

# Culture, Detection and Monitoring of Equine Parasites in the Fraser Valley



A multi-faceted approach to studying the unique features and mechanisms of drug resistance in local parasite populations. (detailed abstract on back)

## Why study horse parasites?



Horse parasites can be used as a model system to investigate **human diseases**, such as strongyloidiasis.



Horse parasitism is the key limiting factor of BC's equine economy, which generates over **750 million dollars** per year.



This project will **train KPU students** in genetics, evolutionary biology, bioinformatics and parasitology.

## A multidisciplinary approach



***In vitro* culturing** of parasitic worms for species identification and to determine optimal conditions.

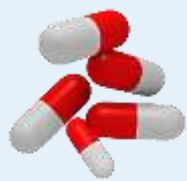


A **longitudinal study** of locally obtained fecal samples to study the evolution of parasitic drug resistance.

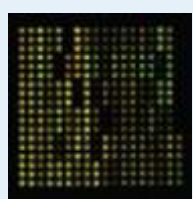


An analysis of the **genetic pathway** required for worms to enter into infective stages.

## Potential outcomes



Refining the model for the **evolution of resistance** to anti-parasitic drugs.



Development of **biomarkers** to allow for quick and accurate measurements of parasite load.



Address the parasite challenges facing the **Fraser Valley's** equine community.

## About the researchers



**Dr. Carson Kever's** research is broadly focused on molecular ecology and zoology. She has a keen interest in applying her research to answering questions about large animal veterinary medicine.



**Dr. Nick Inglis** is a nematode geneticist and cell biologist who studies the underlying mechanisms of animal sensation and behaviour.

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