

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 part of the Barcelona Biomedical Research Park (PRBB), a stimulating international research environment with state-of-the-art facilities.

About the [Mutation Dynamics lab](#)

As individuals age, mutations accumulate in their cells, playing a pivotal role in evolution, aging, and disease. Despite their importance, much remains unknown about how mutations originate or why some cells accumulate more mutations than others. Our lab aims to elucidate the fundamental mechanisms behind mutation formation and investigates the evolutionary forces that shape mutation rates across different cell types and species. We are part of the [Evolutionary Medical Genomics Program](#), a collaborative initiative by the IBE, UPF, and CRG.

Project overview: Characterizing the DNA damage response across primates

How do long-lived species maintain lower mutation rates and minimize the impacts of DNA damage over time? This project aims to uncover the molecular mechanisms that have evolved to protect cells from DNA damage and reduce mutational burden in species with diverse life histories.

Using primary fibroblast cell lines from diverse mammalian species, we aim to systematically compare their cellular responses to controlled mutagen exposure. By measuring changes in mutation rates, gene expression, chromatin accessibility, and cell viability, the project seeks to:

- Identify core pathways that mitigate DNA damage and reduce mutation accumulation.
- Reveal how evolutionary adaptations enable longer-lived species to maintain genome integrity over time.
- Provide new insights into the molecular underpinnings of cancer resistance and longevity.

This project will be supported by a lab technician to run the experiments. It will combine experimental assays with cutting-edge genomics to deepen our understanding of the DNA damage response in mammals, with implications for evolutionary biology, aging, and disease.

What we offer

- A **fully-funded 3-year Postdoc contract** as part of the ERC Starting Grant *Mut-Scales*.
- A gross annual salary in the **38.000 - 42.000€** range.
- Location: **IBE, Passeig Marítim de la Barceloneta 37-49, Barcelona, Spain.**
- Starting date: Flexible, ideally early 2025.

Key responsibilities

- Design and execute experiments to assess DNA damage responses in mammalian cell lines.
- Perform analyses of omics datasets.

- Analyze mutation patterns and their molecular drivers across mammalian species.
- Lead the preparation of scientific publications and present findings at conferences.
- Collaborate with team members and external partners to advance the project.

Requirements

- PhD in molecular biology, genomics, or a related field.
- Experience with cell culture, sequencing, and standard molecular biology techniques.
- Familiarity with data analysis pipelines for omics sequencing data (bash, HPCs, and R/Python).
- Strong organizational and communication skills.
- Proficiency in English.

How to apply

Interested candidates should complete [the application form](#), including:

- i. A **CV**.
- ii. A **brief motivation letter** explaining your interest in the project.
- iii. **Contact information for at least two referees.**
- iv. Information on **how you heard about this job offer.**

Questions? Please email Marc de Manuel at marc.demanuel@ibe.upf-csic.es.