



BIOMEDICAL SCIENCE FOR THE BENEFIT OF SOCIETY

**“Postdoctoral position: Inferring Complex Causality in Aging”**  
*Centre for Genomic Regulation (CRG)*

### 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](#)

### The role

**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 two candidate profiles:**

1. Candidates with an interest in developing and applying modeling approaches to analyze multi-omic, time-series data.
2. Candidates with an interest in primarily theoretic projects, aimed at understanding causality, interdependency, and stochastic phenomena in complex networks.

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

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

This is a four year, post-doctoral position funded by the European Research Council project **SYSAGING**.

#### **The successful candidate will:**

- Lead an open-ended project studying theoretic or computational topics related to the genetics and molecular physiology of aging
- Engage in close wet-lab / dry-lab collaborations to develop and exploit new experimental methods
- Join in regular journal clubs, departmental data clubs, and institutional symposia
- Interact with EMBL Barcelona as part of a new collaborative modeling initiative





## About the lab

We are a small, international, multi-disciplinary 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.

## Whom would we like to hire?

### Professional experience

#### Must Have

- You have experience in computational biology, statistics, computational physics or computer science
- You have a first author publication
- You have interest in working in a highly interdisciplinary environment

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

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

### Education and training

- You hold a PhD

### Languages

- You are proficient in English

### Competences

- You have highly developed organization skills
- You have analytical thinking

### The Offer – Working Conditions

- **Contract duration:** 1 year renewable up to 4 years
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales.
- **Target start date:** Fall 2020-Spring 2021

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>

## 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 be interviewed by the Hiring Manager of the position and a selection panel if required.
- **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 September 20<sup>th</sup>, 2020.



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