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Using functional genomics to understand the molecular mechanisms behind alternative life-histories

Jeudi 22 février 2024 à 12 h 30

Pavillon Charles-Eugène Marchand, salle Hydro-Québec (1210)

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Abstract:

Understanding the evolution of life-histories is a central challenge in biology, yet mechanisms that encode for adaptive life-history variation remain poorly understood at the molecular level. My research aims to uncover the mechanisms by which genes and regulatory networks underly evolution in life-history traits and fitness (the “genotype-phenotype-fitness map”). I address this question using functional genomics and quantitative genetics in Atlantic salmon (*Salmo salar*), which, being among the most variable vertebrates on Earth, is an excellent system to study the links between ecology, evolution, and development. I will present my work to uncover a molecular mechanism that mediates variation in a key adaptive life-history trait, maturity age. I will also touch on my ongoing work to discover the molecular mechanisms that underlie evolution of body allometry, that is, changes in relative organ size yet not in shape, in unique populations of dwarf Atlantic salmon.

Hôte : Christian Landry

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