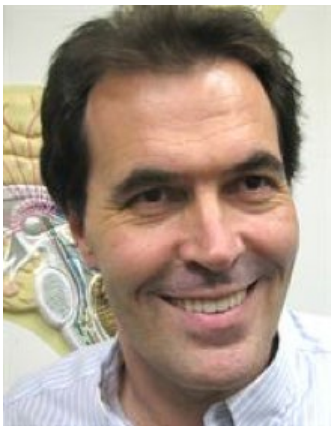
Manitoba Neuroscience Network

2015/2016 Seminar & Visiting Speaker Series

Friday, December 4th, 2015 | 12:00 Noon



Christoph J.W. Pröschel

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TOPIC: Glial cell therapy: the opportunity for restoring function by restoring tissue homeostasis.

Location: Theatre C, Bannatyne Campus

Within the context of our work on glial progenitor cells, we are now focusing on the role of astrocytes as critical modulators in response to injury or stress. The importance of understanding this process is emphasized by our discovery that the generation of mature astrocytes may be impaired in Vanishing White Matter leukodystrophy (Nat Med. 2005 Mar;11(3):277-83.).

The ability to study astrocyte development in normal and pathological conditions, provides a unique opportunity to test the utility of glial precursor cells and their astrocytic progeny for cell transplantation therapy in diseases of the central nervous system (CNS), such as traumatic injury (spinal cord and traumatic brain injury) and neurodegenerative diseases (Parkinsons Disease, Multiple sclerosis).

We have identified distinct astrocyte populations that demonstrate different functional properties with respect to their ability to promote injury repair upon transplantation into the injured nervous system. While one type shows little benefit and may even cause neuropathic pain syndrome, the other remodels the injured host tissue, enables axon outgrowth and extensive functional recovery (J Biol 2006 Apr 27, 5(3):7; J Biol 2008 Sep 19;7(7):245). As a prerequisite for the transition to the clinic we are analyzing the factors secreted by these astrocytes and have now derived homologous astrocyte populations from human precursor cells.
(PLoS One. 2011 Mar 2;6(3)).

For more information, contact the MNN Office at
(T) 235.3939 or email: mnn@sbrc.ca

Partners:

Society for Neuroscience Winnipeg Chapter

Hôpital St-Boniface Hospital Recherche • Research
Division of Neurodegenerative Disorders

Health Sciences Centre Winnipeg

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