

## **PHD POSITION IN SINGLE CELL IMMUNOBIOLOGY**

A PhD position is available in the Single Cell Immunobiology Group at the Department of Internal Medicine II in University Medical Center Freiburg to investigate gamma delta T cell development and evolution.

We are a small, dedicated group of scientists working to understand gamma delta T cell biology using cutting-edge single-cell technologies. We are seeking a highly motivated and skilled individual to join our team as a PhD student as part of the RTG2344 "MelnBio" to investigate the development, peripheral adaption, and evolution of gamma delta T cells.

### **PROJECT DESCRIPTION**

#### **PhD Position in Single-Cell Analysis of Gamma Delta T Cell Development and Evolution**

The main aim of the project is to generate and analyze large scale single-cell multimodal datasets (including gene expression, chromatin accessibility, T-cell receptor sequencing, and cell-surface protein profiling) across different organs and species to understand the development, peripheral adaption, and evolution of gamma delta T cells.

#### **I. RESPONSIBILITIES**

- Perform single-cell RNA sequencing and other single-cell multimodal profiling using microfluidics and split and pool technologies.
- Intensively perform computational data analysis of the generated datasets in collaboration with other scientists.
- Present the biological interpretation of datasets in a comprehensive way during lab meetings, retreats, and meetings with collaboration partners.

#### **II. REQUIREMENTS**

- Master's degree in biology, molecular medicine, or immunology.
- Experience in basic molecular and cellular biology techniques such as cell culture, FACS, qPCR, etc.
- Basic knowledge of R and/or Python.
- Strong interest and motivation in analyzing your own datasets as the position is mainly computational.
- Excellent communication skills in English.
- Ability to work independently and to derive creative hypotheses from the data for further validation experiments.

#### **III. WHAT WE OFFER**

- An initial contract until August 2026 based on the German public service pay scale with a definite possibility of extension.
- A flexible environment where you will have the possibility to develop your own skillsets.
- Mentorship on how to be productive and successful, resulting in several publications without micromanaging.
- Joining date is flexible.

#### **IV. REQUIRED DOCUMENTS**

- Motivation letter and CV.
- Bachelor's and master's degree certificates.
- Transcript records.
- Minimum two letters of recommendation.

#### **V. SELECTION PROCEDURE**

- Presentation of master's thesis research.
- Presentation of a paper related to single-cell biology.
- The applicant will be given a sample dataset to analyze and will be asked to present the data.

## **FURTHER INFORMATION**

<https://www.uniklinik-freiburg.de/medizin2/forschung/ag-sagar.html>

<https://orcid.org/0000-0002-8657-4704>

<https://www.meinbio.uni-freiburg.de/what-is-meinbio>

## **FURTHER READING**

<https://pubmed.ncbi.nlm.nih.gov/38177282/>

<https://pubmed.ncbi.nlm.nih.gov/38073484/>

<https://pubmed.ncbi.nlm.nih.gov/32627520/>

**Please apply by sending all documents to Dr. Sagar ([sagar@uniklinik-freiburg.de](mailto:sagar@uniklinik-freiburg.de)).**