



Therapy for peripheral nerve disease - leaving the bench and approaching the bedside

SEMINAR & VISITING SPEAKER SERIES

DATE

Friday, February 26th, 2016
9:00 AM

LOCATION

PX236/238
Psych Health Building
Bannatyne Campus

SPEAKER

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Director & Principal Investigator - Division of Neurodegenerative Disorders, St. Boniface Hospital Albrechtsen Research Centre;

Acting Head & Professor - Depts of Pharmacology & Therapeutics; and Physiology & Pathophysiology, Faculty of Health Sciences, College of Medicine

RESEARCH INTERESTS:

Project 1: The main focus of our research will take a hypothesis-driven approach and perform mechanistic studies in order to understand the etiology of diabetic sensory neuropathy. This work is currently supported by CIHR, JDRF, CDA and MHRC. The program is multidisciplinary involving in vitro and in vivo paradigms and includes collaborative arrangements (see section later describing collaborations). The main body of work will use cutting edge real time imaging with standard and confocal microscopes to assess the role of impaired Ca²⁺ homeostasis, mitochondrial dysfunction and enhanced ROS levels in the etiology of diabetic neuropathy. Studies will be performed on adult neuronal tissues as single neuron cultures or slices of neuronal tissue.

Project 2: In parallel the laboratory will take a translational approach and attempt to identify novel drugs for treatment of diabetic neuropathy. The JDRF is very keen to support my laboratory in order to extend our drug screen studies. We have identified at least 4 FDA-approved compounds that can improve axon regeneration in cultures of adult sensory neurons. This work will now be taken in vivo to test the drugs in whole animal models of type 1 diabetes. In addition medicinal chemistry will be used to identify related compounds that may also be efficacious and will permit generation of new IP.

For more information:

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