DCEXS-UPF (Barcelona) PhD fellowships 2017

Call for applications

The Department of Experimental and Health Sciences of the Pompeu Fabra University (DCEXS-UPF) opens a call for the academic year 2017-18, for accomplished and driven students with an excellent academic record to carry out a PhD in Biomedicine. The research and teaching excellence of the DCEXS-UPF is widely acknowledged. For instance the DCEXS-UPF was one of six research units in Spain to be awarded the "María de Maeztu" distinction and grant by the Ministry of Economy, Industry and Competitiveness in its first call. Furthermore, the DCEXS-UPF offers a unique and international research environment and cutting-edge scientific facilities, thanks to its privileged location in the Barcelona Biomedical Research Park.

11 fellowships are offered in groups led by recognized scientists performing research in biomedicine (see below for more information). Candidates will choose up to 3 groups they would like to join (see section Selection process and calendar).

Fellowships, training, and advantages

The UPF’s PhD programme in Biomedicine has been verified by the ANECA (Spanish National Agency for the Evaluation, Quality, and Accreditation). In October 2011, the doctoral programme in Biomedicine was awarded the "Mention towards Excellence" (MEE2011-0323) by the Ministry of Education. Successful candidates will have access to a wide range of academic activities, as well as ad hoc training in specific scientific skills; UPF and PRBB seminars, conferences and symposia; and career development courses, not only at UPF, but also through the PRBB Intervals Programme.

Fellowships will be funded by the Spanish National Sub-Programme for Training, as well as by the DCEXS-UPF. All fellowships will offer the same wage conditions, for 4 years, 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.

Requirements

Candidates must have obtained a University Degree and a Master’s Degree in natural or medical sciences (Biology, Medicine, Biochemistry, Biomedicine, Chemistry, Physics, Bioengineering, etc), or in other quantitative sciences (Mathematics, Computer Science, etc) within the
European Higher Education System (minimum 300 ECTS), or an equivalent university degree that would allow the candidate to start a PhD thesis in their home country by September 2017. Candidates who expect to be awarded with such degree by September 2017 are eligible to apply.

Candidates are advised to check that they fulfil the requirements for admission to the UPF PhD in Biomedicine as those who do not fulfil these requirements will be considered ineligible. Candidates will be required to present their academic record and those who obtained their degree and/or Master’s in a country other than Spain will have to include the conversion of their grades to the Spanish 0-10 scale.

Candidates must have excellent academic qualifications and good command of English. Previous research experience and authorship of scientific publications will be a plus. Candidates from any nationality are eligible.

**Application**

To apply, please register and send the required documents via web. Please ensure that all information -including reference letters- is uploaded before the deadline, as incomplete proposals will be disregarded.

**Selection process and calendar**

The call will be open until the 7th of April 2017. The pre-selection of the candidates will be based on academic qualifications and research experience. Candidates will receive feedback on pre-selection in late April.

Pre-selected candidates will be interviewed by the Principal Investigators in the DCEXS facilities or via Skype during May 2017 and will receive feedback by mid June.

*Note: pre-selected candidates will have at least one interview, but they will not necessarily be interviewed by the all the Principal Investigators they selected. Contracts are expected to start from January 2018 (depending the publication and resolution of the National Sub-Programme for Training call).

**Contact:**

Dr. Regina López
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Research project title
Understanding stress adaptation in mammals

Research project summary
The main focus of our group is to understand how cells detect and respond to environmental changes. We have focused our studies on the characterization of the stress signal transduction pathways, especially those controlled by MAP kinases of the Hog1/p38 family, also known as the stress activated MAP kinases (SAPK). We study the molecular mechanisms required to respond to changes in the extracellular environment and the adaptive responses required for cell survival. Proper adaptation to stress involves the modulation of several basic aspects of cell biology, such as the control of cell cycle progression and regulation of gene expression (Nadal-Ribelles et al., Mol Cell, 2014; Duch et al., Nature, 2013). Remarkably, many of those aspects are conserved between yeast and mammals (de Nadal et al., Nat Rev Genet, 2011). The PhD fellow funded by this call will participate in the characterization of the molecular mechanisms required for stress-adaptation mediated by the mammalian SAPK p38. Although our knowledge of the transcriptional control by p38 has increased over the years, we plan to assess systematically the role of chromatin structure in p38-mediated gene expression and also the modulation of alternative splicing by the SAPK. On the other hand, we will study how p38 regulates cell cycle progression. We have already shown that p38 mediates a transient G1 arrest through the phosphorylation of a CDKi and the down-regulation of cyclin expression. This delay in cell cycle is activated by the phosphorylation of RB, a key negative regulator of the G1/S phase transition in mammalian cells (Gubern et al., Mol Cell, 2016).

Preferred background of candidates
We are seeking a talented and highly motivated PhD student with a master on Biomedicine, Biology or similar finished on September 2017 the latest. Candidates should have previous Molecular and Cell Biology research experience and a strong commitment to scientific research. Candidates must have a good knowledge of English and have an interactive personality.

Selected references