

## Supervisor's contact details

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## Title of the project

Multiomics in Cardiometabolic Disease

## MSCA-PF Research Panel

- Chemistry (CHE)
- Social Sciences and Humanities (SOC)
- Economic Sciences (ECO)
- Information Science and Engineering (ENG)
- Environment and Geosciences (ENV)
- Life Sciences (LIF)
- Mathematics (MAT)
- Physics (PHY)

## Description of the project

The objective of this computational dry-lab project is to assess the (functional) relations of various omics (genomics, metabolomics, metagenomics) with cardiometabolic disease. The work will be carried out in Finnish population cohorts of 5000-500000 individuals.

A suitable candidate has:

- PhD in Biostatistics, Bioinformatics, Computational Biology, Computer Science, Biology, Mathematics, Medicine, or a related field
- Relevant background knowledge including proven bioinformatics skills and a solid publication track record
- Experience in statistical data analysis, integration, and visualization
- Fluency in at least one data science language (such as Python, R, or Julia)
- Ability to work both independently and in a team
- Willingness to learn new and multidisciplinary skills as needed
- Good communication and interpersonal skills and English language skills
- Good scientific writing skills

## **Research objectives or research questions of the project**

The duties of Postdoctoral Researcher include the analysis of population-level omics data (genomics, metagenomics, metabolomics etc.) aiming at groundbreaking biological discoveries. The key data sources include comprehensively phenotyped, large national and international human cohorts whose plasma and/or fecal samples have been analyzed in leading laboratories using high-throughput (metagenomic) sequencing and/or state-of-the-art mass spectrometry. Different project areas related to multi-omics data integration, analysis of longitudinal cohort data, and the discovery of personalized disease biomarkers are available.