

McEwen Centre for Regenerative Medicine Scientific Symposium Highlights Stem Cell Research

(Toronto, Oct. 25, 2006) -- The emerging field of regenerative medicine aims to use the power of stem cells to repair, replace or regenerate damaged or injured tissues or organs, offering great promise for the treatment of a broad spectrum of diseases for which there are limited or no treatments, say McEwen Centre for Regenerative Medicine scientists who will speak Wednesday, October 25, 2006 at an afternoon symposium that launches the McEwen Centre for Regenerative Medicine at the University Health Network, a fully affiliated teaching hospital of the University of Toronto.

The symposium is chaired by the stellar team of Dr. John Dick, a Senior Scientist, Cellular and Molecular Biology, Toronto General Research Institute and Dr. Gordon Keller, the newly-appointed Director of the McEwen Centre. Dr. Keller, a pioneer in embryonic stem cell research, was identified as one of the top six medical minds that New York didn't want to lose in the Jan. 3 issue of New York magazine.

“Our goal is to develop novel therapies to regenerate damaged tissues and organs in chronic diseases and conditions such as Parkinson’s, spinal cord injury, stroke, heart disease, leukemia and diabetes,” said Dr. Keller, adding that, “Our team of scientists and clinicians with diverse areas of expertise in stem cell research, biology, cancer research and organ repair are part of an outstanding science research base that exists in this city.”

Dr. Keller explained that stem cells, immature cells which do not yet have a specialized function, have the unusual ability to form cells of any tissue in the body and that “the capacity of stem cells to give rise to many different cell types opens the door for developing new approaches for the treatment of various diseases.”

Wednesday’s symposium will bring together 10 internationally renowned scientists who will speak on a broad range of topics such as “Getting to the Root of Cancer”, the “Regenerative Capacity of the Heart,” the “Repair and Regeneration of the Injured Spinal Cord” and the use of regenerative techniques to improve lung function.

The keynote speech will be delivered by leading Harvard Medical School stem cell researcher Dr. George Daley, Associate Director of the Stem Cell Developmental Biology Program at Children’s Hospital, Boston on “Stem Cells in Disease and Regenerative Medicine”. Dr. Daley’s address is open to the media and scheduled from 4:00 – 4:45 p.m. in the Medical and Related Sciences (MaRS) Auditorium. Dr. Daley’s research pertains to leukemia and genetic diseases of the blood, and is aimed at translating insights in stem cell biology into cellular therapies. Dr. Daley is currently heading up one of two research teams at Harvard, attempting to create the world’s first cloned human embryonic stem cells.

Dr. Daley's laboratory reported the first successful application of therapeutic cloning of embryonic stem cells to treat genetic disease in a mouse model of immune deficiency. Additionally, his lab was responsible for the first creation of functional sperm cells from embryonic stem cells, work that was cited by Science magazine as a "Top Ten" breakthrough for 2003.

Other symposium highlights include:

- Dr. John Dick, Senior Scientist, Cellular and Molecular Biology, Toronto General Research Institute, will speak on "Getting To The Root of Cancer"- Getting rid of cancer by targeting the unique properties of cancer stem cells without harming normal stem cells.
- Dr. Rudiger von Harsdorf, Robert R. McEwen Chair in Cardiac Regenerative Medicine, will speak on the "Regenerative Capacity of the Heart". Citing the "epidemic" of heart failure in North America (more than 50,000 Canadians are treated for advanced heart failure annually, and nearly 40% of patients die within the first year of diagnosis), Dr. von Harsdorf notes that while current therapies may reduce the burden on the heart, they do not actually heal the heart. Taking a cue from the striped zebrafish, which is known to regenerate heart muscle, Dr. von Harsdorf will outline novel approaches to regenerating the human heart.
- Dr. Michael Fehlings, Krembil Chair in Neural Repair & Regeneration and Director of the Krembil Neurosciences, Toronto Western Research Institute, will speak on "Repair and Regeneration of the Injured Spinal Cord: Opportunities for Clinical Translation of Basic Discoveries" Dr. Fehlings and his colleagues work has broken new ground by showing that therapeutically useful stem cells can be derived from the adult brain of rodents, and that these cells can be caused to differentiate or specialize into the types of cells that are useful for repairing the damaged spinal cord.

About the McEwen Centre for Regenerative Medicine

The McEwen Centre for Regenerative Medicine was established in 2003 with a generous donation from Rob and Cheryl McEwen. Its mission is to be a catalyst for regenerative medicine research by facilitating collaborations and promoting research and awareness in the field of regenerative medicine. The McEwen's Centre ultimate goal is to accelerate the development of better, more effective treatments for life-threatening conditions such as heart disease, diabetes, respiratory disease and spinal cord injury. The McEwen Centre for Regenerative Medicine is fully affiliated with the Toronto General Hospital of the University Health Network.

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