MATTEO ZOIA, PH.D.

CANDIDATE FAMH

CONTACTS

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https://www.linkedin.com/in/matteo-zoia-44aa331ab/

Switzerland

LANGUAGES

ITALIAN	Native
FRENCH	Native
ENGLISH	Proficient
GERMAN	Advanced

SKILLS

Cell Biology

Genomics · Immunology

Analytical Techniques

Biomedecine · NGS

Bioinformatics

NGS softwares

KEY ACHIEVEMENTS

- **High impact journals**
  Nature scientific reports / Nature communications
- **Conferences awards**
  CVRC Annual Meeting 2024
  Best poster prize

CAREER INTERESTS / PASSION

- **NGS techniques**
- **Diagnostic Medecine**
- **Interpretation of diagnostic results**

FIND ME ONLINE

- **LinkedIn (Career insights)**
  https://www.linkedin.com/in/matteo-zoia-44aa331ab/
- **ORCID (Publications list)**
  https://orcid.org/0000-0002-0040-0085

SUMMARY

After completing my M.Sc. in Experimental Biomedical Research with a focus on Immunology, I pursued a Ph.D. in Cell Biology in the Osterwalder lab in Bern, where I studied heart development and genetic regulation. During my doctoral work, I developed a strong interest in Next-Generation Sequencing (NGS) technologies and data analysis, gaining in-depth knowledge of coding and non-coding variants and how genomic and epigenetic alterations affect 3D chromatin architecture and *cis*-regulatory function. I focused on how these disruptions lead to gene mis-regulation, a key driver of developmental and hereditary genetic diseases, detectable through diagnostic methods. I now aim to pursue an FAMH specialization in Medical Diagnostics, where precise analysis advances the diagnosis of developmental and hereditary genetic impairments.

EDUCATION

University of Bern 2020 - 2025
Ph.D. degree in Cell Biology - Cardiac Development and Gene Regulation

University of Fribourg 2017 - 2019
M.Sc. degree in Experimental Biomedical Research - Immunology

University of Neuchâtel 2013 - 2015
Bachelor degree in Biology

High School Lugano 2 2005 - 2009
High School degree - Biology and Chemistry

EXPERIENCE

University of Bern Bern, Switzerland
Ph.D. Student in Cell Biology 2020 - 2025

Doctoral degree in cardiac development and gene regulation

- *Aim :* Dissection of the functional architecture of cardiac transcription factor regulatory landscapes in control of mammalian heart development.
- *Main Techniques :* CRISPR-Cas9, Cloning, Embrionic tissue collection, qPCR, Primary cell culture maintenance, Cell Transfection, Western Blotting, Immunofluorescence (IF), Immunohistochemistry (IHC), Light Sheet Fluorescence Microscopy (LSFM), Nuclei Isolation for Single Cell Multiome ATAC + Gene Expression Sequencing, RNA-seq.
- *Main Analysis :* Genotyping, NGS Analytical Techniques & Corresponding Softwares analysis such as; Quality Control (QC) of Raw Reads, Read Alignment/Mapping, Variant Calling (SNPs, Indels, Structural Variants), RNA-seq Analysis, Epigenomic Analysis (ATAC-seq, ChIP-seq, Methylation, Acetylation), Single-Cell NGS Analysis, Visualization & Integrative Analysis.

University of Fribourg Fribourg, Switzerland
M.Sc in Experimental Biomedical Research 2017 - 2019

Master degree in Immunology

- *Aim :* Investigate the interactions between microglial cells, peripheral blood mononuclear cells (PBMCs), and extracellular vesicles (EVs).
- *Main Techniques :* Blood fractionation, PBMCs collection, EVs collection, infected (Malaria) and healthy Red Blood Cells (RBCs) culture maintenance, Multicolor Flow Cytometry (FACS), High-Performance Liquid Chromatography (HPLC), Electron Microscopy (EM), Immunofluorescence (IF), Immunohistochemistry (IHC), Light Sheet Fluorescence Microscopy (LSFM).
- *Main Analysis :* Fluorescence-Activated Cell Sorting (FACS) on infected (Malaria) and healthy Red Blood Cells (RBCs), FACS on Peripheral Blood Mononuclear Cells (PBMCs), Visualization of extracellular vesicles (EVs), Visualization and quantification of Neutrophil Extracellular Traps (NETs).

REFERENCES

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