

Internship/Master Thesis in Immunology at Harvard Medical School

An Internship or Master Thesis in T cell immune regulation is available at the laboratory of Prof. Dr. Vijay Kuchroo at the Evergrande Centre for Immunologic Diseases of Harvard Medical School and Brigham and Women's Hospital in Boston. The lab is composed of a highly motivated, friendly team and is internationally recognized for its major contributions to Th17 cell Immunology and immune checkpoint Tim-3 which paved the way for therapy development.

The project will involve Crispr/Cas9 mediated approaches to unravel regulators of Th17 cell phenotypes in health and autoimmune diseases, including potential targets of the gut brain axis and metabolism. The work has a major component of animal experimentation, including the use of autoimmune disease models, lineage tracing, Cas9 and reporter mice.

The candidate will be trained in the following techniques and is ideally already experienced in some of them:

- Mouse handling (injections) and breeding
- Preparation of and immune cell isolation from various mouse organs
- MACS sorting and multicolor flow cytometry of T cells
- Molecular cloning and gene editing (Crispr/Cas9)
- Cell culture
- Analysis of mRNA expression using RT-qPCR

The candidate will further have the opportunity to attend a great variety of Harvard seminars and get informed on other state-of-the art techniques in the lab, including single-cell RNA sequencing and ATAC-sequencing.

We are looking for a highly motivated student with dedication to research and a strong interest in Immunology as well as work with mice. The offer is available starting fall 2022 but can also start as late as spring 2023. A minimal length of 6 months is strongly recommended, ideal would be 9-12 months.

The project will be in the framework of a Postdoctoral project and the lab work supervised by a Postdoc, Martina Spiljar who graduated in 2015 from FAU with a Master's degree in Cell and Molecular Biology and obtained her PhD in 2020 from the University of Geneva. The work might result in an opportunity to be part of a high impact publication. Please send your application with a short statement of motivation and your CV to: martina.spiljar@bwh.harvard.edu.

While the research costs are covered by the lab, the candidates would ideally be motivated to apply with our support for Promos funding by DAAD for financing.