Western
The Brain and Mind Institute

Visiting Speaker

Kim Cornish

Inaugural Director, Monash Institute of Cognitive and Clinical Neuroscience (MICCN),
Monash University, Melbourne, Australia
Head, School of Psychological Sciences, Deputy Dean, Biomedical and Psychological Sciences

Identifying Inhibitory Deficits through Early Childhood into Adulthood: the Complex Interplay between Genes, Environment and the Developing Brain

The focus of the talk will be on how the expansion of a single gene on the X chromosome, the *FMR1* gene, can have detrimental and cascading impact on attentional processes across development. Children with Fragile X syndrome, who have a large expansion of the FMR1 gene, have a well-documented trajectory of inhibitory deficits that now inform new interactive technologies to train attention capacity in early childhood. In contrast, less well documented are Fragile X "carriers", who have a medium expansion (estimated at ~1 in 150 females and 1 ~450 males) and until recently were assumed be risk-free from cognitive and psychiatric impairments. Our recent findings suggest otherwise. In carrier females, we have found the presence of specific epigenetic aetiology associated with increased risk of developing co-morbid dysexecutive and social anxiety symptoms; and in carrier males, poor inhibitory control, captured in the early 30's onwards, can serve as a precursor to a later neurodegenerative disorder in a subset of males. A greater understanding of inattentive phenotypes associated with the *FMR1* gene expansion will result in more targeted early intervention recommendations aimed at improving the outcomes for millions of affected families worldwide.

Date: Wednesday, April 6, 2016

Time: 10:00 am

Location: Fisher Room, RRI

If you require information in an alternate format or if any other arrangements can make this event accessible to you, please contact Denise Soanes at dsoanes4@uwo.ca