

# Graduate Opportunities Available to Study the Genomics and Physiology of Thermal Tolerance in Fish



Dept of Integrative Biology, University of Guelph

We are seeking highly motivated students to study the genomics and physiology of thermal tolerance in rainbow trout. This research will be conducted under a recently funded NSERC Strategic Grant project and is a collaboration between the laboratories of Drs. Roy Danzmann, Moira Ferguson and Brian Dixon (University of Waterloo). MSc and PhD positions are available for September 2018 or earlier. There is also an opportunity to first gain experience as a research assistant during summer 2018.

Rainbow trout aquaculture is limited by the ever-increasing water temperatures during the summer. The research is directed improving thermal tolerance by (a) identifying genetic markers and genes associated with increased thermal tolerance for use in selective breeding programs and (b) developing a novel physiological approach so fish are able to better tolerate thermal stress and disease. Students will be trained in the latest genomic methods such as the use of SNP genotyping platforms, transcriptomics, digital droplet PCR and bioinformatics analysis. All students will also gain practical experience working with fish in aquaculture and academic settings.

An undergraduate background with courses and/or research experience in genetics, evolution and physiology is preferred. Motivated students with a keen interest in understanding the genomics and physiology underlying thermal tolerance in fish would be ideal.

Applications should include an unofficial copy of your transcript, a resume, a letter outlining why you are interested in a position and your research experience, and the names and contact details of two academic referees.

If interested, please contact either:

Dr. Roy Danzmann, [rdanzman@uoguelph.ca](mailto:rdanzman@uoguelph.ca)

Dr. Moira Ferguson, [mmfergus@uoguelph.ca](mailto:mmfergus@uoguelph.ca)

Informal enquiries are welcome.