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“Immunologist - Single Cell Genomics”

Centro Nacional de Análisis Genómico (CNAG-CRG)

The Institute

The Centro Nacional de Análisis Genómico (CNAG-CRG) is one of the largest Genome Sequencing Centers in Europe. CNAG-CRG researchers participate in major International Genomic Initiatives such as the Human Cell Atlas Project (HCA), the International Cancer Genome Consortium (ICGC), the International Human Epigenome Consortium (IHEC), the International Rare Diseases Research Consortium (IRDiRC) and the European Infrastructure for life-science information (ELIXIR), as well as in several EU-funded projects. The CNAG-CRG aims to carry out large-scale projects in DNA/RNA sequence analysis for the improvement of quality of life in collaboration with the Spanish, European and International Research Community. The CNAG-CRG operates 6 Illumina and 4 Oxford Nanopore sequencing instruments together with an outstanding computing infrastructure (7.6 petabyte of data storage and 3472 cores of computing). The operation is certified ISO 9001 and accredited ISO 17025 and serves to deliver standardized, high quality data for research and clinics. **Single-cell genomics and long-read sequencing are strategic priorities for CNAG-CRG.**

The CNAG is integrated with the Centre for Genomic Regulation (CRG), 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. CRG has been conferred with a badge of 'HR Excellence in Research' by the European Commission, in recognition to its progress in implementing the European Charter for Researchers and the Code of Conduct for Recruitment of Researchers, that among others consists of transparent, merit-based recruitment procedures and attractive work-life balance working conditions.

For further information: www.cnag.crg.eu and www.crg.eu

The role

We are looking for an **Immunologist** to lead the interpretation of our efforts to generate an Immune Cell Atlas (Human Cell Atlas Project) and to delineate mechanisms of immuno-therapy (clinical trials). We are looking for an enthusiastic (clinician) scientist, motivated to improve our understanding of immune cell function and to positively impact on patient prognosis. We require a solid background in Immunology and the ability for working in a multi-disciplinary team on collaborative projects.

The candidate will be integrated in the Single Cell Genomics Team, a highly collaborative, international work environment with well-experienced colleagues in single-cell data production and analysis. The position is supported through EU-funded ERC and H2020 projects. The projects the candidate will be involved aim to understand the dynamics in B-cell maturation (ERC Synergy *BCLLatlas* project) and the molecular/cellular basis of immuno-therapy action by applying multi-omic single-cell characterisation of healthy and tumor microenvironment immune cells. The latter are obtained from clinical trials on immuno-therapy or advanced mouse model systems.

The position includes the development of a cell type/state annotation system and, more broadly, the interpretation of results from single-cell and spatial transcriptomic (Digital Pathology) data, as well as patient information. We are looking for a highly motivated and creative thinking individual who is interested in working in an environment where the technical sophistication of single-cell analysis technology meets innovative approaches for interpreting data and generating new knowledge.



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All career stages (MD/PhD/Postdoc) are welcome to apply. For undergraduate student, we offer the possibility to do a PhD. We encourage and prioritize applications from under-represented minority groups.

About the team

The Single Cell Genomics Team at the CNAG-CRG is dedicated to advance genome research of single cells. The mission of the group is the implementation of single-cell sequencing technologies and their application in a research and translational context. The group focuses on the systematic integration of transcriptional and epigenetic data from individual cells to elucidate causalities underlying phenotype formation. We successfully established sequencing protocols to quantify gene expression and open chromatin of thousands of single cells. Our newly developed computational pipelines include methods to deconvolute tissue composition and track to transcriptional dynamics. Our international team joins computational, technical and biological knowledge in order to establish and apply best practices in single-cell research. The group combines collaborative research, development activities and follows research lines on the generation of human cell atlases and on translational cancer research. We are member of the Human Cell Atlas Project.

Web: <http://www.cnag.cat/teams/genome-research-unit/single-cell-genomics-team>

Whom would we like to hire?

Professional experience

Must Have

- You have strong knowledge in Immunology

Desirable but not required/ Nice to have

- You have expertise in immuno-therapy
- You have a background in B-cell biology
- You have experience in single-cell analysis/ interpretation
- You have knowledge of Computational Biology
- You have experience in the analysis of genomics datasets

Education and training

- You hold a Master or MD/PhD in Immunology or similar

Languages

- You are fluent in English

Technical skills

- You have background in immune cell (expression/protein) profiles of normal tissues and in the context of diseases (specifically cancer).
- You have experience in Interpretation of genomics data from high-throughput technologies (e.g. RNA sequencing, Mass cytometry, etc)



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Competences

- You have highly developed organizational skills
- You have ability to pay attention to detail
- You have ability to work independently and in a team

The Offer

- **Contract duration:** 3 years
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales.
- **Target start date:** 01/10/2020

We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development opportunities.

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

We are committed to reconcile a work and family life for our employees and are offering the opportunity to benefit from annual leave, flexible working hours and teleworking.

Application Procedure

All applications must include:

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

All applications must be addressed to Dr. Holger Heyn 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 1st, 2020.



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