BIOMEDICAL SCIENCE FOR THE BENEFIT OF SOCIETY

"Bioinformatician - Design of Biological Systems Laboratory"

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 April 2021, 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 Bioinformatician to support research and innovation in Protein Masking through the development and application of bioinformatics workflows. The successful candidate will use and develop computational tools to model the accessibility of biomolecules connected by flexible linkers. The role will contribute to the development of predictive computational models that support the design and evaluation of a general mechanism for protein-masked biomolecules production.

About the team/ lab/ department

The position is based in the **Design of Biological Systems Laboratory**, led by Prof. Luis Serrano at the Centre for Genomic Regulation (CRG) in Barcelona. The laboratory combines computational and experimental approaches to achieve a quantitative understanding of biological systems, with a strong focus on protein engineering, synthetic biology, systems biology, and the development of predictive computational methods.

The successful candidate will join a multidisciplinary and international research environment, working closely with computational and experimental scientists to develop innovative algorithms and bioinformatics tools for protein engineering and therapeutic applications.

Whom would we like to hire?

Professional experience

Must Have

- You have experience in bioinformatics, computational biology, structural biology, or a related field.
- You have proven experience in developing computational methods or algorithms for biological applications.
- You are fluent in English, both written and spoken.
- BSc degree in Bioinformatics, Computational Biology, Structural Biology, Biotechnology, or a related field.
- Strong programming skills in Bash, C++, Python & R.

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- Experience developing computational methods or algorithms for biological applications.
- Knowledge of protein structure, protein-protein interactions, and biomolecular modelling.
- Experience working with structural biology data (e.g. AlphaFold, PDB structures, molecular descriptors).
- Understanding of statistical methods and machine learning approaches for biological data analysis.
- Experience with Git for version control and collaborative software development.
- Proficiency in Linux/Unix environments and Bash scripting.
- Familiarity with workflow management systems and reproducible computational pipelines.
- Experience with high-performance computing (HPC) environments.
- Ability to collaborate effectively within multidisciplinary teams and communicate computational results to experimental scientists.

Desirable but not required/ Nice to have

- Experience with protein structure prediction and analysis tools (e.g. AlphaFold, Rosetta, FoldX).
- Experience with molecular modelling or molecular dynamics simulations.
- Experience applying machine learning or deep learning methods to structural biology problems.
- Familiarity with protein language models (e.g. ESM, ProtT5) or geometric deep learning.
- Knowledge of protein engineering, antibody engineering, or biologics development.
- Experience contributing to open-source software projects or scientific software development.

Education and training

- You are currently enrolled in, or have recently completed, a master's degree in bioinformatics, Computational Biology, Computer Science, Structural Biology, Biotechnology, or a related field.
- You have a strong academic background in computational biology, bioinformatics, or quantitative life sciences.

Languages

- You are proficient in written and spoken English (minimum B2 level; C1 preferred).
- Knowledge of Catalan is considered an asset but is not required.
- Knowledge of Spanish is considered an asset but is not required.

Technical skills

- You have good programming skills in different languages.
- You are familiar with Linux/Unix environments and basic Bash scripting.
- You have experience using version control software.
- You are familiar with structural biology resources and formats (e.g. PDB structures, AlphaFold models).
- You have basic knowledge of protein structure and protein-protein interactions.
- You have experience handling and analysing biological datasets using Python or R.
- Familiarity with machine learning libraries (e.g. PyTorch, scikit-learn) is an advantage.
- Familiarity with molecular visualisation tools (e.g. YASARA, ChimeraX, etc…) is an advantage.

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Competences

- Strong analytical and problem-solving skills.
- Excellent attention to detail and commitment to reproducible research.
- Ability to work independently while contributing effectively to a multidisciplinary team.
- Strong organizational and time-management skills, with the ability to manage multiple tasks.
- Good written and verbal communication skills, with the ability to present technical concepts clearly.

The Offer – Working Conditions

- **Contract duration:** Technical and scientific activities contract linked to the project (estimated duration 1 year).
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales
- **Target start date:** 20-07-2026

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:

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

All applications must be addressed to Dr. Luis Serrano 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 **July 17, 2026.**

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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.

Plan Estatal 010198 con referencia oficial: PID2024-157303OB-I00

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