

Engineer in Bioinformatics

Keywords: Bioinformatics, Data Analysis, Networks

The Mathematics and Algorithms for Systems Biology (MABioS [1]) group in the Marseille Institute of Mathematics (I2M, CNRS, Aix-Marseille University), has an opening position for a bioinformatics engineer. The successful applicant will work in an interdisciplinary team of biologists, bioinformaticians and computer scientists, involved in the development of methods to better understand a specific type of leukaemia: T-cell Acute Lymphoblastic Leukaemia (T-ALL), which is a malignant proliferation of T lymphocyte precursors.

Project

This project, funded by the french National Cancer Institute (INCa), is carried out in collaboration between I2M and the Marseille Cancer Research Center (CRCM). It aims to provide a holistic view of each T-ALL case and to decipher oncogenic pathways, clonal evolution and associated resistance mechanisms. In fine, this project could contribute to improve the therapeutic management of T-ALL patients.

The engineer to be recruited will have to integrate multi-omics data (scRNA-seq, ACT-seq, exome) coming from public databases (TCGA) as well as in-house produced data. Two different approaches will be used: the first one will leverage tools like Seurat, GATK, ChromHMM, Phylex, PyScenic to do multi-omics data integration; the second one will use network-based approach using molecular interaction networks and random walks algorithms. One of the goals is to identify 'silent players', i.e. the genes that are important in T-ALL, but which are neither systematically mutated nor differentially expressed.

Qualifications

- Master in Bioinformatics, Computational Biology, or related fields
- Skills in manipulation and analysis of biological -omics data
- Proficiency in programming (R, Python, bash) in a Linux environment
- Experience in bioinformatics workflows and package development would be a plus
- Expected to work collaboratively with other team members

Offer

Fully-funded 26 months Study or Research Engineer (depending on CV). The starting date is January 1st, 2025. The salary will be based on experience (see [2]). The I2M is located on the Luminy campus (Faculty of Sciences).

Application can be sent directly to laurent.tichit@univ-amu.fr. Please make sure your application includes a cover letter, a detailed CV and the contact information of 2 references.

[1] <https://mabios.math.cnrs.fr/news.html>

[2] <https://www.emploi-collectivites.fr/grille-indiciaire-etat-ingenieur-etudes-ministere-charge-enseignement-superieur/1/6580.htm>