

## DCEXS-UPF (Barcelona) PhD fellowship 2019

### Call for applications

The [Department of Experimental and Health Sciences](#) of the [Pompeu Fabra University](#) (DCEXS-UPF) opens a call for accomplished and driven student with an excellent academic record to carry out a PhD in Biomedicine within the [Cancer Biology laboratory](#)

**Research project title:** Unrevealing mechanism for p53-mediated tumour suppression

**Research project summary:** The tumour suppressor gene p53 is mutated in half of the human cancers, and there is still extensive morbidity and mortality associated with cancers bearing p53 mutations. Given the difficulties in developing strategies for targeting wild-type or mutant p53, further understanding of its basic biology is required for successful clinical translation. Recent studies, including ours, have challenged the previously understood model of how the p53 gene is involved in tumour suppression. We found that several p53 activated target genes implicated in DNA repair have critical functions in suppressing lymphoma/leukaemia development. Based on this observation, we hypothesise that coordination of DNA damage repair is the most critical mechanism by which p53 suppresses tumour development. The present PhD project focuses on understanding the complexity of the p53 network in tumour suppression in different contexts, in order to determine which p53 downstream function should be targeted for treatment of different tumour types, without targeting p53 itself.

**Training objectives:** The role will involve the use of a wide variety of experimental techniques, including mouse models of cancer, tissue/tumour pathology, CRISPR-Cas9 gene-editing technology, next-generation sequencing, molecular biology, cell culture and flow cytometry. In addition, successful candidate will have access to a wide range of academic activities; UPF and [Barcelona Biomedical Research Park](#) seminars, conferences and symposia; and career development courses, not only at UPF, but also through the [PRBB Intervals Programme](#).

Fellowship will be funded by the DCEXS-UPF for 4 years.

Previous research experience will be highly appreciated.

To apply contact [ana.janic@upf.edu](mailto:ana.janic@upf.edu)

The call will be open until January 31st, 2019

#### Selected publications related to this project:

1. Janic *et al.*, DNA repair processes are critical mediators of p53-dependent tumor suppression. *Nature Medicine*, 2018.
2. Valente *et al.*, Combined loss of PUMA and p21 accelerates c-MYC-driven lymphoma development considerably less than loss of one allele of p53. *Oncogene*, 2016.
3. Valente *et al.*, p53 efficiently suppresses tumour development in the complete absence of its cell cycle inhibitory and pro-apoptotic effectors p21, Puma and Noxa. *Cell Reports*, 2013.