

# Biology Seminar



Western  
UNIVERSITY · CANADA

12:30 - 1:30 pm  
Friday, November 30, 2018  
BGS 0153



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## Amphibian skin innate immunity: Newly generated *Xenopus laevis* skin epithelial cell lines and their role in sensing viral infections

The skin epithelial barrier is the interface between a frog's external and internal environments and represents an important physical, chemical, immunological and microbiological barrier to invading pathogens. Amphibian mortality is often linked to fungal and viral infections that are transmitted through the environment and either replicate within, or cross, the skin barrier. Our ability to dissect the role of skin epithelial cells in recognizing and responding to pathogens is limited by the availability of suitable *in vitro* cellular systems.

I will discuss our recent development of novel *Xenopus laevis* skin epithelial cell lines and our ongoing investigations to the contribution frog epithelial cells to sensing and responding to synthetic viral-associated molecular patterns and to frog virus 3 (FV3), one of the proximal causes of global amphibian declines. These novel frog cell lines will aid in our understanding of the complex network that comprises the amphibian skin barrier, and the role of frog skin as an innate immune organ.

