GUEST SPEAKER SEMINAR

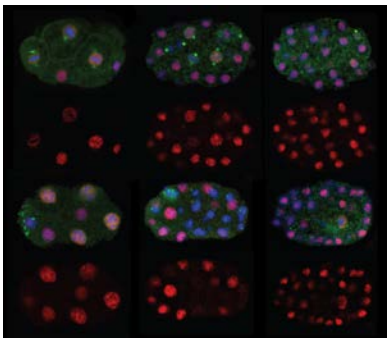
Molecular Genetics
UNIVERSITY OF TORONTO

Barbara Vivash Award in Molecular Genetics

Seminar and Award Presentation

2017-2018 Recipient:

Monica Z. Wu, PhD
Research Scientist
New England Biolabs



Characterization of two opposing small RNA pathways required for germline homeostasis in *Caenorhabditis elegans*

RNA interference (RNAi) is an important cellular process in which small RNA molecules are able to stop the expression of their target genes. In the cell, RNAi pathways act to stop viruses and other foreign nucleic acid from harming the cell. In the lab, RNAi is a tool that has revolutionized research. At the heart of all small RNA pathways is a protein called Argonaute, which interacts with the small RNA and executes regulation of gene expression. Loss of Argonaute function can have a profound impact on gene expression and can lead to tumorigenesis or infertility. Utilizing the powerful model organism, the nematode Caenorhabditis elegans, my thesis focused on deepening our understanding of the molecular mechanisms of small RNA gene regulatory pathways. I specifically focused on characterizing two Argonaute proteins found in C. elegans: CSR-1 and VSRA-1. My work unveiled novel gene regulatory mechanisms for Argonaute proteins in the nucleus and shed light on how different small RNA pathways can co-regulate mRNA targets to maintain the proper balance of gene expression.

Host: Dr. Peter Roy

Date: Wednesday August 7th, 2019
Time: 1:00PM
Place: Donnelly Centre CCBR, Red Seminar Room, 160 College Street