

## OPEN CALL FOR PhD STUDENT CANDIDATES TO APPLY FOR the call *Ayudas para contratos predoctorales para la formación de doctores 2019* (ref. *PREDOC/19/09*).

IRB Barcelona is a world-class research centre devoted to understanding fundamental questions about human health and disease. It was founded in October 2005 by the Government of Catalonia (Generalitat de Catalunya) and the University of Barcelona (UB), and is located at the Barcelona Science Park (Parc Científic de Barcelona).

The Institute's missions include conducting multidisciplinary research of excellence at the unique interface between biology, chemistry and medicine, providing high-level training in the biomedical sciences to staff, students and visitors, driving innovation through active technology transfer to the benefit of society, and actively participating in an open dialogue with the public through a series of engagement and education activities.

### **IRB Barcelona seeks**

A PhD Student candidate to apply for the call of the Ministerio de Ciencia, Innovación y Universidades *Ayudas para contratos predoctorales para la formación de doctores 2018*, to be published in September 2019.

The successful candidate will work on the project **The molecular basis of sex-linked malignant tumour dimorphism. (DROSOSEX)**. (Ref. PGC2018-097372-B-I00, PI Prof. Cayetano González).

The thesis will be directed by **Prof. Cayetano González**, PI of the **Cell Division Laboratory**.

In our laboratory we model cancer in flies to understand the cellular changes that drive malignant growth and to identify conserved mechanisms that might be relevant for human cancer therapy (Nat Rev Cancer, 2013). Over the last years we have made a number of significant contributions to this field. Recently we have shown that brain tumours that originate in l(3)mbt mutants larvae are strongly dimorphic, being more aggressive in males than in females. This tendency is in line with what is known for a wide range of human cancer types, for which the striking male predominance remains unexplained. We have found out that *Drosophila* experimental models of malignant growth may serve to investigate the cell biological axes that control sex-linked tumour dimorphism. We have identified potential regulators of sex-linked tumour dimorphism and showed that these genes may serve as targets to suppress sex-linked malignant traits. (Science Advances, 2019, accepted).

The proposed PhD project will extend this work, by analyzing a collection of validated *Drosophila* malignant brain neoplasms, with the aim of identifying those that may serve as models to investigate sex-linked dimorphism. This project will address the fundamental biological question of which are the molecular bases that account for tumours that are identical in origin, but present very different outcomes depending on the sex of the tumour bearer. Taking into account the high level of molecular conservation between most of the main molecular axes at work in animal cells, we expect that our findings in *Drosophila* models of neoplastic growth might help to understand sex-linked dimorphism in cancer.

Research in our laboratory is fundamentally multidisciplinary, combining the newest molecular biology and genetic analysis methods with biochemistry, genomics, proteomics, electron microscopy, and advanced light microscopy techniques.



IRB BARCELONA endorses the Requirements and Principles of the *European Charter for Researchers*, the *Code of Conduct for the Recruitment of Researchers* and Open, Transparent, Merit-based recruitment promoted by the European Commission and follows Equal Opportunities policies.

On 9th December, 2014, IRB Barcelona was awarded the "HR Excellence in Research" logo. This recognition reflects the commitment of the Institute to continuously improving its human resources policies in line with the *Charter & Code*. The Institute works to ensure fair and transparent recruitment and appraisal procedures.

More information:

Prof. C. González:

<https://www.irbbarcelona.org/en/research/cell-division-laboratory>

<https://divisioncelular.irbbarcelona.org/>

#### CANDIDATE REQUIREMENTS:

- a) University studies in Biomedical Sciences, Biology, Biochemistry, Medicine, Chemistry or related fields that lead to an official Spanish (or from another country of the European Higher Education Area) university degree, with outstanding qualifications, and that have 300 credits (ECTS), of which at least 60 must correspond to master level.
- b) a degree in a non-Spanish university not adapted to the European Higher Education Area that gives access to doctoral studies in Biomedical Sciences, Biology, Biochemistry, Medicine, Chemistry or related fields.

More info at:

<http://www.ciencia.gob.es/portal/site/MICINN/menuitem.dbc68b34d11ccbd5d52ffeb801432ea0/?vgnnextoid=131955e2d5e01610VgnVCM1000001d04140aRCRD&vgnnextchannel=115222e988f75610VgnVCM1000001d04140aRCRD> (please note that since the 2019 call has been not published yet, the info available is 2018 call).

**Please confirm your eligibility for this call before applying.**

#### HOW TO APPLY & SELECTION PROCESS

- Applicants should send their CV + motivation letter + two reference letters to Dr. C. González ([irbjobs@irbbarcelona.org](mailto:irbjobs@irbbarcelona.org))
- **Deadline for applications:** Applications can be submitted until the call opening date (expected opening date: September 2019).
- **Selection process:** Candidates will be selected exclusively on merit, on the basis of their curricula.

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For more information please visit our website at: [www.irbbarcelona.org](http://www.irbbarcelona.org)



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