



Position offered at the [Mediterranean Institute of Oceanography \(MIO\)](#)  
Funded by the [BNP Paribas Foundation Climate & Biodiversity Initiative](#)

## Project description

The biological fixation of dinitrogen ( $N_2$ ) by marine microbes called 'diazotrophs' sustains ~50% of primary production in the ocean, boosting  $CO_2$  absorption and mitigating climate change. The BNP Paribas Foundation funded project NOTION (*NitrOgen fixers structuring phyToplankton biodiversity in the Ocean under climate change*) studies how climate change stressors affect the activity of diazotrophs, and how they will impact phytoplankton biodiversity and productivity in the future ocean.

We are looking for a PhD candidate to develop experimental approaches to test the effect of climate change on marine diazotrophs. The work will focus on dissolved organic matter biogeochemistry and dynamics (uptake and release) by diazotrophs facing climate change. A combination of environmental microbiology, organic geochemistry and molecular biology methods will be applied. The candidate will develop her/his experimental and analytical work at the Mediterranean Institute of Oceanography (France), with visits to the University of Copenhagen (Denmark) and the Leibniz Institute for Baltic Sea Research (Germany). Options to work at sea in oceanographic cruises will also be available. The experimental results will be integrated into global biogeochemical models developed at ETH Zürich (Switzerland).

## Work environment

MIO is a multidisciplinary oceanographic research institution based in Marseille, France. It employs 250 researchers divided in 5 scientific teams (plankton and biogeochemical cycles, environmental chemistry, molecular biology, physical oceanography and macrofauna ecology).

MIO provides first-class analytical facilities including analytical chemistry, microscopy, flow cytometry and molecular biology, and an international working environment. The MIO lab is based at the Luminy Campus, close the "Les Calanques" natural park, which hosts a wide variety of research institutions and University schools.

## Conditions

The PhD position and related travel is fully funded by BNP Paribas for 3 years starting in 2020. The candidate will subscribe to the Doctoral School "École Doctorale ED251: Sciences de l'environnement" of Aix-Marseille Université (France).

## **Requisites**

The candidate should hold a Master degree in marine science, microbiology or related field. She/he should be willing to engage in experimental work (in the lab and at sea), and to spend prolonged stays abroad. The candidate is also expected to engage in public awareness and educational actions.

Previous expertise in microbial oceanography methods such as stable isotope tracing, flow cytometry, cell culture and/or molecular biology methods are highly desired. Previous experience in CO<sub>2</sub> chemistry analyses are welcome. Good English skills are essential. Candidates from any nationality and gender are welcome to apply.

## **Application**

Candidates can send their applications before 28th February (letter of motivation, CV, copies of certificates and 2-3 reference letters) to:

**Mar Benavides**

[www.oceanbridges.net](http://www.oceanbridges.net)

[mar.benavides@ird.fr](mailto:mar.benavides@ird.fr)