatocytes derived from hESCs either to restore liver function, or to be incorporated into bioartificial devices for patients awaiting transplantation or in need of short-term hepatic support.

In the liver program, recent improvements in the hepatocyte differentiation protocol have significantly increased the efficiency of producing functional human hepatocyte-like cells. These derived cells have important genetic and functional characteristics of normal human hepatocytes, such as the expression of genes required for liver cell function and the ability of the cells to metabolize drugs. The current funding will support preclinical studies to assess safety and efficacy of the hESC-derived hepatocyte-like cells. An immediate goal of the work will be the development of the cells for drug testing. Successful development of liver cells from hESCs will revolutionise and improve the way we are able to test drugs and novel therapies both for the liver and other organs in addition to the possible development of a stem-cell based approach to regenerate the liver.

Bone and Cartilage Cells

Similarly, orthopaedic indications are important targets for cell therapy, such as the replacement of degenerated cartilage in osteoarthritis, or of bone after trauma or osteoporosis, applications with major unmet needs. These hESC-based therapies are intended to be off-the-shelf products, delivered on demand, and centrally produced from a uniform renewable source of undifferentiated cells, allowing efficient treatment of large numbers of patients. The orthopaedic program has derived bone forming osteoblasts and cartilage-forming chondrocytes from hESCs in vitro by directed differentiation and demonstrated survival of grafted cells in bone and cartilage repair sites in vivo. Cells derived in this way have been shown to be capable of forming the authentic bone and cartilage material that is required to repair our skeleton and to be capable of doing this in sites in the body that need it. The current funding will support further studies to assess safety and efficacy of hESC-derived osteoblasts and chondrocytes in preclinical models. Bioactive scaffolds and cell carriers, developed at the University of Edinburgh, will be used to promote tissue regeneration in vivo.

The Principals of the Program

The University of Edinburgh's MRC Centre for Regenerative Medicine (CRM) is based at Little France medical campus, combining the Royal Infirmary of Edinburgh, an 870-bed teaching hospital, with the University of Edinburgh's world-renowned Medical School and Queen's Medical Research Institute adjacent to a 100-acre science park development, Edinburgh BioQuarter. The CRM was launched in December 2005 to advance basic research in stem cells and regenerative medicine with the goal of translating science and technology into clinical application. Under the directorship of Professor Sir Ian Wilmut FRS, who led the team that cloned Dolly the sheep, the CRM is already one of the largest critical masses of basic and clinical researchers in this field in Europe. It recently received full status as an MRC Centre of Excellence in regenerative medicine and stem cell research as part of the UK's strategic investment in the field. For more information, visit http://www.scrm.ed.ac.uk.

The UK Stem Cell Foundation is a registered charity established in 2005 to support the advance of pioneering stem cell research into clinical practice and bridge the gap in the funding available for translational projects. A strategic funding partnership has been set up with the UK's Medical Research Council (MRC) as part of a wider initiative to strengthen the Government's commitment

to stem cell research and boost investment in its translation in order to maintain a leading position in the field internationally. For more information visit http://www.ukscf.org.

Scottish Enterprise (SE) is Scotland's main enterprise, innovation and investment agency and is focused on supporting business growth and developing a competitive business environment. Working in partnership with industry, academia and the public sector, SE aims to play its part in delivering the Scottish Government's new economic strategy to increase productivity in Scotland by helping businesses grow, encouraging greater innovation and creating the right conditions for companies to access property, markets and finance. Further information can be found at http://www.scottish-enterprise.com.

Geron is a Menlo Park, California-based biopharmaceutical company developing first-in-class therapeutic products for the treatment of cancer and degenerative diseases, including spinal cord injury, heart failure and diabetes. The company is advancing an anti-cancer drug and a cancer vaccine that target the enzyme telomerase through multiple clinical trials. Geron is also the world leader in the development of human embryonic stem cell-based therapeutics, with its spinal cord injury treatment anticipated to be the first product to enter clinical development. For more information, visit http://www.geron.com.

This news release may contain forward-looking statements made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that statements in this press release regarding potential applications of Geron's human embryonic stem cell technology constitute forward-looking statements that involve risks and uncertainties, including, without limitation, risks inherent in the development and commercialization of potential products, uncertainty of clinical trial results or regulatory approvals or clearances, need for future capital, dependence upon collaborators and maintenance of our intellectual property rights. Actual results may differ materially from the results anticipated in these forward-looking statements. Additional information on potential factors that could affect our results and other risks and uncertainties are detailed from time to time in Geron's periodic reports, including the quarterly report on Form 10-Q for the quarter ended March 31, 2008.