

PhD FELLOWSHIP CALL.
LABORATORY OF MOLECULAR PHYSIOLOGY.
UNIVERSITAT POMPEU FABRA, BARCELONA

The Laboratory of Physiology at the [Department of Medicine and Life Sciences](#) of the [Pompeu Fabra University](#) (MELIS-UPF) opens a call for the academic year 2022-23, for accomplished and driven students with an excellent academic record to carry out a [PhD in Biomedicine](#).

The research and teaching excellence of the MELIS-UPF is widely acknowledged, and provides a unique and international research environment and cutting-edge scientific facilities, thanks to its privileged location in the [Barcelona Biomedical Research Park](#) (PRBB).

Contract, training and advantages

Contract will be funded by the MELIS-UPF. Chosen candidate will be offered a 4-year contract after initial probatory period, and fellows will be registered in the Spanish Social Security System, which provides health and occupational insurance coverage. Academic costs (except fees) are also covered.

The PhD programme in Biomedicine of UPF has been certified by the ANECA, and in October 2011 it was awarded the "Mention towards Excellence". Since the academic year 2012-13, the PhD Programme in Biomedicine follows the latest regulations for doctoral studies in Spain, the so-called Royal Decree (RD) 99/2011, which were introduced to comply with the guidelines and recommendations of the European Higher Education Area (EHEA) on doctoral studies. The contents of this doctoral programme have been verified by the Catalan Agency for Quality Assessment and Accreditation with a qualification "Quality Label towards Excellence" (2018).

The PhD programme is carried out in English with the aim to prepare students to become independent researchers pursuing a scientific career. Fellows will have access to a wide range of academic activities, as well as ad hoc training in scientific skills, and access to the PRBB Intervals programme, an interdisciplinary education programme for professionals working in the PRBB. In addition to the research activities, PhD fellows will participate in practical teaching of undergraduates up to a maximum of 60h/year.

Salary: 16.971,72€/year

Research project:

Zinc is a micronutrient essential for human health. Besides the structural role of zinc atoms in proteins, this element plays a role as a second messenger modulating

signalling cascades and transcription programs. Up to 24 zinc transporters and several ion channels regulate zinc fluxes within the cell. Zinc signalling modulates immune function (Colomar-Carando et al 2019 *J Immunol*; Vogel-Gonzalez et al 2021 *Nutrients*) and excitability. Its homeostasis is tightly regulated and has been a target of selective pressure during human evolution (Roca-Umbert et al 2022 *Sci Rep*; Roca-Umbert et al 2022 *BioRxiv*). However, altered zinc signalling can be associated with pathological processes like cancer progression or neurotoxicity (Vogel-Gonzalez et al 2021 *Int J Mol Sci*). A deeper understanding of the molecular drivers that cause zinc dysregulation is essential to find novel therapeutic strategies in certain diseases. The research project is focused on dissecting the dysregulation of zinc fluxes through ion channels and transporters in pathological processes.

Requirements

Candidates must have excellent academic qualifications and good command of English. Research experience in ion transport/neuroscience and/or authorship of scientific publications will be a plus.

Candidates must have obtained a University Degree and a Master's Degree in natural or medical sciences (Biology, Medicine, Biochemistry, Biomedicine, Chemistry, Physics, etc), within the European Higher Education System (minimum 300 ECTS), or an equivalent university degree, of at least 300 ECTS, that would allow the candidate to start a PhD thesis in their home country by September 2022 (candidates who expect to be awarded such degree by September 2022 are eligible to apply).

Candidates are advised to check that they fulfil the requirements for admission to the UPF PhD in Biomedicine (<https://www.upf.edu/web/doctorats/qui-pot-accedir-hi>) as those who do not will be considered ineligible. Please note that it is not necessary to start the admission process for the PhD programme at this stage. All candidates will be required to present their academic record.

Reference letters will be requested for pre-selected candidates only. Also, pre-selected candidates who obtained their degree and/ or Master's in a country other than Spain will have to present the conversion of their grades to the Spanish 0-10 scale.

MELIS promotes diversity in an inclusive environment that welcomes applicants regardless of age, disability, gender, nationality, race, or religion.

Application

To apply, candidates must send their CV and letter of interest to the following email address: Imp@upf.edu

Deadline for applications: October 12, 2022.