

Postdoc in Arctic geomicrobiology and biogeochemistry M/F

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Application Deadline : 30 September 2025 23:59:00 Paris time

Reference : UMR7294-SYLJOV-023

Workplace : Marseille, France

Contract Period : 24 months

Expected date of employment : 1 February 2026

Missions

We are seeking a postdoc (M/W) in geomicrobiology (PhD-level position) in Marseille, France, to work on the European Research Council funded Starting Grant project 'SIESTA: The Role of Microbial Dormancy as an Ecological and Biogeochemical Regulator on Earth'. The position is under the supervision of Dr. James Bradley (<https://www.jbradleylab.com/>). The recruited person will work with the principal investigator and will participate in laboratory experiments, data analysis, field work, and work as part of a project team that includes doctoral students and technical staff. The main objective of this postdoc position is (1) to measure the activity and dormancy of diverse microbial communities in cryospheric environments, and (2) to link the activity and dormancy of these microbial communities to biogeochemical cycles. This data will feed into wider project goals to understand the role of dormancy as a regulator of biogeochemical cycles, and to link dormancy to the emergence, survival and evolution of microbial populations.

Applicants should hold a Ph.D. in a relevant natural science discipline (e.g. environmental microbiology, geomicrobiology and biogeochemistry, microbial ecology and evolution). The CDD is offered for 2 years and is renewable on an annual basis, contingent on satisfactory performance evaluations. We expect a flexible start date around February 2026, adjustable based on the candidate's availability and the requirements of the project.

Applicants should submit IN ENGLISH 1) a current curriculum vitae; 2) a cover letter (maximum 2 pages) stating their motivation for applying to this position, research interests, relevant skills, training and experience; 3) contact information for at least two and up to three professional references. Please combine these documents into a single PDF. Important: Please also email Dr. James Bradley (james.bradley@mio.osupytheas.fr) to confirm your intention to apply. Apply as soon as possible. The application window will remain open for three weeks after the date that it is advertised online, and on a rolling basis thereafter (depending on whether or not a candidate has been selected). Contact Dr James Bradley (james.bradley@mio.osupytheas.fr) with any questions.

Activities

The postdoc (M/W) will contribute to different research aspects on the project:

- Study/analysis of cryosphere (cryoconite, ice, sediment, soil) environments and microbiomes (experimental and observational).
- High-resolution sampling of natural microbial populations (including fieldwork in remote Arctic regions).
- Molecular and experimental microbiological and biogeochemical laboratory work.
- Generation and analyses (bioinformatic and statistical) of environment and microbiome data, including amplicon sequencing libraries, metagenomes, and metatranscriptomes.
- Publish (as lead and co-author) in leading academic journals, participation in scientific conferences, outreach activities.
- Collate and catalogue data for deposition and archiving in data repositories.

Skills

- Expert knowledge of microbial ecology, biogeochemistry, microbial adaptation to extreme environments, microbial ecophysiology.
- Demonstrated skills and experience in a range of microbiology competencies (molecular biology, environmental microbiology, 'omics/sequencing, physiology/incubation/activity measurement and experiments).
- Technical skills and experience in microbial incubation experiments, activity/ecophysiology measurement at the community and/or single cell level, metagenomics and/or metatranscriptomics.
- Technical skills and experience in cell-specific activity measurements including fluorescent markers for cell activity, flow cytometry, cell sorting (e.g. BONCAT-FACS).
- Quantitative skills in analysis of large datasets, for example: to integrate biological/genomic data with biogeochemical measurements, biogeographic, phylogenomic, comparative, time series (community or population) modelling/analyses.
- Demonstrated skills in bioinformatic and statistical analyses of microbiome, geochemical and ecological data including sequencing data.
- Analysis skills: write and execute code in R, Python, GitHub etc., high-performance computing.
- Strong oral and written communication skills in English.
- Ability to work independently and flexibly.
- Ability to work harmoniously as part of a team.
- A track-record of research productivity.
- Awareness of open science standards for microbiome research (reproducible analyses, preservation of metadata and repository of public data).

Work Context

The successful candidate (M/W) will work at the Mediterranean Institute of Oceanology (MIO), in Marseille Luminy. The MIO is an Oceanography research laboratory of the Universities of Aix-Marseille, Toulon, CNRS and IRD. It is integrated into OSU Pythéas. Its

objectives are to better understand the ocean system and its evolution in response to global change. It constitutes a center of expertise in biology, ecology, biodiversity, microbiology, fisheries, physics, chemistry, biogeochemistry and marine sedimentology. Its frameworks are the world ocean, its interfaces with the continent, the atmosphere and the sediment. The MIO has more than 250 people, including around a hundred researchers (CNRS, IRD) and teacher-researchers from universities, around sixty engineers and technicians, more than 50 doctoral students and an administrative team serving research. The candidate (M/W) will join the MEB team, working in the ERC project SIESTA led by James Bradley. The successful candidate (M/W) will enjoy a vibrant research group, access to excellent research facilities and platforms at the Mediterranean Institute of Oceanography and Aix-Marseille University, and be embedded in a team committed to high scientific integrity, open and reproducible science, and promoting inclusivity. Marseille is an affordable, vibrant and historic city on the Mediterranean coast, with culinary excellence, diverse cultural experiences, and a large international community. The Mediterranean Institute of Oceanography, on the Luminy campus of Aix-Marseille Université, is surrounded by nature being nestled among the spectacular Calanques National Park.

Constraints and risks

Travel and fieldwork in remote (glaciated, Arctic) environments for field collection of samples, and attending scientific meetings for dissemination of results.