

## Research Position in Genetics and Neuroimaging

### Dual appointment at CRG and BBRC (the research centre from Pasqual Maragall Foundation)

#### The CRG

The Centre for Genomic Regulation (CRG), is an international biomedical research institute of excellence, based in Barcelona, Spain, whose mission is to discover and advance knowledge for the benefit of society, public health and economic prosperity.

The breadth of topics, approaches and technologies at the CRG permits a broad range of fundamental issues in life sciences and biomedicine to be addressed. Research at the CRG falls into four main areas: gene regulation, stem cells and cancer; cell and developmental biology; bioinformatics and genomics; and systems biology.

With more than 380 scientists from 42 countries, the CRG excellence is based on an interdisciplinary, motivated and creative scientific team that is supported by high-end and innovative technologies.

The Scimago Institution Rankings (SIR) World Report 2015 classifies the CRG in 6<sup>th</sup> position (Health sector), out of over 5,100 research institutions around the world.

The centre's other main strategic goals are: to translate basic scientific findings into benefits for health and economic value for society; to provide advanced and excellent training to our scientists; and to communicate and establish a bilateral dialogue with society.

The Centro Nacional de Análisis Genómico (CNAG-CRG) was integrated with the CRG in July 2015, and is one of the major Genome Sequencing Centres in Europe with a large park of second generation DNA sequencers supported by an extensive informatics infrastructure.

CRG has received the "HR Excellence in Research" award from the European Commission, which shows the commitment of the institute in conducting transparent and merit-based recruitment procedures and providing attractive working conditions in alignment with the European Charter and Code.

For further information: [www.crg.eu](http://www.crg.eu)

#### The BBRC

The BBRC is a new research infrastructure, constituted by the Pasqual Maragall Foundation and with the participation of the Pompeu Fabra University, 100% dedicated to research on Alzheimer's disease. The new building was completed by March 2016, and contains excellent technical facilities including a research-allocated 3T MR scanner, dedicated to clinical research on neurodegenerative diseases.

BBRC is a research institute affiliated to Pompeu Fabra University and is also part of the Barcelona Biomedical Research Park (PRBB), a large research facility that hosts seven different research institutions related to biomedical research, including the Hospital del Mar Research Institute (IMIM), the Experimental and Health Sciences Department (CEXS) of the UPF, the Regenerative Medicine Centre of Barcelona (CMRB), and the Centre for Research in Environmental Epidemiology (CREAL), among others, in a multidisciplinary, collaborative and stimulating international environment in close contact with a clinical setting, thus conducive to translational research.



### Mission of the role

The Barcelonaβeta Brain Research Centre (BBRC), research institution of the Pasqual Maragall Foundation (PMF) and the Centre for Genomic Regulation (CRG) invites applications for a full-time research position to study the genetic modulation of cerebral phenotypes based on genome-wide associations with neuroimaging data, as part of its clinical research program.

### Principal Responsibilities:

The primary responsibility of this position includes the analysis and interpretation of genome-wide association studies (GWAS) data in association with quantitative phenotypes extracted from neuroimaging modalities. The candidate will be working under the guidance of the Principal Investigators Roderic Guigó and Stephan Ossowski of the CRG and the Neuroimaging Group Principal Investigator of the BBRC, Juan-Domingo Gispert. The aim of this project is to improve our understanding of genetic modulation of cerebral phenotypes in healthy subjects and to identify spatially varying patterns of genetic control that may not be evident from summary variables.

This project will be carried out in the context of the Foundation's Alzheimer's disease clinical research and its flagship project, the Alzheimer and Families (ALFA). The ALFA project is a large longitudinal cohort of sons and daughters of Alzheimer's disease (AD) patients, to explore the preclinical stage of this condition with the aim of identifying novel risk factors and biomarkers. Within this study, over 2700 participants have already been involved and a comprehensive amount of data has been collected, including blood samples, cognition, mental health, quality of life and risk factors, as well as, neuroimaging procedures to assess brain function. As part of this effort, over 500 participants have already undergone an MRI protocol and PET imaging is underway. This study will enhance our knowledge of the processes involved before the onset of AD to develop interventions aimed to prevent or delay the disease. Furthermore, The BBRC is involved in European projects (IMI) and other international collaborations.

### Requirements

#### Studies:

- PhD in Neuroscience, Medicine, Computer Science, Bioengineering or related disciplines (It is mandatory for the candidates to hold a PhD)

#### Experience:

- Proven experience with GWAS analysis in association with quantitative traits
- Experience in neuroimaging and/or genetic data analysis would be positively considered
- Proven record of first authorship and co-authorship on scientific publications is required

#### Skills required:

- Interest in joining a non-profit organization with a mission of high social impact
- Strong interpersonal skills (empathic and focused team-worker)
- Ability to think independently and work collaboratively

#### Languages:

- Fluent level of English



### The Offer

- **Starting date:** First quarter 2017
- **Duration:** two years (open to renewal)
- **Estimated annual gross salary:** A competitive salary will be provided, which will be well matched relative to the cost of living in Barcelona, and adjusted according to experience

We offer work in a highly stimulating environment with state-of-the-art infrastructure, providing the successful applicant with unique opportunities to develop a strong technical portfolio.

CRG offers and promotes a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, nationality, race, religion or sexual orientation.

### Application Procedure

All applications must include:

1. A presentation letter addressed to Dr. Roderic Guigó and Dr. Juan-Domingo Gispert
2. A full CV including contact details
3. Two contacts for further references
4. All applications must be addressed to Dr. Roderic Guigó and Dr. Juan-Domingo Gispert and be submitted by means of on-line application on the official website of the CRG - <http://recruitment.crg.eu/>

**Deadline:** Please submit your application by **November 18<sup>th</sup>, 2016**.

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