

Postdoctoral Fellowships





CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Jean-Baptiste Boulé
Supervisor page	https://biophysique.mnhn.fr/en/directory/jean-baptiste-boule-9011
Host Institution	Muséum national d'Histoire naturelle (MNHN) https://www.mnhn.fr/en/scientific-research
Research Lab	Genome Structure and Instability https://biophysique.mnhn.fr/en
Research Team	Genomics and Physiology of Adaptation https://biophysique.mnhn.fr/en/gpa-9045

Project Title

Understanding competitive and cooperative metabolism and its dynamics during fermentation in microbial consortia from water kefir using multi-omics characterization and metabolic modeling

Project Description

We aim to study the dependency on cooperation or competition in the functioning of water kefir, a simple ecosystem with finite resources. How cooperation and/or competition allow the ecosystem to function, from the production of its specific biofilm to the complete usage of resources available in this ecosystem ? The project will help to understand the the metabolic strategies put in place to ensure the resilience of this diverse ecosystem over time in the context of finite resources.

Keywords

microbial ecology, metabolic modeling, multi-omics analysis

Description of the Host Research Lab

Research in our laboratory "Genome Structure and Instability" relates to nucleic acids, their structures, their dynamics and their interactions with cellular partners. Our research works aim to characterize the molecular and cellular functions associated with nucleic acids, in particular the molecular mechanisms of genetic instability, involved in various pathological and evolutionary processes.