

Biomedical Discussion Group Lecture

Thursday November 27, 2014

2:30-3:30 pm

EIT, Room 3142

“Imaging Lipids in the Vulnerable Brain”

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Abstract:

We are only just experiencing the beginning phase of an unusually large cohort of aged individuals, an age group that is associated with a significant increase in the occurrence of devastating brain diseases and injuries such as Alzheimer's, Parkinson's, ALS and Stroke that affect millions of Canadians. A major complication to understanding the mechanism responsible for brain deterioration in neurodegenerative disorders and injury is that no brain disorder occurs in isolation. Therefore other brain and vascular co-morbid conditions may play a key role in the pathogenesis of brain disease and injury. Lipids contained within different cellular compartments of the brain have the ability to change their structure to meet their external and internal environmental demands. This ability to 'shape-shift' may explain why certain regions of the brain possess differential levels of vulnerability to stress. The major roadblock in understanding how lipids work and interact (lipidomics) within the brain, is a lack of fundamental methodology to image these lipids in situ. This talk will discuss the use of molecular imaging in combination with mass spectrometry analysis to detect and characterize the composition of membrane lipids to understand the role that they play in conferring vulnerability to different types of neurological insults in *in vitro* and *in vivo* animal models of brain injury as well as validating these findings in post-mortem brain tissue obtained from human patients with brain disease.

If you are interested in meeting with Dr. Whitehead, please email [John Mielke](#).

Pay parking available in lots B or N ([map](#))

Event is FREE and there will be coffee/cookies available.



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