

Job Offer

FUNCTION	https://data.enseignementsup-recherche.gouv.fr/pages/referens/
EMPLOYMENT TYPE	<i>Postdoc / Research engineer</i>
CORPS	Contract : <i>Research engineer</i>
CATEGORY	A
AFFECTATION	UPVD – UMR 3278 CRIOBE

MISSION(S)

Coral reef ecosystems are critically threatened by the effects of global climate change. As corals are long-lived organisms, it is likely that the current rate of climate change is rapidly outpacing the capacity for genetic adaptation in reef-building corals. In recent years, non-genetic mechanisms of adaptation, such as epigenetic mechanisms, phenotypic plasticity, or changes to the microbial communities and metabolisms, have increasingly shifted into the focus of coral reef research. Reef-building corals are complex holobionts that associate with intracellular algae (Symbiodiniaceae), bacteria, archaea, fungi, and viruses. Decades of functional research are testament to the importance of the coral-algae symbiosis, a reciprocal nutrient-exchange relationship that forms the functional basis of coral reef formation. However, our understanding of the functions of the other microbes in the coral holobiont remains limited. Increasingly, microbial roles are considered in the health, resilience, and acclimatization of coral holobionts to global environmental change. As such, the molecular and metabolic interactions of bacteria in the coral holobiont remain poorly understood, and experimental data supporting the mutualistic lifestyles of bacteria in corals are largely lacking.

A motivated postdoc on a research engineer contract will develop hypothesis-driven research of microbial interactions and functions in cnidarian health and stress responses in the context of global climate change using a reduced model system approach. The postdoc will develop a research project using dinoflagellate, bacterial and fungal co-cultures to identify crosstalk, i.e. specific molecular pathways and metabolites involved in the interactions of different microbial partners. You will further assess how this crosstalk is affected by the effects of global climate change. The recipient of this postdoctoral contract will have access to microbial cultures to establish the co-culture work.

This work is embedded into the ANR CPJ Project 'A connected underwater world' based at the UMR 3278 CRIOBE at the University of Perpignan Via Domitia, which focuses on the chemical ecology and molecular interactions of complex marine holobionts.

ACTIVITE(S)

- Isolation and microbial (co)culture (bacteria, dinoflagellates, fungi)
- Hypothesis-driven experiments in the context of global climate change
- Sample processing for molecular biology (metabolomics, gene expression)
- Data analysis (metabolomics, gene expression, physiology)

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COMPETENCES

Experience in microbial ecology required (ideally marine)
Aseptic techniques, cultivation of marine microbes
(dinoflagellates, bacteria, and/or fungi)
Experimental design
Molecular biology (PCR, nucleic acid extraction, library prep)
Experience in bioinformatics is desirable
French and /or English language skills

WORK ENVIRONMENT AND CONTEXT

The work will be carried out under the supervision of Claudia Pogoreutz (CRIOBE – UPVD). The project will be further supported by students and international collaborators.

The candidate will be placed at the Moulin à Vent Campus of the University of Perpignan Via Domitia.

The candidate will use lab space at the CRIOBE and the BioEnvironment Platform of the university.

The project is funded by ANR CPJ funding.

WORKING HOURS AND REMUNERATION

Contract duration: 18 months

Desired start date: 1 September 2024

Working hours : 37.3 hours and 57 days annual leave.

Salary range : Remuneration will be commensurate with experience. For this category **A** position, the gross salary range is **2,326** and **2,500** euros a month.

Degree requirements: PhD or equivalent

Applications (cover letter plus CV) should be sent by email to:

- Claudia Pogoreutz – PI : claudia.pogoreutz@univ-perp.fr
- Pierre Sasal – Director of the CRIOBE: sasal@univ-perp.fr

NO LATER THAN 5 JULY 2024