ALVARO REGANO
COMPUTATIONAL BIOLOGIST

HARD SKILLS

- Data Analysis
- Statistical Modeling
- Machine Learning
- Bioinformatics
- Multiomics
- scRNASeq & bulk RNASeq
- Next Generation Sequencing (NGS)
- Illumina, Nanopore Sequencing
- Prompt writing for LLMs
- High Performance Computing (HPC)
- Docker, Nextflow
- Linux systems (UNIX)
- Scientific writing
- Adobe Suite: Illustrator, inDesign
- MS Office: Excel, Word, PowerPoint

PROGRAMMING

R: Seurat, SingleR, ggplot2, dplyr, Bioconductor, tidyverse, RMarkdown

Python: Pytorch, scanpy, pandas, matplotlib, scikit-learn, Biopython

Julia, JavaScript, SQL, HTML, CSS

SOFT SKILLS

- Insightful
- Autonomy
- Communication
- Focused
- Resourceful

LANGUAGES

Language	Level	Cert.
Spanish	Native	
English	C2	CPE
Italian	B2	CILS
German	B2	TELC
Dutch	A1	

PROFILE

Dedicated Computational Biologist with bench work experience. My main expertise lays in single cell multiomic data acquisition, processing, analysis and visualization. Passionate about leveraging technology to improve our understanding of living systems.

WORK EXPERIENCE

February 2025 –Present

Postdoc Bioinformatics *Genomics and Epigenomics of Pediatric Brain Tumors, 4-1G1, PMC*

- Analyzing transcriptomics (bulk, single cell and spatial) and epigenomics (DNA methylation) datasets for 6 projects involving:
  - Studying the tumor microenvironment (TME) in various rare pediatric brain cancer tumors (Medulloblastoma and Ependymoma).
  - Validating organoid models for pediatric brain cancers.
  - Characterizing rare Medulloblastoma subtypes.
- Mentoring master students and co-chairing bioinformatics seminars

June 2020 –November 2024

Research Scientist *Molecular Genetics of Angiogenesis, 3N,CNIC*

- In charge of scRNASeq experimental design, following computational analysis employing supervised and unsupervised ML methods and visualization of over 10 datasets for 5 projects.
- Developed bioinformatic pipeline tools and bioassays for iFlpscLineage, a new scLT technology coupled with transcriptomics.
- Fostered collaborations with the Theoretical Systems Biology group at DKFZ and Single Cell Genomics unit at CNAG.

March 2018 - June 2018

Research Intern *Dpt of Biochemistry and Immunology, TCD*

- Computational analysis of bulk RNASeq data
- FACS, RT-PCR bioassays for validating in silico findings

September 2016 - June 2017

Undergraduate Research Intern *Dpt of Pharmacy, TCD*

- Sinthesized and *in vitro* tested various types of Nanoparticles
- Platelet Isolation, Cell Culture, Zymography, RNA isolation, qPCR

EDUCATION

PhD Computational & Molecular Biology 2020 - 2024

Universidad Autónoma de Madrid (UAM)

Thesis: Single cell transcriptomical analysis of endothelial to hematopoietic transition

Course Artificial Inteligence in Python 2024 - 2025

Escuela de Organización Industrial partnered with Samsung (400h)

Web App Dev and Amazon Web Services. 2018-2019

Generation Spain, a McKinsey Social Initiative (400h)

MSc. Immunology 2017 - 2018

Trinity College Dublin (TCD). Grade: 74% (Pass with Distinction)

Thesis: The function of γδ T cells and a novel T cell subtype in autoimmune disease

BSc Biochemistry 2013 - 2017

Universidad Complutense de Madrid (UCM). Grade: 8,25

Thesis: Cellular interactions and safety testing of chitosan coated ferrite nanoparticles