DIVISION OF MEDICAL SCIENCES
SEMINAR SERIES

Bridging the translational gap in neurodegenerative disease research using mouse models

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Tuesday, April 16, 2019
12:00 p.m. to 1:00 p.m.

Alzheimer's disease (AD), the most common form of dementia, is characterized by dysfunctional basal forebrain cholinergic activity, accumulation of protein aggregates, increased neuroinflammation and progressive cognitive decline. Basic findings in AD are slow to impact the clinic, hence efforts to facilitate translation are currently needed. We have explored new mouse models targeting genes to manipulate proteostasis, cholinergic function, and microglial signalling to further understand how these critical processes impact AD-related molecular, cellular, and pathological alterations. Moreover, we have used automated and highly translational touchscreen behaviour tests to probe cognitive function in mouse models. This presentation will explore examples of the cognitive signatures identified in mouse models protein misfolding and the creation of an open access database to facilitate translational research. The combination of next-generation mouse models, precise molecular manipulations and automated high-throughput cognitive assessment will facilitate the translation of basic findings to improve clinical outcomes in neurodegenerative diseases.

NOSM at Lakehead University – BSC 1014
NOSM at Laurentian University – MSE 215

Lunch will be provided.