



PhD fellowship in Coral Holobiont Adaptation

We are seeking for a highly motivated PhD candidate within the field of Marine Biology, Genetics or Evolution to lead research in coral reef ecology and coral holobiont adaptation to environmental change. Applicants should have a background in molecular biology, programming (R and scripting in linux shells) and scuba diving. Experience in performing experiments in aquaria is desired.

The PhD fellow will combine coral holobiont genomics and field ecology to better understand the influence of environmental change on ecological patterning and evolutionary processes through the interaction of genetics, host-microbiota interactions, and symbiosis. In particular, the successful applicant will use omics-based approaches to explore the molecular and physiological responses of corals exposed to different environmental conditions through in situ surveys and manipulative experiments.

The successful candidate will conduct his/her research in two laboratories: the “Centre de Recherches Insulaires et Observatoire de l’Environnement” ([CRIOBE](#)) at Moorea, French Polynesia, for field work and stress experiments in aquaria (~6 months/year) and the “Institut de Biologie Intégrative et des Systèmes” ([IBIS](#)) at the Université Laval in Québec, Canada, for lab work (~6 months/year).

Start date is expected to be 1 November 2022 or as soon as possible thereafter.

Qualified candidates must have:

- A Master’s degree in Marine Biology (or related field)
- Experience in scuba diving (Certified scientific diver is preferable)
- Strong skills in molecular methods (DNA/RNA extractions and PCRs)
- Coding skills in R (scripting in linux shells is desired)
- Ability to manage, analyze, and synthesize data
- Proficiency in both written and spoken English

If lacking one of the must have qualifications, we encourage outstanding and very motivated candidates to submit their application.

Desired qualifications:

- Background within the field of coral reef ecology
- Experience in performing field work and/or manipulative experiments in aquaria
- Experience in analyzing genomic (RAD-Seq) and/or microbiome (metabarcoding) data
- Willingness to conduct field work on shallow coral reefs using SCUBA diving from small boats
- Willingness to spend ~6 months/year (or longer periods of times) on a tropical island
- Experience of using photogrammetric approaches to characterize benthic community
- Boat driving license
- Excellent interpersonal skills
- Keen interest in interdisciplinary research and collaboration
- Conversational French. The PhD fellow will share his/her time between French Polynesia and Québec. Although French language skills are not required, it is a great opportunity for you to learn French.



Responsibilities and tasks of the PhD fellow

- Develop an independent research project under supervision
- Take ownership of the research project and be fully committed to achieve research objectives
- Participate in active research environments, including a stay at the CRIOBE field station in Moorea, French Polynesia, and the IBIS lab, Université Laval, Québec, Canada.
- Develop a productive and collaborative research environment
- Engage in outreach activities
- Write scientific papers aimed at high impact journals
- Write and defend a PhD thesis

Supervisory duties will be shared by CNRS Researcher Laetitia Hédouin (CRIOBE), Professor Nicolas Derome (Université Laval), and Dre Caroline Dubé (Université Laval and California Academy of Sciences).

The PhD fellowship

The PhD fellowship is funded by the “Ministère de l’Enseignement Supérieur et de la Recherche” in partnership with the France-Canada Research Fund. Employment as PhD fellow (through the École Pratique des Hautes Études, Sorbonne, Paris) is full time for 3 years and will take place at the CRIOBE lab in Moorea, French Polynesia, and the IBIS at the Université Laval in Québec, Canada.

Centre de Recherches Insulaires et Observatoire de l’Environnement (CRIOBE)

The CRIOBE was founded with the objective to integrate biology, ecology, genetics, molecular biology, chemistry, endocrinology, economics, anthropology, and sustainability of socio-ecological systems to better understanding the functioning of the coral reef ecosystem, its response and adaptation to global change. This laboratory is one of the few in France whose research area focuses on coral reef ecosystems, which will provide the PhD fellow with a unique opportunity to collaborate with an interdisciplinary team of coral experts.

Institut de Biologie Intégrative et des Systèmes (IBIS), Université Laval

The IBIS is a transdisciplinary research institute at the forefront of efforts to understand fundamental biological and evolutionary processes from molecular structure and interactions, through cell functions and microbiome, to ecosystem dynamics. Through partnerships and public engagement initiatives, the institute’s scientists guide critical sustainability and conservation decisions against climate change, and drive innovation in human and animal health, and food production. The IBIS also operates the Genomic Analysis Platforms (GAP), a fully equipped DNA sequencing facility.

To apply: Please send your application as a single PDF including a cover letter summarizing your qualifications and interests, curriculum vitae (with a publication list, if applicable), Academic transcripts (Bachelor and Master translated in French or English, if applicable), and the names and contact information of 2 referees (recommendation letter, if available) to caroline.dube.qc@gmail.com. Applications that do not fulfill the requirements outlined above will not be considered.

Application deadline: The deadline for applications is 15 August 2022, 23:59 GMT-10