BIOMEDICAL SCIENCE FOR THE BENEFIT OF SOCIETY

"Bioinformatician in the Single Cell Epigenomics and Cancer Development Lab"
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

We are looking for an enthusiastic and motivated bioinformatician to join the Single Cell Epigenomics and Cancer Development team to provide support in creating a better understanding of early tumour formation. The candidate will lead the data analysis of different single-cell technology-based projects and will also provide bioinformatics support to other team members in the lab, both at the level of experimental design and data analysis.

The layers that we aim to address in the lab at the single-cell level comprise gene expression, chromatin accessibility, DNA methylation and somatic mutations.

About the lab

Tumours originate from normal cells that acquire tumour-initiating genetic events, such as translocations and somatic mutations. These genetic hits turn normal cells into pre-malignant cells, but do not lead to immediate tumour formation. For that, secondary genetic events as well as epigenetic hits are required.

We aim to create a better understanding of how epigenetic tumour-associated changes arise in the context of non-Hodgkin lymphomas. To that end, we aim to study the occurrence of these changes in healthy individuals as well as in pre-malignant cells *in vitro* (to be created by CRISPR/Cas9 genomic editing) and *in vivo* using single-cell technologies. On top of that, we aim to define cell intrinsic mechanisms, such as enhancer activation and 3D chromatin interactions, that influence the occurrence of the observed changes.
We are affiliated to the Gene Regulation, Stem Cell and Cancer Research program of the CRG in double affiliation with the Centre for Genomic Analysis (CNAG-CRG) and the department of Oncology and Haematology of the IDIBAPS. We strongly believe that bringing the knowledge and resources of these different environments together majorly aids to better understand the biology of disease. Further information can be found at: https://www.crg.eu/en/programmes-groups/beekman-lab.

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Whom would we like to hire?

Professional experience

Must Have

- You have good knowledge of Computational Biology
- You have at least 5 years of experience in performing bioinformatics analysis
- You have a strong background in analysis of single-cell technology-based data

Desirable but not required/ Nice to have

- You have experience in data analysis of genetic layers, epigenetic data (e.g. ChIP-seq, ATAC-seq, DNA methylation data, chromatin conformation capture data) and RNA-seq
- You hold a PhD degree in Bioinformatics

Education and training

- You hold a master's degree in Bioinformatics or a related discipline.

Languages

- You have fluency in English

Technical skills

- You have high level of hands-on experience in:
    - NGS data-analysis
    - Single-cell technology-based data analysis
- You have advanced Unix operating systems skills
- You are competent in Python, Perl or R

Competences

- You have highly developed organization skills
- You have excellent analytical and problem-solving skills
- You have enthusiasm, motivation and dedication to explore new scientific avenues
- You have capability to work on different projects simultaneously as part of a team and/or independently

The Offer – Working Conditions

- **Contract duration:** 1.5 year with possibility of extension
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales.
- **Target start date:** June 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.

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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. Renée Beekman.
2. A complete CV including contact details.
3. Contact details of two referees.

All applications must be addressed to Dr. Renée Beekman 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 contacted to coordinate an interview with the PI.
- **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 May 29th, 2020

HR EXCELLENCE IN RESEARCH

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