



EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN



CSC-Tübingen PhD Scholarship Program

2026/2027 application round: prospective PhD positions at the University of Tübingen

Faculty: Faculty of Science

Institute / Section / Subject: Pharmaceutical Technology and Biopharmaceutics

Supervising Professor(s): Dr. Moritz Reuter, Prof. Dr. Dominique Lunter

About the Supervisor(s): Dr. Reuter's research is focused on computational modeling of the skin permeation of pharmaceutical compounds, with a special focus on mechanistic modeling using molecular dynamics simulations. Prof. Dr. Lunter is a renowned expert in skin science and dermatopharmaceutical development, with a special research focus on Raman-spectroscopy-based permeation analysis of small molecules and the impact of pharmaceutical excipients on the skin barrier.

Specification/Project title: Development of Combined-Experiment Approaches for Mechanistic Modeling of the Skin Barrier

Topic Description: The aim of the PhD project is to leverage a combination of computational methods for simulation and prediction of the skin barrier properties (Atomistic and coarse-grained molecular dynamics simulations and COSMO-based methods) with experimental methods of skin science (animal skin models, Franz diffusion cell measurements) synergistically to iteratively develop and refine models for deeper understanding of skin barrier transitions of small molecules.

Intended Degree: Dr. rer. nat.

Type of the PhD Study: Full time

Required Degrees and Qualifications: M.Eng./M.Sc. in chemical engineering, materials science, life science or a related field

Language Requirements: IELTS 6,5

Notes: None