

## Post-doctoral/Technician position in the Genomics Group in the Barcelonaβeta Brain Research Center

### About the employer

The Barcelonaβeta Brain Research Center (BBRC) is a research center, constituted by the Pasqual Maragall Foundation and the Pompeu Fabra University. The goal of BBRC is to become an **internationally recognized centre of excellence in our understanding of age-related cognitive disability** in order to provide practical solutions to the global challenges posed by the **world's aging population**. Our goal will be achieved by **championing primary and secondary prevention programs for Alzheimer's disease and other related neurodegenerative disorders**, the study and promotion of healthy aging, and the research of the basic physiological mechanisms of cognitive functions affected by healthy or pathological aging. The vision of BBRC is to provide society with distinct and innovative solutions for age-related cognitive disability by leveraging complementary research programs to attain a multidisciplinary comprehension of the aging process and the pathophysiology of neurodegeneration.

Pasqual Maragall Foundation, Pompeu Fabra University and "La Caixa" Foundation are permanent members of the BBRC Board. International competitive recruitment, state-of-the-art scientific facilities, effective management and continuous high-standard peer-review evaluation are the BBRC core proceedings to ensure achieving world-class research results. BBRC is affiliated and located in the Campus Ciutadella of the Barcelona Pompeu Fabra University, the building contains excellent technical facilities, **including a research-dedicated 3T MR scanner, Clinical Trials facilities, EEG and Eye Tracker labs**.

**BBRC is also part of the Barcelona Biomedical Research Park (PRBB), a large research facility that hosts other seven different research institutions related to biomedical research**, including the Center for Genomic Regulation (CRG), the Hospital del Mar Medical Research Institute (IMIM), the Department of Experimental and Health Sciences of the Pompeu Fabra University (CEXS-UPF), the Institute of Evolutionary Biology (IBE CSIC-UPF), the Barcelona Institute of Global Health (ISGlobal) and the Barcelona site of the European Molecular Biology Laboratory (EMBL), among others, in a multidisciplinary, collaborative and stimulating international environment in close contact with a clinical setting, thus conducive to translational research.

BBRC 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 October 2020, BBRC Barcelona was awarded the '**HR Excellence in Research**' logo. This recognition reflects the commitment of the Institute to the continuous improvement of its human resources policies.

For more information see: [www.fpmaragall.org](http://www.fpmaragall.org) and [www.barcelonabeta.org](http://www.barcelonabeta.org)

### About the project

The BBRC has recently opened a Genomics lab, led by Professor Arcadi Navarro, and the Center for Genomic Regulation (CRG) and the Institute for Evolutionary Biology (IBE, UPF-CSIC). The group focuses on the genomic architecture of age-related disease –including neurodegenerative disease– and on the analysis of full genomes, epigenomes and transcriptomes to ascertain the processes, variants and molecular features that underlie human ageing patterns. Amongst other projects, the group plans to undertake functional analysis on the effects of particular mutations in a number of experimental models, ranging from cell lines to brain organoids. These projects

will be carried-out in collaboration with Dr. Sandra Acosta's Lab at the University of Barcelona (UB).

Prof. Navarro is Professor of Genetics at the UPF, ICREA Research Professor, the Director of the European Genome-phenome Archive at the CRG and the Director of the BBRC and the FPM. He regularly participates in projects funded by the European Commission such as the H2020 projects ELIXIR-ACCELERATE, EUCANIMAGE, HEALTHYCLOUD, etc. In addition, his group at the CRG participates in major Spanish initiatives in Personalized Medicine such as the recently awarded IMPaCT project.

Dr. Acosta is tenure-track Serra-Hunter Assistant Professor at University of Barcelona Medical School. Her research focuses in modeling the functional events regulating the human brain functions in health and disease. The lab gold-standard functional model is iPSC-derived brain organoids derived from patients and/or genetically engineered analyzed through mesoscopy and microscopy. She leads and participates in a number of national and international projects, including CaixaImpulse and Foundation Lejeune.

### **About the job**

Amongst others, the immediate aim of the project is analyzing the phenotype of AD brain organoids with different degrees of genetic risks. The main activities of the being held in this position comprise the reprogramming of fibroblasts into iPSC and the generation of brain organoids, mainly cortical and minibrain, and their phenotypic characterization using a wide-range of technologies including advanced microscopy, mesoscopy and molecular techniques.

Additional responsibilities involving career development activities, mainly contributing to publication and article writing, general managing of the lab and mentoring of junior lab members in their projects will be enhanced.

We are hiring at any seniority level, so we encourage the application by all, prospective PhD students, technicians and postdocs.

### **Main Responsibilities**

- iPSC reprogramming and maintenance and brain organoid generation.
- Advanced microscopy and mesoscopy phenotyping.
- Immunofluorescence, western blot, gene expression analysis.
- Assists with the instructing and training of students, fellows, technicians and laboratory assistants as required.
- Participates in regular internal meetings as well as external collaborations.

### **Required qualifications, competences and technical skills**

- You hold either a MSc in Neuroscience-Developmental Biology or Biomedicine / or a PhD in Neuroscience or Developmental Neurobiology.
- You must have experience in iPSC-derived neural differentiations.
- You have experience in confocal microscopy.
- You have excellent communication and writing skills in English.
- You are able to work collaboratively and with a high degree of autonomy.

- You are a highly motivated and organized candidate.
- You have excellent knowledge and follow Good Laboratory Practices (GLPs).

#### **Desirable but not required/ Nice to have**

- You have experience in bioinformatic analysis
- You have experience in human sample handling
- You have experience in laboratory management (lab safety, upkeep and troubleshooting of lab equipment, and other organizational functions).
- You have basic knowledge in statistics.

#### **We offer**

- Starting date: Summer 2021 (starting date can be negotiated).
- The position is scheduled for 2 years and may be renewed thereafter.
- We are hiring at any seniority level, so salary will depend on experience and will be according to BBRC's salary scales.

We offer work in a highly stimulating team, and BBRC offers and promotes a diverse and inclusive environment welcomes applicants regardless of age, disability, gender, nationality, race, religion or sexual orientation.

In the foundation we also care about developing your professional career so you will participate in internal and specific training for your job, promotion opportunities and development of your professional career. We evaluate the potential of our team in order to develop those skills necessary to achieve a high level of professional performance.

#### **Application process**

To apply, please submit a single PDF file containing the following:

1. Cover letter describing research interests and relevant background;
2. CV
3. The names of up to three individuals who could provide reference letters. All files or inquiries should be submitted electronically to: [rh@barcelonabeta.org](mailto:rh@barcelonabeta.org)

**Subject: [Postdoc/Technician/PhDStudent] Genomics Group**

**Deadline: May the 21<sup>st</sup> 2021**

We inform you that your personal data will be part of a file which Pasqual Maragall Foundation and Barcelonaβeta Brain Research Center is responsible for, in order to manage the job offer you have requested. Once the process is complete, the data processed will be erased.

You have the right to exercise the rights of access, rectification, cancellation and opposition recognized in Regulation (EU) 2016/679 (General Data Protection Regulation), to be addressed to the Pasqual Maragall Foundation and Barcelonaβeta Brain Research Center: Wellington Street 30, 08005 Barcelona.