

Master's project at Genome Biology

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

Title: Why can European lobsters be so blue?

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

Contact persons / supervisors:

Marie Saitou (CIGENE), Arturo Vera Ponce De Leon (CIGENE), Louise Chavarie (MINA)



Marie Saitou Please read our website carefully before contacting me:

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

Task description:

Extremely blue individuals of European lobster (*Homarus gammarus*) have been occasionally found.

This project aims to understand the biological basis of lobster color variation by using multi-omics approaches. The tasks in the projects are:

- Build a project plan and conduct a literature search with the help of supervisors before the project starts
- Conduct comparative genome, transcriptome, and metagenome sequencing of blue and non-blue lobster individuals and uncover the molecular basis of the color variability
- Investigate the geographical distribution of blue lobsters through surveys and estimate the potential ecological/evolutionary force for the lobster color

Notes:

- Familiarity with bioinformatics and the concepts of omics (<https://www.nmbu.no/course/BIO326>) are preferred.
- *You will likely work with Ph.D. students/Postdoc(s) in the group.*