BIOINFORMATICS POSTDOCTORAL POSITION AT THE EVOLUTIONARY AND FUNCTIONAL GENOMICS LAB

Research at the Evolutionary and Functional Genomics lab focuses on understanding the genetic and molecular basis of adaptation. Towards this end, we combine *-omics* approaches, including DNA-seq, RNA-seq, ChIP-seq and Hi-C, with detailed molecular (*e.g. in vivo* enhancer assays, *in vivo* CRISPR/Cas9 editing) and phenotypic analyses (*e.g.* survival analysis, stress-response analysis), to identify and characterize adaptive mutations. More details about our research are available at http://gonzalezlab.eu. We are 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. The IBE is a member of the Barcelona Biomedical Research Park (PRBB).

Job Description

The postdoctoral researcher will be part of a team of two postdoctoral researchers and one laboratory technician, carrying out a research project that aims to understand the molecular mechanisms underlying gene-environment associations in the context of the current global change. The team will identify and characterize gene-environment associations in *Drosophila melanogaster* natural populations using both bioinformatic and experimental approaches. Whole genome sequences from natural populations collected mainly in Europe, US and Africa will be available at the start of the project, while other *-omics* datasets will be produced during the course of the project.
The postdoctoral researcher will be responsible for the bioinformatic analyses of the project including the identification of genetic variants, both SNPs and transposable element insertions, in all the genomes available; ChIP-seq and RNA-seq analyses; the identification of gene-environment associations across space and time (seasonal and across years); the analysis of the environmental variables most relevant for adaptation; and the analysis of the candidate genes identified, among other related tasks. Contact josefa.gonzalez@csic.es for further details.

REQUIREMENTS

A PhD in Evolutionary Biology, Genomics, Bioinformatics, or similar fields is required. Good programming skills, good organizational skills and good writing and oral communication skills are required.

Experience with variant calling, whole-genome scans for population differentiation, and available tools to identify gene-environment associations, such as *BayPass*, are desirable.
Experience with high-performance computing or use of clusters (SLURM) is desirable.
Previous knowledge on *Drosophila melanogaster* and transposable element biology is desirable.

CONTRACT DURATION AND BENEFITS

Duration: 2 years
Starting date: The position is available immediately. Starting date is negotiable.
Type of contract: Full time (37.5 hours per week)
Salary Range: Depending on experience and according to CSIC salary scales.
Benefits: The candidate will join a research team that has expertise both in experimental and bioinformatics methodologies. Several projects are currently ongoing in the laboratory which allows for collaborative opportunities. The Evolutionary and Functional Genomics lab also offers extensive networking opportunities as we are co-leaders of the European Drosophila Population Genomics Consortium (https://droseu.net) that brings together 74 research labs across 28 countries, the Spanish excellence network in Adaptation Genomics (https://adaptnet.es), the CSIC LifeHub network (https://lifehub.csic.es), and we are part of the TE hub initative (http://tehub.org/).

APPLICATION PROCESS

Send your CV and a brief letter of motivation explaining qualifications and interest in the position to Dr. Josefa González at josefa.gonzalez@csic.es. Please include "Bioinformatics position" in your e-mail subject.

APPLICATION DEADLINE

Send your application by March 4th 2023 CET.

FUNDING

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