INSTITUTO DE BIOMEDICINA DE VALENCIA CSIC

European Research Council
Established by the European Commission

Postdoctoral Researcher & Lab Manager positions

Deep mutational scanning of rare disease proteins · IBV-CSIC, València, Spain

This project has received funding from the European Research Council (ERC) under the European Union's Horizon Europe research and innovation programme.

ABOUT THE PROJECT

rareDMS, funded by an ERC Starting Grant, aims to understand the molecular mechanisms of clinical variants in rare disease proteins at scale. In previous work (Nature 2025) we found that about half of disease-causing missense mutations in protein domains act via destabilization, indicating a common mechanism accounts for a large share of genetic disease. rareDMS moves from isolated domains to complete, multi-domain full-length proteins. Combining deep mutational scanning (DMS), high-throughput functional assays in human cells and quantitative modelling, we will map the effects of every possible variant in a large set of rare disease proteins to work out their molecular mechanisms, and use this understanding to improve variant interpretation and guide therapeutic strategies.

We are seeking two highly motivated team members to join this 5-year project at the Institut de Biomedicina de València (IBV-CSIC), in the Mutational Scanning Unit led by Dr. Antoni Beltran.

OPEN POSITIONS

1. Postdoctoral Researcher – Deep Mutational Scanning of Rare Disease Proteins

Role: Lead the design, execution and analysis of deep mutational scanning experiments on full-length rare disease proteins, to uncover the molecular mechanisms of clinical variants. Experimental and computational applicants will be considered.

Essential qualifications

- Ph.D. in Biochemistry, Molecular Biology, Genetics, Biophysics, Computational Biology or a related field
- A strong publication record

Desirable qualifications

- Experience in high-throughput screening / DMS / MAVEs, protein biochemistry, and/or machine learning.

2. Lab Technician / Lab Manager

Role: Support the lab's day-to-day operations and the experimental pipelines of the project, including variant library construction, molecular cloning, mammalian cell culture and sequencing library preparation. Manage the lab: ordering and inventory, equipment, safety and organisation.

Essential qualifications

- B.Sc., M.Sc. or Ph.D. in Biochemistry, Biotechnology, Molecular Biology or a related field
- Proven hands-on experience in molecular biology (PCR, cloning, DNA purification)

Desirable qualifications

- Mammalian cell culture, NGS library preparation or high-throughput screening
- Previous experience in lab management, ordering and inventory

Additional positions may become available within the project.

WHAT WE OFFER

- Involvement in a high-impact, pioneering research project
- A newly established, well-funded lab with the resources to run experiments at scale
- A collaborative and interdisciplinary research environment
- A competitive salary according to qualifications and experience

How to Apply. Send a single PDF containing a cover letter, a CV (with a full publication list, where applicable) and contact details for 2–3 references to **abeltran@ibv.csic.es** with the subject line **"ERC rareDMS – [Position Name]"**. Applications will be evaluated on a rolling basis starting October 13th. More information: **mutationalscanning.ibv.csic.es**