

# Platform Bioinformatician

Barcelona, Spain

Full-Time / On-Site or Hybrid

Starting date: April 2025

## Who We Are

ALLOX is a spin-off of the Centre for Genomic Regulation (CRG) and draws on the expertise and technology developed in the lab of Ben Lehner. The company was born out of the realisation that combining systematic mutagenesis, high-throughput phenotyping and biophysical modelling has the potential to revolutionise drug development but also transform biotechnology in general. In February 2025 we will be relocating to a new incubation space in the [Barcelona Science Park](#) (surrounded by 3 research institutes and over 70 different companies), and our immediate goal is to identify allosteric switches in all proteins and then leverage this unprecedented resource to rapidly develop novel medicines to treat human diseases. Our long-term vision is to become a leader in programmable biology, building the next generation of tools to predict, design and engineer new protein functions. We believe in a future where humanity will be able to harness the power of biology to solve our most pressing issues. We are expanding our interdisciplinary team with highly motivated individuals who are excited by this bold vision, share our sense of urgency, but are not willing to compromise on integrity. At ALLOX the success of our revolutionary scientific approach is as important to us as our mission to create a healthy, honest and respectful culture, both internally and with our partners.

For additional information, please visit: <https://www.allox.bio/>

## Who You Are

ALLOX is seeking an adaptable computational scientist with strong collaborative and problem-solving skills to join our growing startup as a **Platform Bioinformatician**. You will be an integral part of a multidisciplinary team solving problems at the intersection of Deep Mutational Scanning (DMS), AI and Structural Bioinformatics for Drug Design. Your primary responsibility will be to develop and maintain software infrastructure to support ALLOX's **Experimental Platform**, which uses high-throughput mutagenesis and phenotypic screening in yeast to identify allosteric sites at scale. This will involve the following tasks: (1) developing software tools and apps to automate regular bioinformatic jobs such as construct design and optimization, mutagenesis library design, pre-platform target validation analyses and quality control, (2) implementing and managing cloud data integrations with ALLOX's **Computational Platform** via the [Benchling](#) Laboratory Information Management System (LIMS) API, (3) performing meta-analyses of LIMS data and platform output to identify bottlenecks and potential ways to increase experimental data production and platform throughput. The ideal candidate will have a hybrid skill set with domain knowledge in either biochemistry, molecular biology or genetics as well as strong data science skills and demonstrated experience developing scientific software. Close communication and collaboration with both experimental and computational teams will be crucial to understand needs and identify opportunities for improvement. This position is therefore ideally suited to a systems thinker with excellent communication skills and an engineering mindset that is passionate about building software/laboratory automation solutions and process optimisation. Experience working closely with bench scientists is highly advantageous. If you share our sense of urgency to bring novel and better drugs to address unmet needs and thrive in a fast-paced, multidisciplinary environment, don't hesitate. Join ALLOX and help us make our mission a reality!

## What You'll Do

### Software Development

- Lead the development of custom software tools to support the lab team and increase the throughput and fidelity of experimental data production.
- Build apps to standardise, simplify and automate custom bioinformatic analyses including construct design and optimization, mutagenesis library design, pre-platform target validation analyses and plasmid quality control.
- Implement and manage data integration between the Laboratory Information Management System (LIMS) and the company's cloud-based computational platform via the [Benchling](#) API.
- Design, construct and maintain data pipelines and storage solutions for raw and processed data produced by the experimental platform.
- Identify and propose novel strategies to improve the integration between experimental and computational platforms.

### Data Science

- Integrate data from public databases on protein structure, function and disease/clinical relevance to prioritize target proteins and protein-protein interactions (PPIs) to enter the downstream drug discovery efforts.

- Analyse (DMS) data generated by the experimental platform to produce allosteric maps by using and adapting existing tools (e.g. [DiMSum](#), [MoCHI](#))
- Apply statistical analyses to data generated by the experimental platform to monitor progress, discover trends and drive decision-making.

#### Communication, Teamwork and Culture

- Establish clear communication channels with the different working teams.
- Keep stakeholders informed about workload, progress, results, and innovations.
- Exemplify best practices and positive behaviours.
- Foster a productive and inclusive working environment.
- Participate in general company duties and contribute to overall success.

### Job & Technical Competencies Requirements

#### Essential:

- **Bachelors/Masters** degree in Bioinformatics, Computational Biology, Computer Science, Engineering, Physics or a related field. We also welcome applications from candidates with a wet laboratory background in molecular biology, genetics or biochemistry, supplemented with strong computational experience.
- **3+ years** of full-time scientific software development experience (industry or academia).
- Good working knowledge or research experience in the fields of **molecular biology, genetics or biochemistry**.
- Familiarity with **high-throughput screening** (HTS) workflows and a successful track-record of collaborating with bench scientists is highly beneficial.
- Ability to develop **algorithms** and apply statistical analysis to biological data.
- Strong programming skills in **Python**, with expertise in libraries for data analysis (pandas) and machine learning (scikit-learn).
- Experience with **cloud-based computing** (preferably GCP) environments for handling large datasets and computationally intensive tasks.
- Experience with **UNIX** OS and Bash/Shell scripting.
- Knowledge of **version control systems** (e.g., Git and GitHub) and high-performance computing infrastructure.
- Strong **teamwork** and collaborative attitude.
- **Adaptable**, capable of managing **multiple projects** concurrently and adept at shifting focus between them in line with the company's evolving priorities.
- Strong **organisational** and record-keeping skills.
- Organised **thinker** with excellent **communication** skills, thriving in a multidisciplinary, fast-paced team environment.
- Fluent **English**.

#### Desirable:

- Experience with **Nanopore** and/or **Illumina** sequencing data analysis.
- Proficiency in operating **automated liquid handling systems** and robotics integration.

- Experience in developing **deep learning software** and proficiency with frameworks such as TensorFlow or PyTorch.
- Experience with **Docker** for packaging and deploying bioinformatics software.
- Proficiency in **R** and libraries for data science (Tidyverse).
- Fluent Spanish and/or Catalan.

## Compensation & Benefits

To determine starting pay, we consider multiple job-related factors including a candidate's skills, education and experience, the level at which they are actually hired, market demand, business needs, and internal parity. We may also adjust this range in the future based on market data.

This role is eligible for participation in our Annual Performance Bonus Plan (based on company goals by role level and annual company performance) and all employees are offered Equity, subject to the terms of those plans and associated policies.

In addition, ALLOX also provides our employees:

- 25 days annual leave (excluding public holidays)
- Paid parental leave
- Free drinks, snacks and regular team meals

This position is available for full-time on-site work at [Barcelona Science Park](#) or a hybrid model combining on-site and remote work depending on the role and your individual circumstances. We are open to discussing the best option for you during the interview process.

## Let's make programmable biology a reality

The startup nature of ALLOX provides multiple growth opportunities into other areas of the company. As one of the early employees at ALLOX, your work will have a direct impact on the foundation of a groundbreaking new approach to biotechnology.

## Application Process

Apply for this job [here](#). The interview process includes a take-home assignment to assess your practical skills.

The closing date for applications is **February 28th, 2025**. We encourage applicants to submit their application at the earliest opportunity as the closing date may be brought forward if a high volume of applications are received.

*\*Please note jobs may be taken down from our website, this does not mean they have been filled. This is to maintain our candidate experience for current applicants. If you are in the*

*interview process and would like to request a copy of the job description, reach out to your recruiting contact.*