

**CONSORTIUM ON LAW AND VALUES  
CONSORTIUM SCHOLAR FINAL REPORT**

**“Understanding the zoonotic risk of echinococcosis for a northern Minnesota tribal community”**

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**Introduction**

Echinococcus granulosus and E. multilocularis are multi-host parasites found definitively in wolves, foxes, and even domestic dogs. Humans can become infected when accidentally ingesting contaminated food or water, or by interaction with infected hosts. In the last few decades, prevalence of these cestodes has been markedly increasing in both natural and accidental hosts. Grand Portage Indian Reservation is located in the northeastern-most corner of Minnesota on Lake Superior, and is home to the GP band of Chippewa. A shared environment with wolves and foxes, along with subsistence lifestyle practices, puts the GP inhabitants at potential risk of contracting Echinococcosis. We are particularly interested in the transmission potential between wild canid hosts (wolves, foxes) and domestic dogs, and strive to understand the risks to human health. We aim to determine the prevalence of infection among wolves, foxes, and dogs in order to assess risk of human exposure and develop community-specific recommendations for prevention. This project will serve to foster interdisciplinary collaboration between the College of Veterinary Medicine, School of Public Health and the Grand Portage Indian Reservation, as well as provide a unique graduate training opportunity in infectious disease epidemiology at the interface of human and animal health.

**Financial summary—provided separately**

**Results**

*Publications (planned, in press, or published):*

- The Zoonotic risk of echinococcosis transmission warrants renewed attention in northern Minnesota.
  - Submitted to Emerging Infectious Diseases September 2018
  - Co-authors Seth Moore, Belgees Boufana, PhD, Dominic Travis, DVM, MS, Tiffany M. Wolf, DVM, PhD

*Presentations (planned or completed):*

- A presentation of the analyzed results will be made at the CVM’s Ecosystem Health meeting.

*Grant proposals (planned or submitted):*

- Institute on the Environment Mini Grant, submitted and awarded 2016

**Future project plans**

Field work has been completed and samples are being stored on campus. Future plans include completing sample testing with an outside laboratory. Our timeline has been pushed back due to unforeseen issues in identifying a lab capable of testing our fecal samples. We hope to have the samples submitted for testing by the end of this summer, with results back during this fall/winter (2017) for analysis. Analysis of the results will guide future project goals, with the hope of expanding the species in our sampling pool, and will allow us to provide a public health risk analysis to the members of the Grand Portage Band of Chippewa. Sokolik is a masters student through the School of Public Health, and the manuscript from this work will serve as her project requirement for that degree, in fall of 2018.