

## PHD POSITION TO APPLY TO THE SPANISH FPU PROGRAM

**Research Project – European Project: ONE -BLUE** Integrated approach to assess the levels and impact of cONTaminants of Emerging concern on BLUE health and biodiversity modulated by climate change drivers (2024-2027).

**Reference:** Horizon-CL6-2023-Zeropollution-01-2. European Union

**PhD Supervisors:** Maria Montserrat SALA and Carles PELEJERO

**Centre:** Institut de Ciències del Mar (ICM-CSIC)

### Project description

Contaminants of emerging concern (CECs) comprise a vast array of contaminants, currently not regulated, including chemicals such as pharmaceuticals, personal care products (PCPs), flame retardants (FRs), endocrine disruptors, per- and polyfluoroalkyl substances (PFASs), nanoparticles, micro and nanoplastics among other, their by-products, and even pathogens such as antibiotic-resistant bacteria (ARB) and emerging viruses. CECs have potential to impact the environment in many ways, particularly the oceans. The compounding effects of CECs in the oceans, amplified by the persistent global stresses of warming and acidification, can jeopardize the vital ecosystem services that oceans provide and their ability to sustain marine biodiversity. In particular, microorganisms sustain microbial production in the oceans and minor alterations can induce crucial changes in marine ecosystems. Some of the consequences of seawater warming and acidification have already been studied, but the combined effect of CECs and climate change related pressures on marine microbes is largely unknown.

The aim of this PhD is to evaluate the effects of climate change stressors, (e.g. acidification and temperature) and CECs on marine microbial communities. For this, a number of experiments in mesocosms will be undertaken simulating future scenarios, and microbiological and molecular techniques (metagenomics, metatranscriptomics, metabarcoding) will be applied. Experiments will be performed using the aquaria facilities at the ICM (Barcelona) and the candidate will have also the opportunity to engage in a



sampling cruise along the Iberian coast and in an international mesocosm experiment in Crete (Greece).

## Requirements of the candidate

Bachelor's Degree in Biology, Environmental Sciences, Marine Sciences, Environmental Biology, Chemistry or similar. Very good academic record. Good level of English. Deep enthusiasm and interest for advancing knowledge in this field.

## Hosting research team

The candidate will be hosted by members of the ICM Research Groups: "Ecology of Marine Microbes" and "Marine Biogeochemistry, Atmosphere and Climate", with wide expertise in microbial ecology and ocean biogeochemistry.

## How to apply

If you are interested, please contact the PIs as soon as possible, with a CV and clear indications of the grades achieved in your degree program. The formal applications to the FPU program will have to be submitted through [the official site](#), **before the 15<sup>th</sup> of February**, but it is critical that the candidates contact first the PIs.

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*Interested candidates, please contact the Principal Investigators:*

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