

Master's project at Genome Biology

Faculty of Biosciences, Department of Animal and Aquacultural Sciences (IHA)

Title: Molecular evolution of pituitary hormone genes in vertebrates

Key words: evolutionary genomics, natural selection, population genomics, bioinformatics,

Contact persons / supervisors:

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<https://sites.google.com/view/saitou-lab/home>



Task description:

Growth hormone, prolactin, and somatolactin are hormones that regulate growth, development, lactation, and parental behavior. This project aims to understand how these genes evolved in broad species and how they led to the variety of relevant traits in each species. The tasks in the projects are:

- Build a project plan and conduct a literature search with the help of supervisors before the project starts
- Examine the evolutionary history of pituitary hormone genes using cross-species genome datasets
- Associate them with behavior and ecology data in each species to estimate potential evolutionary forces
- Determine the function of each gene using RNAseq data sets

Notes:

- Familiarity with bioinformatics and the concepts of molecular evolution (<https://www.nmbu.no/course/BIO321>) are preferred.
- You will likely work with Ph.D. students/Postdoc(s) in the group.

Ref. <https://doi.org/10.1016/j.ygcen.2018.01.007>