UNIVERSITY of GUELPH

COLLEGE of BIOLOGICAL SCIENCE

DEPARTMENT OF MOLECULAR AND CELLULAR BIOLOGY

# MCB Distinguished Speaker Series

# 2017-2018

**Wed. March 28, 2018**
**SSC 2315 @ 10:30 am**

## Dr. Peter McCourt

Professor, Department of Cell & Systems Biology, University of Toronto, Canada Research Chair in Plant Molecular Biology, Jack Dainty Distinguished Professor

## "Understanding strigolactone perception in parasitic plants using chemical genomics"

Small molecule hormones play central roles in plant development ranging from cellular differentiation and organ formation to instructing developmental responses in changing environments. A recently discovered collection of related small molecules, collectively called strigolactones (SLs), are of particular interest as these hormones also function as ecological communicators between plants and fungi and between parasitic plants and their hosts. In this seminar, I summarize this information and examine how an understanding SL hormone signaling is leading to insights into parasitic plant infections. Because a laboratory-friendly model does not exist for parasitic plants, we are currently using information gleaned from the model plant, *Arabidopsis*, in combination with the chemical probes developed through chemical genetics to understand SL perception of parasitic plants. This work shows how an understanding SL perception is useful in developing compounds that perturb SL signaling. Second, these studies demonstrate that the chemical space available to probe SL signaling in both model and parasitic plants is sizeable. Because these parasitic pests represent a major concern for food insecurity in the developing world, there is great need for chemical approaches to uncover novel lead compounds that perturb parasitic plant infections.

**"A GREAT OPPORTUNITY TO HEAR LEADING RESEARCHERS IN THE SCIENTIFIC COMMUNITY DISCUSS THEIR WORK"**

*** ALL WELCOME TO ATTEND ***

*** COFFEE, TEA AND TIMBITS ***

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