

The Institute of Evolutionary Biology seeks a: PhD student

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: The timing and mechanisms of male germline mutation

Germline mutations are pivotal to evolution and heritable disease, yet their origins during spermatogenesis remain poorly understood. Are they driven by DNA replication errors, damage-induced processes, or perhaps unique events in meiosis and sperm genome packaging?

This project leverages mouse spermatogenesis—a remarkably well-characterized cell differentiation model—to unravel these questions. Using fluorescence-activated cell sorting (FACS) and recent breakthroughs in long-read sequencing, you will map mutation rates across the key stages of spermatogenesis. By integrating this data with stage-specific omics datasets, the project aims to reveal how cellular processes like DNA damage repair and chromatin dynamics shape germline mutation rates in males. Insights from this research will shed light on the mechanisms ensuring remarkably low germline mutation rates, with broad implications for evolutionary biology and male fertility.

What we offer

- A **fully-funded 4-year PhD contract** as part of the ERC Starting Grant *Mut-Scales*.
- A gross annual salary of **24,300€**.
- Location: **IBE, Passeig Marítim de la Barceloneta 37-49, Barcelona, Spain**.
- Starting date: Early 2025.

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. Information on **how you heard about this job offer**.

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