

Postdoctoral Candidate in Bioinformatics

Paul-Arthur MESLIN

Ph.D. student in Bioinformatics
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Research interests

I am currently completing my PhD in bioinformatics, with a focus on the analysis of single-cell time-series datasets. My research primarily involves temporally resolved lineage tracing, aiming to better understand cellular processes over time. The goal of my research is to contribute to a deeper understanding of cellular dynamics, particularly in the context of response to treatment and disease progression.

Education

Ph.D. in Bioinformatics (on going) Université Paris Cité, Paris, France <i>Supervisor:</i> Dr. Camille Lobry	2021-2024 (expected)
M.Sc. in Bioinformatics, Modelling and Statistics Université Rouen Normandie, Rouen, France - M2 in apprenticeship for 2 years: 50% in the laboratory, 50% at school.	2018-2021
B.Sc. in Biochemistry, Molecular and Cellular Biology and Physiology Université Rouen Normandie, Rouen, France - Basis of experimental biology, biochemistry, molecular and cellular biology, physiology and genetics.	2015-2018

Experience

Ph.D. Student, UMR 7212 / Inserm U944, Université Paris Cité, France <i>Supervisor:</i> Dr. Camille Lobry - Analyzed time-series single-cell RNA-seq data to trace cell lineage in acute myeloid leukemia studies.	2021-2024 (expected)
M2 Apprentice, UMR 7212 / Inserm U944, Université Paris Cité, France <i>Supervisors:</i> Dr. Alexandre Puissant, Dr. Camille Lobry - Developed 'PitViper', a software tool for meta-analysis and annotation in functional genomic screening - Investigated genomic instability by analyzing NGS data, contrasting normal and tumor pairs in AML cases.	2019-2021
M1 Intern, UMR 7212 / Inserm U944, Gustave Roussy, France <i>Supervisor:</i> Dr. Camille Lobry - Integrated ChIP-seq and RNA-seq datasets to identify and characterize super-enhancers in genomic studies.	March-Sept. 2019
L3 Intern, Inserm U918, Centre Henri Becquerel, Rouen, France <i>Supervisor:</i> Dr. Pierre-Julien Vially - Evaluated and optimized existing pipelines for enhanced next-generation sequencing data processing.	April 2018
L2 Voluntary Intern, TIBS team, LITIS, Université de Rouen Normandie, France <i>Supervisor:</i> Dr. Arnaud Lefebvre - Engineered a web application to dynamically visualize mass spectrometry data outcomes, enhancing data interpretability.	May-June 2017

Publications

-Lin KH, Rutter JC, Xie A, et al. **P2RY2-AKT activation is a therapeutically actionable consequence of XPO1 inhibition in acute myeloid leukemia.** Nat Cancer. (2022)

-Fenwarth L et al. **A personalized approach to guide allogeneic stem cell transplantation in younger adults with acute myeloid leukemia.** Blood. (2021)

Key Skills

Programming and Data Analysis: Advanced proficiency in Python and R for statistical modeling, data manipulation, and visualization; Bash.

Bioinformatics Tools: Extensive experience with scverse ecosystem (scanpy, anndata, cellrank, scvi-tools).

Data Visualization: Skilled in creating informative visual representations of complex datasets using tools such as matplotlib, ggplot2, plotly and seaborn.

Reproducible Research: Committed to reproducibility using version control systems (Git, GitHub), containerization (Docker), and workflow management tools (Snakemake with Conda).

Machine Learning: Familiar with pytorch and scikit-learn and related Python libraries for implementing machine learning algorithms in biological data analysis.

Teaching

Bioinformatics Master's Student Association Tutoring Coordinator, Rouen, France 2021
- Provide individualized Python programming and Linux tutoring to M1 students.

Conferences

Bioinfo Single Cell Seminar, Institut Curie, Paris 2023
- Presentation of my thesis project at a single-cell seminar

Journées Ouvertes en Biologie, Informatique et Mathématiques (JOBIM), Rennes 2022
- Presentation of a poster on PitViper

Public Engagement

Dialogues Entre Chercheurs et Lycéens pour les Intéresser à la Construction des Savoirs 2023
- Dialogues with high school students to arouse their interest in the development of knowledge and fundamental research.

Languages

French: Native

English: Intermediate

Norwegian: Beginner, following Norwegian language and culture courses at the Maison de Norvège in Paris

References

Dr. Camille Lobry, Principal Investigator, Inserm U944, Université Paris Cité, France

Dr. Alexandre Puissant, Principal Investigator, Inserm U944, Université Paris Cité, France