

## **PhD position in marine microbial ecology**

We are offering a 4-year PhD position, starting in early 2024, to work on marine microbial ecology, within the Project CROSS-POINT: The eCological Role of the grOwth arreSt reSPOnse In mariNe bacTeria (PID2022-143213NB-I00), to be carried out at the Institut of Marine Sciences in Barcelona, under the supervision of Marta Sebastián (<https://orcid.org/my-orcid?orcid=0000-0001-7175-8941>).

### ***Project summary and proposed work:***

Marine prokaryotic communities play central roles in ocean's ecosystems functioning and in the ocean's resilience to global change. These communities are extremely diverse in terms of taxonomy, metabolic capabilities and activities, and show a remarkable ability to persist from months to years when facing unfavorable conditions by becoming dormant (a reversible state of low metabolic activity). Despite more than 40% of the prokaryotic cells in the ocean may be found in a dormant state, the growth-arrest response leading to dormancy and strategies for survival have been barely explored in marine prokaryotes. The PhD candidate will generate knowledge on this growth-arrest response by i) exploring the molecular basis of dormancy in marine metagenomes, ii) evaluating survival strategies in ecologically relevant marine isolates and iii) shedding light on the potential role of dormancy as a mechanism to resist viral infections. For this purpose, the PhD candidate will use a multifaceted approach that combines metagenomics, single-cell approaches, transcriptomics and proteomics.

The PhD candidate will need to master usage of Unix and R or Python and gain expertise on bioinformatic treatment of sequencing data, as well as in microbiological, molecular and microscopy techniques.

### ***Requirements:***

- Master degree in Environmental Sciences, Marine Sciences, Biology, Microbiology, Bioinformatics, Oceanography, or similar.
- Good academic record. High or very high English level. Good writing abilities.
- Knowledge of R/Python, as well as bioinformatics tools.
- Candidates with wet lab, microbial culturing, molecular, or related skills will be given preference.
- Motivation to learn and to work as a team, problem-solving abilities.

### ***Working environment:***

The selected candidate will integrate into the Ecology of Marine Microbes (EMM), which is a highly dynamic and motivated group, and the Young Researchers Association at the ICM-CSIC, which provides an ideal opportunity for networking between young scientists. The broad diversity of research groups and topics at the ICM will also provide a highly fertile research environment for the PhD candidate. The PhD advisor maintains a firm commitment to training students to

ensure maximum learning benefit, including participation in courses and conferences, stays in other laboratories, seminars and other training strategies. As part of her/his training, the PhD candidate will also attend courses on soft skills such as writing and communication, including dissemination and outreach skills.

### **Contact**

If you are interested please send your CV, the academic transcripts of your bachelor's and master's degrees (in Spanish or English), and a short motivation letter (less than 1 page) directly to Marta Sebastián ([msebastian@icm.csic.es](mailto:msebastian@icm.csic.es)) before **30th of September 2023**. Informal pre-contact is welcome.