UNIVERSITY OF PRINCE EDWARD ISLAND
ATLANTIC VETERINARY COLLEGE
DEPARTMENT OF HEALTH MANAGEMENT
MASTER'S STUDENT
SIMULATION MODELLING IN AQUACULTURE

The Atlantic Veterinary College (AVC) at the University of Prince Edward Island (UPEI) is seeking a highly-qualified applicant for a master's student position in aquatic epidemiology with an emphasis on improving surveillance efforts using simulation modelling approaches. The successful candidate will contribute to a research programme that focuses on the development and application of novel quantitative approaches to salmon health and sustainability. This programme focuses on eco-system health on the East Coast of Canada and includes modules that explore the use of latent variable and agent-based models to improve antimicrobial and anti-parasitic therapies, as well as the early detection and more effective control of disease via risk-based surveillance and novel sensor technologies.

The successful individual will join a multi-disciplinary team of epidemiologists, data science modellers, statisticians, fin-fish clinicians, ecosystem health and regulatory veterinary medicine specialists, whose work focuses on holistic approaches to assist the Canadian and international aquaculture sector improve the productivity, sustainability and health of aquatic food animal stocks. The master's student will contribute to a major multi- institutional grant involving academic, industry and government partners related to modelling the spread of pathogens in the marine environment, including interactions between farmed and wild fish, and the evaluation of mitigation strategies to reduce disease risk.

In particular for the portion of the research project that this master's student will join, the successful individual will work with a team to take models of virus transmission risk and extend them to incorporate adjusted seaway distances and hydrodynamic features, to improve model generalizability and implement it in a user-friendly platform.

The selected candidate must have:
- An undergraduate degree in the biological or veterinary sciences
- An interest in statistical and simulation modelling
- Proficiency in at least one scientific programming language (e.g. R, Python) is beneficial but not required.
- Experience with aquatic animal diseases is desirable.
- Experience of working in a multidisciplinary group with demonstrated abilities to communicate with individuals from diverse backgrounds is expected.
- Must be self-motivated and able to work both independently, and as an effective partner within the team

This master's student assignment will start as soon as possible, and run until August 31, 2020 (the term may be reduced or extended depending on participation in the project, available funding and project requirements). A competitive master's stipend will be offered on a per annum basis for the duration of the assignment. Questions about the position should be forwarded directly to Dr. Ian Gardner through emailing Sheri Gregory (shgregory@upei.ca)

Interested candidates should submit a letter of intent, curriculum vitae and the names of three referees by email to:

Dr. Ian Gardner
Canada Excellence Research Chair – Aquatic Epidemiology
Department of Health Management
Atlantic Veterinary College, UPEI
550 University Avenue,
Charlottetown, Prince Edward Island
CANADA, C1A 4P3
Telephone (902) 620-5059
Email: shgregory@upei.ca

In accordance with Canadian immigration requirements, all qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

Closing date for applications is May 31, 2018 or until a suitable candidate is identified.