

# Cell Biology and Neuroscience Seminar

Friday, October 19th

3:10 pm, 108 Plant BioSciences Building

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**“Genetics, heavy metals, and glycosylation: Following up GWAS hits in schizophrenia”**



**Abstract:** Large-scale genetic studies have recently identified over 100 loci linked to schizophrenia. However, translating hits into biological mechanisms and therapeutic targets remains a considerable challenge. One variant with a strong association to schizophrenia is a mis-sense mutation in a manganese transporter. Enzymes of glycosylation are exquisitely sensitive to manganese concentration, and analysis of glycosylation patterns from plasma of mutation carriers and patients with schizophrenia reveals specific changes related to genotype and disease state that may be useful one day as diagnostic or therapeutic biomarkers. Additional studies of synthetic enzymes and targets of glycosylation further support a role of this critical pathway in the pathophysiology and treatment of this severe neuro-developmental disorder.