

BIOMEDICAL SCIENCE FOR THE BENEFIT OF SOCIETY

"Postdoc – Genome engineering screens for new diabetes targets"

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 is composed by an interdisciplinary, motivated and creative scientific team which is supported both by a flexible and efficient administration and by high-end and innovative technologies.

In September 2026, the Centre for Genomic Regulation (CRG) received the renewal of the 'HR Excellence in Research' Award 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 a postdoctoral researcher to lead genome engineering-based perturbation screens in human pancreatic β cells to identify targets whose modulation restores or improves β-cell function. The successful candidate will design and run the screens and will take the most promising targets forward through focused follow-up experiments.

The project is embedded in a collaboration that brings single-cell genomics and AI-based modelling to bear on the screen output, using it to build predictive models of the β cell. The position will suit someone who enjoys building experimental systems at scale and who wants that work to feed directly into a therapeutic programme.

About the lab

The laboratory combines genetics and genomics to understand how pancreatic β cells are programmed, and uses that knowledge to open therapeutic avenues. Recent work from the lab includes the discovery of a β-cell transcription–splicing axis driven by HNF1A, showing how a gene mutated in monogenic diabetes also plays a key role in polygenic type 2 diabetes (Bernardo et al., Cell Metab 2025). In related work we uncovered a lncRNA promoter that acts as a cis-regulatory element to dial the transcription of HNF1A, and thereby safeguards the fidelity of a cell-specific transcription factor program (Beucher et al., Nat Cell Biol 2022; Ferrer, Nat Rev Mol Cell Biol 2024). Using mouse and human models, we have also explained how point mutations in a single enhancer cause a severe pancreatic developmental defect (Miguel-Escalada et al., Dev Cell 2022)

The laboratory sits within the Computational Biology and Health Genomics programme at the CRG, and works closely with computational, single-cell genomics and machine learning groups on the same campus.

Whom would we like to hire?

Professional experience

Must Have

- You hold a PhD in molecular biology, genome biology, cell biology, biotechnology or a closely related field

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- You have proven hands-on experience with CRISPR-based genome engineering, such as knockout, CRISPR interference or activation, or base or prime editing, including guide design and validation
- You have solid experience with mammalian cell culture
- You have a track record of independent scientific work, evidenced by first-author publications or preprints
- You are fluent in English

Desirable but not required/ Nice to have

- Experience with pooled genetic screens and their readouts, including single-cell approaches
- Experience with viral vector production and with the transduction of primary cells
- Experience with pancreatic islet biology, β-cell models or stem cell differentiation
- Enough computational literacy in R or Python to explore your own screen data

Education and training

- You hold a PhD in a relevant experimental discipline, obtained or expected before the start date

Languages

- You are fluent in English, written and spoken
- Spanish or Catalan are not required; the working language of the laboratory is English

Technical skills

- You are experienced in molecular cloning, library construction and the design and validation of guide RNAs
- You are familiar with flow cytometry and cell sorting

Competences

- Experimental rigour and careful record keeping
- The capacity to plan and execute complex experiments at scale
- A collaborative disposition, towards computational colleagues
- Initiative in troubleshooting and in developing new methods

The Offer – Working Conditions

- **Contract duration**: Technical and scientific activities contract linked to the project (estimated duration 24 months)
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales
- **Target start date**: Flexible, estimated spring 2027

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, ethnicity, religion, sexual orientation or gender identity.

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:

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1. A motivation letter addressed to Jorge Ferrer.
2. A complete CV including contact details.
3. Contact details of two referees.

All applications must be addressed to Dr. Jorge Ferrer 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 People department will send a Job Offer, specifying the start day, salary, working conditions, among other important details.

Deadline: Please submit your application by 15/01/2027

Suggestions: The CRG believes in **ongoing improvement** and promotes a **culture of feedback**. This is one of the reasons we have in place, at your disposal as a candidate, a mechanism to gather your suggestions/complaints concerning your candidate experience in our recruitment processes. Your feedback really matters to us in our aim at creating a **positive candidate journey**. You can make a difference and help us improve by letting us know your suggestions through the following form.

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