ONTARIO VETERINARY COLLEGE
Project Proposal Form:
Summer Research Assistantship

1. BASIC INFORMATION

Advisor Name: Geoffrey Wood

Department: Pathobiology

Proposed Start Date: 2019-05-01

CONTACT INFORMATION FOR STUDENT APPLICATIONS

Name: Geoffrey Wood

Phone Extension: 54632

Email: gewood@uoguelph.ca

2. DETAILS OF PROJECT

Title of Proposed Project:
Circulating microRNA for early diagnosis and outcome prediction in canine cancers

Outline of Proposed Research Project (please keep concise, approximately ½ page or less):
This position involves ~65% experiential learning assisting in post-mortem examinations of domestic animals and ~35% laboratory-based research.
Experiential Learning: Exposure and involvement in activities in an academic post-mortem facility provides an excellent & unique learning opportunity, particularly to see how diagnostic pathology translates into disease research at OVC. The applicant must be a DVM student and completion of phase II of the DVM program is preferred. Proof of immunity to rabies (a protective titre) is required. Students will be encouraged to participate in the Summer CORE program as well as other activities in the Department of Pathobiology, such as research seminars and Gross and Histopathology Rounds.
Research: Cancer is frequently detected at late stages in the disease when it has already invaded tissue and spread (metastasized) to other organs. A relatively new concept in the cancer field is the use of routine, non-invasive blood sampling as a "liquid biopsy" for early diagnosis and prediction of therapy outcome. We have collected blood samples from dogs with a variety of cancer types as well as normal dogs, and banked the plasma. The goal of this project is to analyze specific molecules in plasma called microRNAs and look for correlations to clinical outcome. Our aim is to discover the most clinically relevant and powerful predictive markers for cancer in dogs. The summer student will assist in microRNA isolation and quality assessment, running PCR arrays with a 384-well pipetting robot, and integrating the results with clinical outcome data. An MSc student will help with mentoring and training the student along with a technician and other graduate students in the lab.

3. AVAILABLE ASSISTANTSHIPS

Select assistantship most relevant to the proposed research project (multiple boxes may be checked).
Please note restrictions.