



For Immediate Release

Landmark Canadian paper advances knowledge to cure diabetes

Timothy Kieffer to receive 2015 Till & McCulloch Award

October 16, Toronto, ON – Prof. Timothy Kieffer, a University of British Columbia researcher in the Department of Cellular and Physiological Sciences and in the Department of Surgery, has made significant progress in the quest to generate a fully functional cell type from scratch – one of the ‘holy grails’ of stem cell research and regenerative medicine – by developing a protocol that converts human stem cells into glucose-responsive, insulin-secreting cells capable of reversing diabetes in mice. For this breakthrough work, published in *Nature Biotechnology* last year, Dr. Kieffer has been chosen to receive the 2015 Till & McCulloch Award in recognition of this contribution to global stem cell research.

The paper “Reversal of diabetes with insulin-producing cells derived *in vitro* from human pluripotent stem cells” has been recognized as the most impactful stem cell research publication authored in Canada in the past year. Dr. Kieffer will accept the award, named after Drs. James Till and Ernest McCulloch, and present a lecture entitled “Insulin Replacement for Diabetes by Transplant of Differentiated Pluripotent Stem Cells” as part of the Till & McCulloch Meetings, Canada’s premier stem cell event.

Dr. Till, half of the team who first discovered transplantable stem cells in 1961, and Connie Eaves, a world authority on the stem cells of the blood-forming system, will introduce Dr. Kieffer and present the award to him. Dr. Eaves is a past recipient of the Till & McCulloch Award.

“This paper is a fantastic example of Canadian leadership in an important and competitive area of regenerative medicine,” explains Dr. Peter Zandstra, Chief Scientific Officer of the Centre for Commercialization of Regenerative Medicine, and a member of the selection committee. “Dr. Kieffer and his colleagues’ ability to demonstrate that so-called mono-hormonal glucose responsive cells can be generated from human pluripotent stem cells represents a major step forward in the development of a cell therapy to treat diabetes.”

While not claiming to cure diabetes, Dr. Kieffer’s paper is considered an important step on the pathway to curing a disease that affects over nine million Canadians, according to the Canadian Diabetes Association. Worldwide, the World Health Organization

estimates the global prevalence of diabetes to be 9% among adults aged 18+ years. Dr. Kieffer and his co-authors were able to demonstrate that cells derived from stem cells express insulin, but not other secreted hormones; these cells were functionally similar to insulin-producing beta cells and reversed diabetes in transplantation studies in mice. The reputable journals *Nature Medicine* and *Science* identified Dr. Kieffer's paper as a notable breakthrough of the year.

Upon learning the news he had been chosen to receive this year's award, Dr. Kieffer had this to say: "I am truly honoured to receive this year's Till & McCulloch Award for the team's work to develop a stem cell-based cure for diabetes. The work was done in close collaboration with scientists at BetaLogics and this would not have happened without the Stem Cell Network's encouragement. I am also grateful to the Network for funding for this research. I sincerely hope this research contributes to a cure for all Canadians suffering from diabetes."

The Till & McCulloch lecture will take place in Toronto, Ontario, on Wednesday, October 28, 2015 at 2 p.m. at the Sheraton Centre Hotel.

The Stem Cell Network established the Till & McCulloch Award in honour of Canadians Drs. James Till and Ernest McCulloch, whose pioneering work established the field of stem cell research. The Till and McCulloch Award is presented each year as part of the Till & McCulloch Meetings. The Award is given to one researcher in Canada who is nominated through a public process. The Adjudication Committee chooses the awardee based on what is determined to be the year's most influential peer-reviewed article by a stem cell researcher based in Canada.

Additional background on the Till & McCulloch Award, and a list of previous winners, is available [here](#).

About the Till & McCulloch Meetings

The Till & McCulloch Meetings are Canada's premier stem cell research event. As the only conference of its kind in Canada, the Till & McCulloch Meetings provides a forum for the exchange of ideas and research among Canada's leading stem cell scientists, clinicians, bioengineers and ethicists, as well as representatives from industry, government, health and NGO sectors from around the world. The Centre for Commercialization of Regenerative Medicine, the Stem Cell Network and the Ontario Institute for Regenerative Medicine are pleased to be co-hosting the 2015 Meetings, which will be held Toronto, Ontario, October 26-28, 2015. www.tillandmcculloch.ca

About the Centre for Commercialization of Regenerative Medicine (CCRM)

CCRM, a Canadian not-for-profit organization funded by the Government of Canada's Networks of Centres of Excellence program and six academic partners, supports the development of technologies that accelerate the commercialization of stem cell- and biomaterials-based technologies and therapies. A network of academics, industry and entrepreneurs, CCRM aims to translate scientific discoveries into marketable products

for patients. CCRM launched in Toronto's Discovery District on June 14, 2011. CCRM is hosted by the University of Toronto. www.ccrm.ca

About the Stem Cell Network

The Stem Cell Network, established in 2001, brings together more than 100 leading scientists, clinicians, engineers, and ethicists from universities and hospitals across Canada. The Network supports cutting-edge projects that translate research discoveries into new and better treatments for millions of patients in Canada and around the world. Hosted by the University of Ottawa, the Stem Cell Network is one of Canada's Networks of Centres of Excellence funded through Industry Canada and its three granting councils. www.stemcellnetwork.ca

About OIRM

Building on more than 50 years of world-leading research in stem cells and regenerative medicine, the Ontario Institute for Regenerative Medicine (OIRM) was launched in 2014 with a vision to revolutionize the treatment of degenerative diseases and make Ontario a global leader in the development of stem cell-based products and therapies. More than 160 research programs at universities and institutions across the province are involved with OIRM, with additional contributions from key clinical, commercial and health charity partners. OIRM is based in Toronto and was realized with investment from Ontario's Ministry of Research and Innovation. www.oirm.ca

-30-

For more information, please contact:

Stacey Johnson
Director of Communications, CCRM
647-309-1830
Stacey.johnson@ccrm.ca

Lisa Willemse
Senior Communications Advisor, OIRM
613-304-2108
lisa.willemse@oirm.ca