Centre for Genomic Regulation

BIOMEDICAL SCIENCE FOR THE BENEFIT OF SOCIETY

"Two postdoctoral positions: Inferring Complex Causality in Aging"

Centre for Genomic Regulation (CRG)

The molecular mechanisms driving aging are embedded within complex physiologic networks. At long time-scales, these mechanisms exhibit emergent, collective behaviour that is both a fascinating topic and a fundamental barrier for traditional experimental approaches to establish molecular-level causality. To understand biological aging and develop effective therapies against it, we need better and more quantitative approaches that can rapidly characterize the multiple, complex causal pathways through which molecular-level changes determine systems-level dynamics.

The Dynamics of Living Systems group is an interdisciplinary team that pursues these goals through a mix of molecular genetics, synthetic biology, high-throughput imaging, machine learning, modelling, and math.

We are currently looking for multiple candidate profiles:

- Wet-lab post-doc candidates with a background in genetics, genomics, biomedical engineering, or molecular biology
- Dry-lab post-doc candidates with a background in statistics, physics, computer science or bioinformatics
- Engineering candidates with a background in microfluidics, or applied physics, and engineering
- Laboratory Managers and/or Ph.D-level Research Assistants

The group is led by Nicholas Stroustrup, Ph.D Systems Biology, B.S.E Electrical Engineering.

For more information, check out our research website: http://lifespanmachine.crg.eu .

These positions are funded by the European Research Council project **SYSAGING**.

The successful candidate will:

- Lead an open-ended project related to the genetics and molecular physiology of aging.
- Develop new functional genomics approaches for measuring change at the single cell, individual, and population level.
- Work with *C. elegans* as a fast-aging and genetically tractable model for prototyping approaches that can be transferred to vertebrate models and humans.
- Engage in close wet-lab / dry-lab collaborations to develop new experimental methods
- Join in regular journal clubs, departmental data clubs, and institutional symposia
- Work with the lab's high-throughput imaging technology "The Lifespan Machine".
- Interact with colleagues the CNAG (centro nacional de análisis genómico) Single Cell Genomics Team and CRG Genomics Core, as well as colleagues located in biology, physics, and engineering departments at multiple institutes and universities across Barcelona.

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About the team

We are a small, international team that combines expertise in genetics, molecular biology, physics, computational biology, and engineering. We are based in the EMBL/CRG Systems Biology Unit in Barcelona, Spain, which is an unusually great place to live and do science. We build and apply new technologies that allow us to collect the data needed to build quantitatively rigorous models of physiology.

The Institute

The Centre for Genomic Regulation (CRG) is an international biomedical research institute of excellence, based in Barcelona, Spain, with more than 400 scientists from 44 countries. The CRG shares principles of an interdisciplinary, motivated and creative scientific team that is supported by high-end and innovative technologies and a flexible and efficient administration.

In November 2013, the Centre for Genomic Regulation (CRG) received the 'HR Excellence in Research' logo from the European Commission. This is a recognition of the Institute's commitment to developing an HR Strategy for Researchers, designed to bring the practices and procedures in line with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (Charter and Code).

Please, check out our Recruitment Policy

Whom would we like to hire?

Professional experience

Must Have

- You have a PhD Degree
- You have a first author publication
- You have interested in working in a highly interdisciplinary environment

Desirable but not required/ Nice to have

- You have experience in microbial, inverterate, or human genetics

Languages

- You are proficient in English

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Competences

- Highly developed organization skills

The Offer – Working Conditions

- **Contract duration:** 4-year contract
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales.
- **Target start date:** Fall 2019 through Spring 2020

We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development opportunities. To check out our training and development portfolio, please visit our website in the training section.

We offer and promote a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, nationality, race, religion or sexual orientation.

The CRG is committed to reconcile a work and family life of its employees and are offering extended vacation period and the possibility to benefit from flexible working hours.

Application Procedure

All applications must include:

1. A motivation letter addressed to Dr Nicholas Stroustrup.
2. A complete CV including contact details.
3. Contact details of two referees.

All applications must be addressed to Dr Nicholas Stroustrup and be submitted online on the CRG Career site - http://www.crg.eu/en/content/careers/job-opportunities

Interested candidates can also email Nicholas directly for more information: nicholas.stroustrup@crg.eu

Selection Process

- **Pre-selection**: The pre-selection process will be based on qualifications and expertise reflected on the candidates CVS. It will be merit-based.

- **Interview**: Preselected candidates will present their recent research in front of the Dynamics of Living Systems group and associated CRG laboratories.

- **Offer Letter**: Once the successful candidate is identified the Human Resources department will send a Job Offer, specifying the start day, salary, working conditions, among other important details.

Deadline: Please submit your application by November 1st, 2019

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