



Senior Postdoctoral Position in Single Molecule Microscopy

Department of Molecular Immunology at the University of Freiburg (Germany)

(<https://lillemeier.biologie.uni-freiburg.de>)

We are seeking a highly creative, collaborative, and motivated Senior Postdoctoral Researcher with significant experience in single molecule microscopy who is interested in visualizing immune responses in T cells.

This full-time senior postdoctoral position is available from **1st of January 2026** with the possibility of becoming permanent after 2 years. The salary is at E13 level by the TV-L agreement (Tarifvertrag für den öffentlichen Dienst der Länder / collective agreement for public employers).

We welcome applicants from different areas, e.g. immunology, biology, physics and engineering, with considerable expertise in fluorescence single molecule microscopy using state-of-the-art equipment and a keen interest in immunology. The candidate is expected to conduct studies independently and supervise postdoctoral researchers and students on microscopy projects. This position requires a Ph.D. degree (or equivalent), and publications in peer-reviewed journals. We are an equal opportunity employer and encourage applications from candidates of all genders.

The position is designed to study spatio-temporal mechanisms that control the assembly and signal transduction of the TCR and PD1 pathways at the T cell plasma membrane.

Our group is interested in the regulation of lymphocyte activity and functions during cancer and autoimmunity. Current research is focused on the activating T cell receptor (TCR) and inhibitory PD1 pathways in T cells. We apply multidisciplinary approaches that combine cutting-edge fluorescence microscopy with biophysics, biochemistry and molecular biology to elucidate how protein conformations, modifications and assembly at the plasma membrane control signal transduction. Specifically, we have discovered that the T cell signaling pathways are segregated into distinct plasma membrane nanodomains that concatenate upon T cell stimulation. We are studying how the signaling pathways utilize nanodomain distributions and dynamics, and how signals are exchanged between them. We aim to identify and modulate spatio-temporal mechanisms that are specific to signaling proteins and/or pathways. Our goal is to determine the potential of these mechanisms as future drug targets for immunotherapies.

To Apply: Please submit (1) a letter of motivation including a description of past research accomplishments and future research interests/goals (not more than two pages), (2) curriculum vitae (CV) with publication list and (3) at least three contact details for referees.

Please, send your application in a single pdf file to: lillemeier@bio.uni-freiburg.de