

Genetic variation and experimental evolution of the cognitive brain

Our lab is focusing on experimentally identifying the environmental and genetic ingredients necessary for jump-starting the evolution of cognition. To do so our lab is merging the fields of experimental evolutionary biology and neuroscience. We are integrating technologies and methods from both fields with the end-result of experimentally evolving a cognitive brain in a model organism. Our interest lies in exploring and mapping genetic variation underlying complex behavioral traits such as cognition in *Drosophila* using experimental evolution, next generation sequencing, high-throughput imaging techniques, and complex behavior phenotyping.

We are looking for a prospective PhD student with a good background in neurogenetics, neurobiology, or molecular genetics/genomics to embark on this project. If you are willing to learn and apply quantitative-, molecular- and population genetics approaches to behavioral and neuronal phenotypes in *Drosophila* join us in our quest to explore the drivers of brain evolution.

In this project you will be developing high-throughput phenotyping methods to map the whole-genome sequencing data to cognition-related morphological phenotypes, such as brain morphology. You will also join the setup and the analysis of the evolution experiments aimed to test some of the main hypotheses of drivers of brain evolution.

You can expect to develop your bioinformatics skills, but also learn population genetics, and quantitative techniques in evolutionary biology, gain knowledge of *Drosophila* genetics and neurobiology, and become an expert in experimental evolutionary neurobiology.

You can expect a supportive, inclusive, collaborative, dynamic, and fun research environment, open-door mentorship, flat lab hierarchy, opportunity to attend international conferences, and access to the academic network of evolutionary and neurobiology.

You can learn more about the lab, projects and your future PI at jaksiclab.com or we can have a zoom chat, informal inquiries are very welcome!