



## THE UNIVERSITY OF BRITISH COLUMBIA

**Title:** The effects of glyphosate-based herbicide on the gut microbiome and physiology of mammals in a forest food web

**Level:** PhD Student

**Location:** University of British Columbia- Okanagan Campus, Kelowna, BC, Canada

**Start date:** September 2025

**Duration:** 3-4 years

### **Opportunity description:**

Glyphosate-based herbicides (GBHs) are applied extensively throughout Canada to promote the growth of commercial crop species, to protect infrastructure, and to maintain sight lines. Recent evidence from laboratory studies has identified links between the ingestion of GBHs and adverse health effects in mammals, including anxiety-like behavior, gut inflammation, and changes to metabolic responses. Despite potential health effects, little is known about the effects of widespread glyphosate application on the health, physiology, and population abundance of free-roaming mammals. Accordingly, this position aims to better understand the effects of GBH application on mammals in forested ecosystems. This position is part of the [GROW Alliance](#), a group of researchers from the University of British Columbia (UBCO) and the University of Northern British Columbia (UNBC), in collaboration with the Swan River First Nation, The British Columbia Wildlife Federation, and the British Columbia and Alberta Trapper's Associations. The PhD student will be co-supervised by Dr. Laura Grieneisen ([Wild Animal Microbiome Science Lab](#) at UBCO) and Dr. Deanna Gibson ([Gibson Lab](#) at UBCO), and will work with Dr. Jeffery Werner (UNBC and Province of BC) and Dr. Heather Bryan (UNBC).

The PhD student will design and execute field experiments to assess the impacts of GBH application on target species and broader ecosystem health. This work will examine population-levels effects of GBH on ungulates (deer, elk) and small carnivores (ermine, weasel) and will require field work, lab work, and computational work to examine effects of GBH on ungulate and small carnivore gut microbiome and physiology. The student will work with the project supervisors and collaborators to design other components of the research.

### **Minimum Qualifications:**

- BSc in biology AND relevant research experience
- Applicants must be admissible to the [Biology PhD Program at UBCO](#)

### **Desired Qualifications:**

- MSc in ecology, wildlife biology, microbiome science, or similar discipline
- Capable working in both the field and laboratory
- Experience with data management and quantitative data analysis in R
- Experience with mammal fieldwork and/or microbiome pipelines
- Experience working with Indigenous communities and hunting/trapping groups
- Valid Class 5 drivers license

**Stipend:**

The UBCO Biology Department has a guaranteed minimum stipend of \$24,000 per year, plus additional opportunities for scholarships and internal annual awards.

**Include with application:**

- Cover letter
- CV
- Unofficial academic transcripts
- Name and contact information for 3 references

**To Apply:**

Please email your application as a single PDF file with your name and “Glyphosates and Large Mammals PhD Application” in the subject line to:

**Dr. Laura Grieneisen, [laura.grieneisen@ubc.ca](mailto:laura.grieneisen@ubc.ca)**

**Applications received on or before December 15, 2024, will receive full consideration; however, applications will be accepted until the position is filled.**

*All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority*