

Join Moisés Mallo's Lab at GIMM as a Postdoctoral Researcher

An exciting postdoctoral research opportunity is open in Moisés Mallo's laboratory at the Gulbenkian Institute for Molecular Medicine (GIMM) to investigate the developmental and evolutionary mechanisms underlying limb loss in snakes, as part of a Human Frontier Science Program (HFSP) project.

About the Project and the Role

The project aims to uncover why snakes and certain lizard species lack limbs despite being phylogenetically classified as tetrapods. It combines comparative developmental analyses of embryos from limbed and limbless species, with a particular focus on the prospective hindlimb-forming region, followed by functional validation of the findings using genetic approaches in mouse embryos.

The project brings together three research groups with complementary expertise in reptile biology, mouse genetics and bioinformatics.

Work in the Mallo laboratory will initially focus on the analysis of wild-type and limb-deficient mouse embryos to identify the molecular and regulatory mechanisms underlying hindlimb development. These studies will integrate single-cell RNA sequencing (scRNA-seq) and single-cell ATAC sequencing (scATAC-seq) performed on the same cells, enabling the simultaneous characterization of gene expression and chromatin regulatory landscapes. At a later stage, targeted mutant embryos will be generated using CRISPR-Cas9 genome editing to modulate the expression of selected genes or reconstruct chromatin regulatory landscapes characteristic of limbless species, thereby directly testing their contribution to limb loss.

The successful candidate will contribute to the experimental work performed in the Mallo laboratory, including the analysis of mouse embryos, generation and analysis of targeted mutant embryos, and integration and interpretation of molecular, genomic and regulatory data.

This position also offers the opportunity to collaborate closely with the project's international partners, including Martin Cohn at the University of Florida (USA) and Laura Elo at the University of Turku (Finland), and to engage with leading experts across complementary disciplines.



Main Responsibilities:

- Planning and performing experiments addressing the molecular and regulatory mechanisms underlying hindlimb development and limb loss;
- Analysis of wild-type and limb-deficient mouse embryos;
- Preparation and processing of biological samples for single-cell transcriptomic and chromatin accessibility analyses;
- Contribution to scRNA-seq and scATAC-seq experiments;
- Analysis and interpretation of single-cell transcriptomic and chromatin accessibility data, in collaboration with the project's bioinformatics partners;
- Generation and analysis of targeted mutant embryos using CRISPR-Cas9 genome editing;
- Functional validation of selected genes and regulatory elements involved in hindlimb development and limb loss;
- Analysis, interpretation and presentation of experimental results;
- Preparation of scientific reports, presentations, manuscripts and other project-related outputs;
- Participation in laboratory meetings and scientific discussions;
- Collaboration with the project's international research partners;
- Contribution to the overall scientific objectives and milestones of the project.

Who We Are Looking For

Mandatory criteria: Candidates must meet all the criteria listed below:

- PhD degree in Biology, Molecular Biology, Developmental Biology, Genetics, Biomedical Sciences or a related scientific field;
- Research experience in developmental biology, molecular biology, genetics, embryology or related fields;
- Proven experience in experimental research and ability to independently plan, perform and analyze scientific experiments;
- Good knowledge of spoken and written English;
- Ability to work independently as well as collaboratively within an interdisciplinary and international research environment.



Preferential criteria: Preference will be given to candidates who also meet the following criteria:

- Previous research experience in developmental biology, embryology, limb development, tissue morphogenesis and/or related fields;
- Experience with mouse embryos and/or mouse genetic models;
- Experience with molecular and cellular biology techniques;
- Experience in the generation and analysis of genomic and/or gene regulatory data;
- Good organizational skills, attention to detail and ability to maintain clear and accurate research records.

How to Apply

Candidates must submit a detailed CV, Motivation Letter, contact details of two or three referees and Degree Certificate (s). Applications should be submitted to People & Culture Unit, through the email positions@gimm.pt, with the reference “GIMM/EI/12-2026” in the subject.

Important Note: *In case the applicant does not have yet the required degree certificate, a declaration of honor stating the conclusion of the necessary qualifications for the purposes of this process will be accepted and must be sent by the end date of the call.*

Employment Conditions

GIMM offers a full-time employment contract of unfixed term, expected to start in November 2026, with an initial duration of one year and the possibility of renewal for up to three years.

Equal Opportunity and Non-Discrimination Policy

GIMM is committed to ensuring compliance with the principles of non-discrimination and equality and, accordingly, states that no candidate may be favoured, benefited, harmed or deprived of any right, or exempted from any duty, on the basis of, namely, ancestry, age, sex, sexual orientation, marital status, family situation, economic situation, education, origin or social condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions, and trade union membership.



Diversity is a fundamental aspect of GIMM's essence, where researchers and non-research staff of different nationalities, backgrounds and fields of study work together, promoting the exchange of experiences and interactions, contributing to the personal and professional development of each person and to the existence of an international, inclusive and stimulating environment.

Under Decree-Law no. 29/2001, of 3 February, candidates with disabilities have preference in the event of an equal ranking, which prevails over any other legal preference, and candidates must declare in their application, under oath, their respective degree of incapacity, the type of disability, and the means of communication/expression to be used in the selection process, in accordance with the aforementioned decree.

