

# Biology Seminar



Western  
UNIVERSITY • CANADA

12:30 - 1:30 pm  
Friday, November 14, 2025  
BGS 0165



**N. Kirk Hillier**  
Professor  
Department of Biology  
Acadia University

## **From Scent to Strategy: Evolution, Neuroecology, and Biocontrol in a Chemically-Mediated World**

Insect semiochemicals are central to mediating species-specific behaviours, reproductive isolation, and ecological interactions, with increasing relevance to sustainable pest management strategies. In this seminar I will be discussing mechanisms of species isolation via pheromone communication, including the role of pheromone antagonism as a driver for increasing blend complexity and variation between sympatric and allopatric species. This work will highlight the role of novel chemicals and odor reception mechanisms in speciation events. Finally I will show how this work is translated into practical pest management tools such as population monitoring, mating disruption, and biological control agents. Together, these findings underscore the ecological and applied importance of chemical signaling in arthropods.

