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Jordan Dutel

Bioinformatician - Immuno-oncology

Website
LinkedIn
Github
Montbrison (France), 28/06/1998

Objectives

Bioinformatician in immuno-oncology, specialized in **single-cell** and **multi-omics** analyses. Experienced in developing **reproducible pipelines** and leveraging **complex biological data** to characterize the **tumor microenvironment** and drive **biomarker discovery**, with a direct contribution to **oncology R&D programs** and **therapeutic development**.

Skills

Bioinformatics	Single-cell RNA-seq data analysis (QC, normalization, clustering, cell type annotation, differential expression), spatial transcriptomics (10X Visium), multi-omics data integration, immuno-oncology data analysis
Data Analysis	Statistical modeling, dimensionality reduction, clustering, signature enrichment, biomarker discovery, data-driven hypothesis generation
Programming	R (Bioconductor, Seurat), Python, Bash, UNIX environments
Pipelines & Infrastructure	Development of reproducible and scalable pipelines, high-performance computing (HPC), workflow automation (Nextflow), containerization (Docker, Singularity), version control (Git)
Professional Skills	Cross-functional collaboration with biologists, immunologists, and clinicians, data interpretation to support R&D decision-making, autonomy, on-time delivery
Languages	French (native), English (professional proficiency)

Experience

Bioinformatics Scientist – Tumor Microenvironment **January 2026 — Present**
CHU Toulouse – Toulouse Cancer Research Center (CRCT) *Toulouse, France*

- Analysis and interpretation of single-cell RNA-seq data to characterize the tumor microenvironment in hematological oncology (multiple myeloma, murine models).
- Design, implementation, and optimization of robust bioinformatics pipelines for demultiplexing, alignment, quality control, and downstream scRNA-seq analyses (R/Bioconductor, Seurat, Python).
- Identification of immune cell subpopulations, cellular states, and transcriptional signatures associated with tumor progression and immune interactions.
- Integration of bioinformatics results with experimental and immunological data in a translational research framework.
- Large-scale data processing using high-performance computing (HPC, Genotoul) in UNIX-based environments.
- Close collaboration with biologists, immunologists, and clinicians to deliver actionable analyses supporting oncology R&D projects.

Internship – Spatial Transcriptomics Analysis in Triple-Negative Breast Cancer **February 2025 — July 2025**
CRCL – Lyon Cancer Research Center *Lyon, France*

- Analysis of spatial transcriptomics data (10X Visium) from 15 patients with triple-negative breast cancer.
- Integration of expert-annotated phenotypic cell types to characterize intratumoral heterogeneity.
- Development and optimization of normalization, feature selection, and batch correction pipelines (Seurat, Harmony).
- Identification of spatially enriched markers and transcriptional profiles across tumor subtypes and tumor microenvironment contexts.

Internship – Multi-omics and Statistical Analysis of the Profiler Cohort **April 2024 — June 2024**
Centre Léon Bérard (CLB) *Lyon, France*

- Integrative analysis of multi-omics datasets (genomic, transcriptomic, immunological) from the Profiler cohort using statistical latent factor models (MOFA).
- Differential expression analysis and molecular signature enrichment associated with clinical cancer subtypes.
- Development of reproducible R-based pipelines for data preprocessing and normalization.

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Internship – Immuno-oncology and Autoimmune Diseases **January 2023 — July 2023**
CRCL – Lyon Cancer Research Center *Lyon, France*

- Investigation of NF-κB signaling pathway regulation in response to pro-inflammatory stimuli in murine cell lines.
- Cell culture, Western blotting, immunofluorescence, and flow cytometry to assess pathway activation and gene expression.
- Contribution to functional assays exploring the role of NF-κB in cellular stress responses and apoptosis.

Internship – Pseudoviral Particle Engineering for RNA Delivery **April 2022 — July 2022**
International Center for Infectiology Research (CIRI) *Lyon, France*

- Development and characterization of a novel RNA delivery system based on the endogenous retroviral protein hPEG10.
- Design of non-viral particles for mRNA delivery into human cells.
- Application of molecular biology techniques (RT-PCR, qPCR, enzymatic digestion, Western blot).
- Culture of primary cells producing pseudoviral particles.
- Presentation of results in scientific meetings and internal project reviews.

Education

Master's Degree in Bioinformatics – Data Science **September 2023 — July 2025**
Université Claude Bernard Lyon 1 (UCBL1) *Lyon, France*

- Focus: Multi-omics data integration, spatial and single-cell transcriptomics, project management
- Grade: 15.15/20 (Rank: 4/17)

Master's Degree in Molecular Biology – Immunology, Immunopathology & Immunotherapy **September 2021 — July 2023**
Université Claude Bernard Lyon 1 (UCBL1) *Lyon, France*

- Focus: Translational research in oncology and immuno-oncology
- Grade: 13.23/20 (Rank: 46/75)

Bachelor's Degree in Genetics **September 2018 — June 2021**
Université Claude Bernard Lyon 1 (UCBL1) *Lyon, France*

- Grade: 11.76/20 (Rank: 39/129)

First Year Health Studies (PACES) **September 2016 — June 2018**
Université Jean Monnet (UJM) *Saint-Étienne, France*

- Outcome: Admissible but not admitted due to numerus clausus

Activities

Spring School on AI & Machine Learning in Biology and Health – AI4BioMed **April 7-9, 2025**

Music
- Piano and guitar practice (musical skills and creativity)

Sports
- Regular swimming and weight training (discipline and physical fitness)

Language Learning
- Mandarin (beginner), improving Spanish and Italian, practicing English for fluency

Critical Thinking and Epistemology
- Study of philosophy of science, logic, and critical reasoning (analytical skills and problem solving)