

NSERC Visiting Fellowships in Wild Ecological Genomics and Modelling

Program Description

We have two postdoctoral positions available in a new dynamic, multidisciplinary research program on condition of migrating salmon funded through Genome British Columbia. The project uses genomic technologies to identify conditional states in migrating salmon that diminish their performance/survivorship during transitions between freshwater and saltwater. We will develop and apply predictive conditional biomarkers in models that explore the interaction between physiological and environmental conditions, culminating in the generation of a new class of fisheries models that consider both physiological condition of migrating fish and the environmental conditions they are encountering, as well as traditional stock assessment information to predict on a stock-basis how many salmon will return to the river, and what proportion will survive to spawn.

PDF1:

One of the postdoctoral positions is for a candidate with excellent skills in functional genomics and an interest in ecology. Previous experience with DNA microarrays and bioinformatics is an asset, and background knowledge of immunology and disease, metabolomics, osmoregulation, and/or stress response is beneficial.

PDF2:

The second postdoctoral position is for a candidate with excellent skills in quantitative fisheries or ecological modeling. Previous experience with population dynamics modeling, stock-assessment methods, parameter estimation techniques, Bayesian statistics, or generalized linear modeling would be valuable assets. Background knowledge of salmon life history, physiology, oceanography, or climate change impacts in the northeast Pacific would also be beneficial.

For both positions, good communication skills, fluency in both spoken and written English, and motivation to collaborate with other research groups are essential. This project represents a collaborative effort between the federal Department of Fisheries and Oceans, Canada (the lead agency), University of British Columbia, and the Pacific Salmon Commission, and brings together researchers in genomics, bioinformatics, physiology, ecology, modeling, and fisheries management. There are four postdoctoral positions (bioinformatics, social sciences, genomics and modeling), two already filled, that will interact on this project to form a highly collaborative, stimulating working environment.

Both postdoctoral positions will be located at the Pacific Biological Station in Nanaimo, British Columbia on Vancouver Island, a beautiful coastal city with many recreational opportunities and just a short distance from Vancouver and Victoria. Please see <http://www.pac.dfo-mpo.gc.ca/sci/mgl/Genomics/> for more details about the genomics program at Pacific Biological Station.

The funding for these NSERC Visiting Fellowships is guaranteed for 24 months with potential for a 12-month renewal dependent on the quality of research and availability of funding. The start date for PDF1 is ASAP, PDF2 in June, 2009. Qualified individuals should have been awarded a Ph.D. degree no earlier than December 31, 2004.

Contact Information -- Applicants should contact and send a CV by February 15, 2009 to:

PDF1 – Ecological Genomics

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PDF2 – Ecological Modeling

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For links to collaborators their individual research interests please go to http://www.pac.dfo-mpo.gc.ca/sci/mgl/Genomics/Collaborators_e.htm

For information about the NSERC Visiting Fellowships program, please go to:
http://www.nserc.gc.ca/sf_e.asp?nav=sfnv&lbi=3d