



The Institute of Evolutionary Biology seeks a postdoctoral researcher

The Institute of Evolutionary Biology (IBE) is a joint Institute of the Spanish National Research Council (CSIC) and Pompeu Fabra University (UPF), located in Barcelona. IBE's research is focused on the processes and mechanisms that generate biodiversity and on understanding the genetic basis of evolution. The IBE is a member of Barcelona Biomedical Research Park (PRBB).

The Biology and Ecology of Abundant Protists Lab: The BEAP Lab's (<https://www.beaplab.org>) goal is to isolate, culture and subsequently characterize the cell biology, behavior and ecosystem relevance of the most abundant unknown protists on earth. Protists are single-celled and colonial microbial eukaryotes which, due to their size (generally between a few micrometers and a few hundred micrometers) are a critical part of the food webs in all of earth's ecosystems. In addition, protists form the backbone of the eukaryotic tree of life, meaning that studies of protists inform our understanding of the evolution of eukaryotic cell biology, gene content and species diversity.

Project description: Which are the most abundant protist species in the world's sunlit oceans, and what roles do they play in global marine ecology? We seek a motivated, curious postdoctoral researcher to join our team to answer these questions, by isolating abundant, unknown protist species and transforming them into new model organisms to study ocean ecology and evolution. We will use single-cell techniques to sequence and assemble their genomes/transcriptomes in order to provide an initial glimpse of their metabolic potential. Next, we will interrogate global metatranscriptomic data sets with bioinformatic approaches to build hypotheses about each new species' ecological characteristics. Finally, we will test these hypotheses in our lab cultures, with the goal of describing how these globally abundant protists influence oceanic ecosystems. Along the way, we hope that discoveries we make on these currently unknown organisms will influence our understanding of eukaryotic evolution and diversity.

Specific Tasks

- Collection of water samples and isolation of eukaryotic cells in growth cultures
- Characterization of new species via fluorescence/time-lapse/electron microscopy
- Single-cell transcriptome/genome sequencing, assembly, binning and analysis
- Bioinformatic approaches to query global ocean gene expression catalogs for sequences from newly isolated species
- Directed laboratory experiments to test hypotheses derived from environmental gene expression analyses

Funding



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Requirements

- PhD in any biological science (awarded before the starting date)
- Extensive experience in large-scale sequence analysis, which may include: genome/transcriptome assembly, differential expression analysis, short read mapping and phylogenetics
- Proficiency in one or more scripting or programming languages
- Laboratory experience with single-cell sequencing techniques preferred
- Curious, self-motivated, organized and highly team-oriented

What do we offer?

A fully funded 3-year postdoctoral position as part of a 5-year European Research Commission (ERC) project.

Starting date: Very flexible, approximately between May, 2022 and March, 2023

Salary: Roughly 39,000 € annual gross salary

Location: Mediterranean Marine and Environmental Research Center (CMIMA), Passeig Marítim de la Barceloneta 37-49, Barcelona

Application process

Application deadline: 25 March, 2022

Interested candidates should e-mail Daniel Richter (daniel.richter@ibe.upf-csic.es) with the subject line "Postdoctoral researcher position" and (1) their CV, (2) a motivation letter describing their interest in the project, (3) contact information of two potential references, and (4) how you found out about this offer (EURAXESS, jobRxiv, Twitter, from a colleague, etc.).

We are committed to promoting equity in academia. Persons from groups that have been historically excluded from academia are strongly encouraged to apply.

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