

**JOB POSTING FOR UCVM SUMMER STUDENTS**

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| Employer | University of Calgary, Faculty of Veterinary Medicine |
| Title of the research project | Longitudinal study of anthelmintic drug resistance in western Canadians sheep flocks and application of a molecular diagnostic marker for levamisole resistance |
| Supervisors  | Dr. John Gilleard (UCVM) and Dr Camila Queiroz (CFIA , Saskatoon) |
| Description of the Project | Gastrointestinal nematodes (GIN) can result in severe disease in sheep in Western Canada. Until 2016, Ivermectin and benzimidzoles have been the main drug classes used historically resistance to these two drug classes is now widespread for Hameonchus contortus and a major problem for control. This summer project is a continuation of our work on of drug resistance we have undertaken since 2015 as part of a longitudinal study to examine how anthelmintic resistance is changing over time. It will also apply and test for a new molecular diagnostic marker for levamisole resistance. The work will be performed in Calgary, involving communication with producers and laboratory work to process samples received by mail.  |
| Benefits for the student | The project will provide the student with **1)** direct hands-on experience of conventional parasitological techniques with exposure to cutting-edge molecular biology and bioinformatics research in the laboratory. **2)** Insight in sheep production systems inAlberta while working directly with sheep producers, **3)** An understanding and appreciation for GIN identification, control measures and AR in sheep flocks but also in cattle, horses and other pastured animals. **4)** experience of appkicaiton and testing of molecular diagnostics  |
| Skills Required | The position is to be filled by a Veterinary Medicine student in good academic standing at the UCVM. Selection will also depend on the candidate’s availability for the summer. Good organizational skills, ability to work with producers and in a laboratory setting are assets. Training in laboratory methods will be provided. |
| Responsibilities | The student will communicate with producers and organize shipment of sampling kits. Samples will be sent by mail and will be processed by the student. In addition, parasite material will be ethanol fixed. Genomic DNA will be prepared and archived for nemabiome metabarcoding for parasite species quanitification and a deep amplicon sequencing assay for the levamisole resistance mutation in the Hcacr-8 gene applied (support for this will be provided by members of Dr. Gilleard’s research team). |
| Start‐End Date | Beginning of May to end of August 2023 (negotiable). This Summer student position will consist of 17 weeks of work. |
| Location | Foothills campus |
| Hours | Monday to Friday (negotiable days & times)37.5 hours per week |
| Stipend | Scholarship applications to be applied for (February 3rd) but stipend funding is available for the right candidate.  |
| Application Due Date | Please send a letter of intent and curriculum vitae (with 2 listed references and contacts).  And/or contact Dr. John Gilleard with any questions at jsgillea@ucalgary.ca. |