

## 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 the Pompeu Fabra University (UPF) located in Barcelona city. IBE research is focused on the processes and mechanisms that generate biodiversity and on understanding the genetic basis of evolution. The IBE is a center member of Barcelona Biomedical Research Park (PRBB).

### Description Group/Unit

Research at the Evolutionary and Functional Genomics lab focuses on understanding how organisms adapt to the environment. Towards this end, we combine omic approaches, including DNA-seq, RNA-seq, CHIP-seq and Hi-C, with detailed molecular (in vivo enhancer assays, CRISPR/Cas9 editing) and phenotypic analyses to identify and characterize adaptive mutations. More details about our research are available at <http://gonzalezlab.eu>.

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

### Project description

The postdoctoral researcher will work on a project that aims at identifying the genomic basis of adaptation to urban and natural environments. Towards this aim, the postdoctoral researcher will contribute to the investigation of the role of transposable elements (TEs) in rapid adaptation. Despite recent progress in understanding the genomic basis of adaptation, our current knowledge is still limited. One of the limitations is that the majority of approaches focus on the analysis of a single type of genetic variant: single nucleotide polymorphism (SNPs). However, it is now well established that structural variants are functionally relevant and contribute greater diversity at the nucleotide level than SNPs. Among structural variants, transposable elements deserve special attention since they have been shown to play an important role in rapid environmental adaptation by affecting gene expression and gene structure. The technical limitations that preclude the analysis of structural variants have now been solved thanks to the development of long-read sequencing techniques (nanopore and PacBio sequencing), and the members of the Evolutionary and Functional Genomics lab are experts in this field of research.

**Duties:** The postdoctoral researcher will be responsible for the in silico characterization of transposable element insertions in several *Drosophila* species groups. He/She will investigate the diversity, abundance and age of transposable elements across species using already available data. Data comes both from new genome assemblies for several species using nanopore and PacBio sequencing technologies as well as intraspecies data based on Illumina sequencing. Please contact [josefa.gonzalez@csic.es](mailto:josefa.gonzalez@csic.es) for further details.

## Candidate requisites

A PhD in evolutionary biology, evolutionary bioinformatics, or a related field, good programming skills, and good organizational and writing skills are required. A background on transposable elements biology is desired.

## We will valorate...

Previous professional experience will be considered.

## What do we offer?

We offer a full-time 2 year contract. Salary will depend on the experience of the candidate. The candidate will join a research team of three postdoctoral and two predoctoral researchers, as well as masters and undergrads. The lab offers extensive networking opportunities as we are co-leading the European Drosophila Population Genomics Consortium (<https://droseu.net>) that brings together 67 research labs across 29 countries, and the Spanish excellence network in Adaptation Genomics (<https://adaptnet.es>), and we are members of the TE hub initiative. Location in Barcelona (passeig Marítim de la Barceloneta, 37 – 49)

## Application process

Please send your CV (including the contacts of potential references) and a brief motivation letter before the 15th September 2021 to: [mjosefa.gonzalez@csic.es](mailto:mjosefa.gonzalez@csic.es). Please include “2021-Postdoctoral position” in the subject of your e-mail.

**Application deadline:** 15th September 2021.