

Veterinary Microbiology SEMINAR SERIES



Adrián Hernández Ortiz

Ph.D. Student

Department of Veterinary Microbiology

Country food wildlife as a potential risk of a food-borne parasite transmission: *Toxoplasma gondii*

Wildlife, including caribou, seals and polar bears, are hunted and harvested by different communities in the Canadian North, as part of traditions and culture, and as a critical food resource. Consumption of raw or undercooked meat is a common practice between these communities, a factor that may increase the risk of human exposure to parasitic zoonoses such as *Toxoplasma gondii*. In recent years, there has been increasing concern about high rates of exposure to *T. gondii* in northern residents, possibly through foodborne routes. Applying serological and molecular techniques, we tested different kind of samples to detect *T. gondii* in wildlife from the Canadian North; consequently, we can generate knowledge to communicate the risks of the parasite for wildlife and people.



Émilie Bouchard

Ph.D. Student

Department of Veterinary Microbiology

Detection, prevalence and transmission mechanisms of *Toxoplasma gondii* in foxes and lynx of Northern Canada

In changing northern ecosystems, understanding the mechanisms of zoonotic pathogen transmission, including the coccidian parasite *Toxoplasma gondii*, is essential to protect vulnerable animal and human populations that live in these regions. As sentinel species, foxes and lynx give us a better idea of *T. gondii* distribution, of how it persists in this ecosystem, and help understanding trophic relationships between carnivores and their prey species. We used molecular and immunological methods to detect *T. gondii* in feces, brain, heart, and blood. Isotopic analyses to reconstitute the diet of foxes across two different ranges may help elucidate regional differences in *T. gondii* tissue prevalence. This study sheds new light on the current status of *T. gondii* in wildlife in northern Canada, informing future risk assessments and predictive models to determine the potential human and animal health risks associated to *T. gondii* infection.

Friday, November 8, 2019

3:30 p.m.

Room 2104, WCVM