

PhD Program in Fish Health, 2023

Department of Pathology & Microbiology, Atlantic Veterinary College

The Department of Pathology & Microbiology at the Atlantic Veterinary College (AVC) is currently seeking a candidate to complete a four-year PhD research project in fish health. The position will provide a minimum stipend of \$40,000 Canadian /year with the possibility of supplementation through both internal and external awards and scholarships. Pending project funding, the successful candidate will ideally begin work in May, 2023.

The project focuses on characterizing the nature of skin diseases affecting wild salmonid species in Prince Edward Island (PEI) rivers, and will involve field work, laboratory-based techniques, and pathologic investigations. Over the last five years, anecdotal observations have been made of unusually high numbers of salmonid fish (primarily brook and rainbow trout) with skin diseases in certain rivers on PEI. Affected fish have been reported during the summer and fall seasons by a variety of stakeholders including provincial biologists, watershed volunteers, and local residents. Occasionally diseased trout have been submitted to the Canadian Wildlife Health Cooperative (CWHC) at the Atlantic Veterinary College (AVC) for necropsy investigation which invariably revealed extensive patches of grey cottony growths on the skin consistent with infection with an Oomycete species (sometimes referred to as “water mold”). These anecdotal reports of increased incidence of oomycosis in PEI salmonid species is concerning to fisherman and provincial stake holders. An increase in oomycosis in PEI salmonids could suggest exposure to environmental contaminants, increased physiological stressors, or changes in hydrological factors such as reduced flow rate and water temperature. To our knowledge, studies on the prevalence of oomycosis and factors impacting its occurrence in PEI rivers are lacking and will be essential to determine the significance of this disease to salmonid populations as well as identifying possible risk factors leading to increased incidence in some rivers as compared to others.

Minimum requirements for Canadian and International students include holding a MSc or DVM (or equivalent) credentials with excellent academic records. Exceptional candidates with a keen interest in wildlife health and aquatic diseases, environmental conservation, and fish biology are encouraged to apply. Prior research experience using riparian field techniques (ex: electrofishing, water sampling) and molecular and diagnostic procedures (ex: PCR, microbial culture) is considered an asset. The successful candidate must meet the AVC graduate admission requirements.

Prior to submitting their application, applicants are encouraged to contact the faculty member to gauge project compatibility and interest. Interested candidates should submit a letter of interest, curriculum vitae, official transcripts of university grades, and the names, titles, institutions, email addresses, and telephone numbers of three referees.

Faculty contact information and email for submissions are listed below:

Dr. Laura Bourque, Wildlife Pathologist
Canadian Wildlife Health Cooperative – Atlantic Region
Department of Pathology & Microbiology

Atlantic Veterinary College
University of Prince Edward Island
Charlottetown, PE, C1A 4P3
Canada
e-mail: lbourque@cwhc-rcsf.ca