

“Full-Stack Lead Developer”

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 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.

It 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 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](#)' 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 CNAG-CRG has developed a modular and highly specialized Laboratory Information Management System (LIMS) to manage the institute's production workflow, including project management, sample tracking, laboratory procedures, sequencing and data analysis. The LIMS is a core component of the CNAG-CRG.

We are looking for a full-stack developer to lead the design, development and maintenance of the LIMS. The candidate will be expected to develop the database back-end and front-end using a mix of languages and tools to process and display the data.

The position is opened thanks to the Instituto de Salud Carlos III funded project IMPaCT-Genómica. The project aims to establish a collaborative infrastructure for the implementation of Personalized Medicine in the Spanish Health System.

The developer will report to the Production Bioinformatics Manager and will work closely with other software engineers at the CNAG-CRG. Furthermore, he/she will interact with the laboratory, data analysts and researchers.

The candidate responsibilities include:

- Lead the full-stack design, development and maintenance of the CNAG-CRG's Laboratory Information Management System (LIMS)
- Integration of the LIMS and the workflow for genome data processing and quality control
- Interaction with researchers, data analysts and lab technicians



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- Development of tools, scripts and resources
- Ensure compliance with ISO, GDPR and other standards, procedures, and methodologies, including the preparation of corresponding documents and documentation
- Provide software design and engineering support to laboratory and analysis operations, as well as CNAG management
- Metadata processing, extraction, and generation of reports to aid colleagues in problem solving
- Adaptation of LIMS to ever evolving sequencing technologies including development of new tools and displays

About the team

The successful candidate will join the Production Bioinformatics team (<https://www.cnag.crg.eu/teams/bioinformatics-unit/production-bioinformatics>), managed by Matthew Ingham. The team is part of the CNAG-CRG Bioinformatics Unit, which has 22 members in total and is coordinated by Dr. Sergi Beltran.

The responsibilities of the Production Bioinformatics Team include working with lab technicians, sequencer manufacturers and system administrators to maintain a stable informatics environment for the generation and processing of sequencing data by the Illumina and Oxford Nanopore instruments. The team also ensures final data quality through semi-automated workflows, developed and maintained by the team, running in the CNAG-CRG's High Performance Computing (HPC) cluster. The CNAG-CRG is constantly testing, upgrading and improving its instruments and protocols and the team conducts customised analysis to adapt to new developments in the field. The operations of the Production Bioinformatics Team are included within the CNAG-CRG ISO 9001 certification and the ISO 17025 accreditation.

The team works in a stimulating scientific environment, contributing to breakthrough research projects in Genomics that have an impact on people's quality of life and offers continuous growth and support on a professional level.

Whom would we like to hire?

Professional experience

Must Have

- You have a minimum work experience of 5 years in database development on Unix operating systems
- You are familiar with API implementation

Desirable but not required

- You have knowledge of Bioinformatics / High Throughput Sequencing or human genetics
- You have experience in development, configuration and deployment of LIMS systems
- You have experience with javascript
- You have experience with Apache or other web services

Education and training

- You hold a MSc degree or higher in Software Engineering, Information Technology, Computer Science or similar

Languages

- You are fluent in written and spoken English



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Technical skills

- You have experience with SQL approaches to database design and implementation
- You have experience with HTML, CSS, and Python
- You have experience with a web framework such as Django

Competences

- You have excellent organisational, prioritising, communication and interpersonal skills
- You have the ability to effectively interact with multiple stakeholders on interdisciplinary level

The Offer

- **Contract duration:** Linked to the duration of the project with possibility of extension. (Estimated 2 years).
- **Estimated annual gross salary:** Salary is commensurate with qualifications and consistent with our pay scales.
- **Target start date:** As soon as possible

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. Sergi Beltran
2. A complete CV including contact details
3. Contact details of two referees

All applications must be addressed to Human Resources 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 **March 2nd, 2023**.

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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](#).



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