Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

MAX-PLANCK
RESEARCH GROUP FOR
SYSTEMS IMMUNOLOGY

The Max Planck Research Group for Systems Immunology
at the Julius-Maximilians-University of Würzburg invites applications for a

PhD Position in Cancer Immunometabolism

The research group of Dr. Martin Vaeth at the Institute for Systems Immunology (https://www.med.uni-wuerzburg.de/en/systemimmunologie/research/metabolism-and-immune-cell-signalling-vaeth-lab/) investigates the regulation of lymphocyte differentiation and effector function at the **intersection of signal transduction, metabolism, and epigenetics**. We employ a broad range of state-of-the-art molecular and cellular approaches, including (single-cell) transcriptomics and metabolomics, and complement our work with preclinical animal models of viral infection, autoimmune disease and cancer.

We invite applications for a PhD position within the DFG-funded **Collaborative Research Center (CRC) 338 "Lymphocyte Engineering for Therapeutic Synthetic Immunity"** (https://letsimmun.de). The project focuses on the molecular and metabolic regulation of T cell stemness and functional exhaustion, with the goal of identifying novel (metabolic) regulators of T cell differentiation in the tumor microenvironment using functional genomics and preclinical models of cancer and chronic viral infection.

What we offer:

- The opportunity to work on a fascinating scientific topic in an international research team
- Continuous scientific mentoring and rigorous academic training
- Cutting edge technologies and methods in a vibrant scientific environment
- Training within the Graduate School of Life Sciences (GSLS) at the University of Würzburg
- Salary and benefits are according to the public service positions in Germany (TV-L E13, 65%)

Your Profile:

- Excellent Master's degree in life sciences (biology, biochemistry or equivalent)
- Sound knowledge and strong interest in immunology and/or metabolism
- Immune cell isolation and *in vitro* culture methods
- Solid background in molecular and/or cellular biology
- Experience with multi-color spectral cytometry and cell sorting
- Fluent speaking and writing skills in English (German is not required)
- Motivation, reliability and dedication to work in an academic research lab

Desirable experience:

- Hands-on experience with molecular biology, especially CRISPRa and CRISPRi
- Experience with conditional knock out mice and animal handling
- Experience of mouse models of cancer and/or infection (e.g. B16, MC38, LCMV)
- LC/MS-based targeted and isotope-tracing metabolomics
- Experience with (single-cell) RNA-sequencing analysis and bioinformatics
- Knowledge in computational biology and systems immunology

Full applications should be sent before 10th February 2026 via email to martin.vaeth1@uni-wuerzburg.de as a **single PDF file**. The application must include a **motivation letter** with a brief description of past scientific achievements and academic goals (1-1.5 pages), a **recent CV** and **reference(s)** (with full address and email).

The University of Würzburg is committed to equal opportunities and diversity and encourage individuals from underrepresented groups to apply. Applicants with disabilities will be given preference if equally qualified.