

# MOLECULAR STRUCTURE AND FUNCTION PROGRAM SEMINAR

## Dr. Olivia Rissland

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*Dr. Rissland is a candidate for a staff position in the Molecular Structure & Function Program*

### ***Unraveling microRNAs: Targets and mRNP Remodeling***

**Abstract:** The success of every organism rests upon proper control of gene expression, and each step in the life cycle of an mRNA provides opportunities for regulation. One particularly widespread post-transcriptional pathway is that mediated by microRNAs (miRNAs). By base-pairing with their targets, miRNAs direct repression of mRNAs, primarily through mRNA destabilization. With each miRNA family capable of regulating hundreds of genes, these small RNAs are thought to impact essentially every mammalian developmental process and human disease. Despite intense study over the past decade, much remains to be discovered about this important and conserved regulatory pathway. In my talk, I will focus on two related issues - how target mRNAs are defined and the immediate consequences of this regulation. By shedding light on the fundamental principles underlying miRNA-mediated repression, this work helps to forge a link between the activities of miRNAs on a molecular level and their function on an organismal one.

**Date :** Monday, January 27, 2014

**Time :** 1:00 - 2:00 pm

**Location :** Room 02.9310 (Event Room 2, 2<sup>nd</sup> Floor)

SickKids Peter Gilgan Centre for Research and Learning (PGCRL),  
686 Bay Street

**Host: Dr. P. Lynne Howell**

**Pizza Lunch will be provided**

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