



# Manitoba Neuroscience Network

2014/2015 Seminar & Visiting Speaker Series

Friday, March 27th 2015 9:00 a.m.

## Donald Miller, PhD

Professor, Neuroscience Research Program, Kleysen Institute for Advanced Medicine, Health Sciences Centre & University of Manitoba & Department of Pharmacology & Therapeutics, University of Manitoba



**Topic: Medicating the brain: Potential routes for drug passage through the blood-brain barrier.**

Location: PX236/238 PsychHealth Bldg., Bannatyne Campus

My research interests are in understanding the cellular factors that control blood-brain barrier (BBB) permeability under both normal and pathophysiological conditions. Utilizing both cell culture and whole animal models, my laboratory examines various transport processes within the brain microvessel endothelial cells for moving drugs and solutes into and out of the brain. One area of research interest is in drug efflux transporter localization and expression in the brain endothelial cells, and how modulation of transporter activity influences drug delivery to the brain.

My laboratory is also actively pursuing alternative routes for drug delivery across the BBB including transient modulation of BBB permeability and the use of magnetic nanoparticles for targeted delivery to the brain.

Website: [http://umanitoba.ca/faculties/health\\_sciences/medicine/units/pharmacology/faculty\\_members/1908.html](http://umanitoba.ca/faculties/health_sciences/medicine/units/pharmacology/faculty_members/1908.html)

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