



EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN



CSC-Tübingen PhD Scholarship Program

2025 application round: prospective PhD positions at the University of Tübingen

Faculty:	Medicine
Institute / Section / Subject:	Werner Siemens Imaging Center
Supervising Professor(s):	Prof. Dr. Johannes Schwenck
About the Supervisor:	<p>We are aiming to elucidate the crossroads between inflammation and cancer immunology to understand and prevent carcinogenesis as well as improve cancer immunotherapy. To investigate the complex interplay of immune cells, resident cells and tumors we are facilitating <i>in vivo</i> PET with innovative tracers, optical imaging, MRI as well as multiple <i>ex vivo</i> methods like flow cytometry.</p> <p>After the study of medicine at the University of Tübingen and the medical doctorate in 2015 I worked as resident physician in the Department of Nuclear Medicine at the University Hospital of Tübingen. Meanwhile, I obtained my PhD in Experimental Medicine from the University of Tübingen in 2021. Afterwards I stayed as a Postdoc at the Ludwig Institute for Cancer Research at the University of Lausanne (Prof. Ping-Chih Ho). In 2023 I returned to the University Hospital of Tübingen as a Senior Physician in the Department of Nuclear Medicine and Clinical Molecular Imaging and was appointed as W2-Professor for Translational Immune Imaging at the Medical Faculty of the University of Tübingen in 2024. Additionally, I am affiliated as an Associate Investigator at the Cluster of Excellence iFIT (Image-Guided and Functionally Instructed Tumor Therapies) and group leader at the Werner Siemens Imaging Center.</p>
Specification:	Preclinical Immune Imaging
Topic Description:	<p>In this project, we aim to elucidate immune cell migration and interactions in the tumor microenvironment and lymphoid organs using innovative imaging approaches in preclinical animal models to understand the mechanisms of immune response and escape. The student will use innovative <i>in vivo</i> preclinical imaging approaches based on combined PET/MR imaging together with <i>in vitro</i> methods such as state-of-the-art multispectral flow cytometry to shed new light</p>

on the tumor microenvironment. In addition to the use of preclinical mouse models, the candidate will participate in clinical and basic science projects involving patient cohorts. In the long term, this work will contribute to the establishment of new approaches for clinical diagnosis and therapy stratification to enable novel, powerful and individualized treatment approaches to prevent cancer immune escape.

Type of the PhD Study: 1) Full-time (complete doctoral studies at the University of Tübingen)

Intended Degree: Dr. rer. nat., Dr. phil., Dr. med., PhD in Experimental Medicine
iFIT Cluster of Excellence PhD Training Program
<https://www.medizin.uni-tuebingen.de/en-de/medizinische-fakultaet/forschung/ifit-exzellenzcluster/phd-training-program>

Required Degrees and

Qualifications: We are looking for enthusiastic and highly motivated candidates, eager to answer highly relevant biomedical questions and evolve in a multidisciplinary environment with biologists, chemists, physicists and physicians notably using state of the art imaging techniques. The candidate should ideally possess scientific expertise in immunology, molecular biology/medicine, or biochemistry demonstrated by an excellent Master of Science in a relevant field and a keen interest in preclinical imaging sciences. Previous experience with molecular and cell biology techniques (e.g. cell culture, flow cytometry, western blot) is essential. Hands on experience with preclinical PET, MRI or CT imaging is a plus but not a requirement. Knowledge of tumor immunology and working with small animals, especially in vivo models of diseases, are considered beneficial. Prior work with animals and a FELASA certificate would be useful but not essential. As the student will work in an international team and will participate in international conferences, fluency in English is an essential requirement.

Language Requirements: English: Proficiency in speaking and writing