



### PhD position in Multi-species Landscape Epigenomics (Venney lab)

I am seeking a highly motivated student for a PhD project on multi-species landscape epigenomics. This is a funded PhD position in the Department of Biological Sciences at the University of Alberta (**minimum guaranteed salary of \$25,917/year for 5 years**). The start date is anticipated to be January or September 2025 but is negotiable. Previous experience with genomic data or bioinformatics (Linux and R) is an asset.

DNA methylation is a potential underlying mechanism for phenotypic plasticity and can respond to environmental fluctuations such as climate change. Due to the potential for epigenetic inheritance, populations living in different environments could accumulate epigenetic differences over many generations. These methylation differences could slowly lead to genetic divergence over long evolutionary periods due to the mutagenic nature of DNA methylation.

We will assess variation in DNA methylation due to climatic variation and its associations with genetic variation. We have performed ~16X coverage whole genome methylation sequencing for 80 lake whitefish (*Coregonus clupeaformis*) and 80 brook charr (*Salvelinus fontinalis*): 10 fish per species from eight sampling locations across a latitudinal climatic gradient in Hudson Bay and James Bay. We will combine these data with environmental data and ~20X whole genome sequencing data for the same fish to answer diverse questions on interactions among DNA methylation, the genome, and environmental variation in a natural system.

The successful candidate will be co-supervised by Dr. Clare Venney (<https://clarevenney.weebly.com/>) and Dr. Jean-Sébastien Moore (Université Laval, <https://jean-sebastienmoore.weebly.com/>). The successful candidate can also contribute to upcoming fieldwork in the lab as desired (e.g., potential work in and around Banff and Jasper National Park). Interested candidates should send a CV, unofficial transcripts, and one page cover letter detailing their interest in the position to **venney@ualberta.ca** on or before **July 1<sup>st</sup>, 2024**.

Please feel free to reach out with any questions at the email address listed above.

Clare Venney  
Incoming Assistant Professor  
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