ONE HEALTH INSTITUTE

Woolner Research Studentship

ONE HEALTH SUMMER RESEARCH OPPORTUNITY

COMPARING CANINE AND HUMAN EPILEPTIC SYNDROMES

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CLINICAL STUDIES

ARE YOU AN UNDERGRADUATE STUDENT WITH A KEEN INTEREST IN ONE HEALTH?
APPLY TO WORK WITH DR. JAMES!

Send ONEHEALTH@UOGUELPH.CA your:
• 250-500 (max.) word description of your interest in the research and One Health
• CV
• Unofficial Transcript

APPLY BY: TUESDAY, MARCH 17TH, 12 PM
DECISION BY MARCH 25TH
Research Description

**Background:** Dogs experience a naturally occurring epilepsy that strongly recapitulates the human disorder, with similar prevalence, causes, clinical signs, and response to therapies while fully sharing our environment. Diagnostic approaches for dogs mirror those used for people, with electroencephalography (EEG) the only way to confirm seizures. However, canine epilepsy syndromes and therapies are not as fully described as for humans. My comparative epilepsy research program uses EEG to improve diagnosis and treatment in canines within the context of an international collaborative network involving global veterinary academic and referral centres as well as epileptologists at the Toronto Hospital for Sick Children.

**Project:** My lab is currently recording canine EEG to confirm if dogs are similar to humans in three areas: 1) seizure frequency under-reporting, 2) overestimation of anti-seizure drug effectiveness, and 3) physiological effects of transcutaneous vagal nerve stimulation, a non-pharmaceutical anti-seizure therapeutic modality.

**Student's role:** 1) Assist my lab graduate students with recording, analyzing, and archiving canine EEG in the Ontario Veterinary College Health Sciences Centre. 2) Prepare a literature review and poster presentation on one of the three current research objectives.

This hands-on participation in ongoing lab research provides direct experience in Professional and Ethical Behaviour, Communication, and information Management and Data Analysis. This experience further provides exposure to the Holistic Understanding of Health - canine epilepsy in the context of human health - and Problem Solving and Critical Thinking within a framework of biomedical research and clinical trials.