

# Biology Seminar



Western  
UNIVERSITY • CANADA

12:30 - 1:30 pm  
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BGS 0165



## Jean-Christophe Billeter

Professor  
Faculty of Science and Engineering  
Groningen Institute for  
Evolutionary Science  
The Netherlands

### **Female mate choices in *Drosophila melanogaster*: unravelling multilevel female control and adaptive plasticity**

In this seminar, we will explore the intricacies of reproductive decision-making in female *Drosophila melanogaster*. I will present a neurohormonal mechanism allowing females to alter their mate selection process based on their mating history—virgin or mated—and the detection of male pheromones. I will further show that mated females can influence the storage of sperm from their initial partner, thereby affecting the paternity of their offspring, through their assessment of potential future mates within their social surroundings. Additionally, I will discuss how a female's mating status and the environmental conditions she faces impact her spatial distribution in a heterogenous environment and ultimately her mating and egg-laying location preferences. This presentation integrates concepts from evolutionary theory, neurobiology, chemical ecology, sperm biology and behavioural biology, offering a comprehensive view on how individuals adapt their reproductive strategies to their social and physical environmental contexts.

