



EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN



CSC-Tübingen PhD Scholarship Program

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

Faculty: Medical Faculty

Institute / Section / Subject: Institute of Medical Genetics and Applied Genomics, Research Laboratory

Supervising Professor(s): PD Dr. Thorsten Schmidt, MME

About the Supervisor(s): Dr. Schmidt is group leader and laboratory head at the Institute of Medical Genetics and Applied Genomics. He is an experienced supervisor and mentor in the field of neuroscience and genetics. During the last 25 years, he mentored numerous students with various scientific and cultural background (including Chinese students). Dr. Schmidt is biochemist by training, holds a PhD degree in Molecular Biology and habilitated in the field of Experimental Human Genetics. His research focusses on pathogenic mechanisms of Spinocerebellar ataxia type 3, an inherited, neurodegenerative disorder. He generated one of the first antibodies against the affected protein as well as several different transgenic mouse models and identified the nuclear localization of the affected protein as critical pathomechanism. Together with his group, Dr. Schmidt studies modifying factors of the disease and develops treatment strategies for SCA3 using molecular biological, protein biochemical and cell biological methods.

<https://www.medizin.uni-tuebingen.de/de/das-klinikum/einrichtungen/zentren/gene-and-rna-therapy-center/ag-schmidt>

Specification/Project title: Molecular pathomechanisms and treatment strategies for an inherited neurodegenerative disorder

Topic Description: You will work in the state-of-the-art research laboratory of the Institute of Medical Genetics and Applied Genomics in an international research environment. Your project will focus on Spinocerebellar Ataxia Type 3 (SCA3), the most common autosomal dominant ataxia worldwide, caused by a polyglutamine repeat expansion. You will investigate the molecular pathophysiology of the disease using genetics screenings, the analysis and manipulation of specific disease modifiers etc. You will use specific disease models (cellular models and – if applicable – transgenic animal models) with suitable readouts (e.g. protein aggregation, modification, cleavage and localization, cellular viability, histology, and behavioral assessment) as well as omics analyses. The aim is to identify and pre-clinically validate novel treatment strategies for this currently incurable disorder by targeting critical pathomechanisms.

Intended Degree: PhD in Experimental Medicine or PhD in Neuroscience (according to prior experiences and degrees)

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

Required Degrees and Qualifications: Ideally, you hold a Master's Degree in a life-science-related field such as biology, biochemistry, molecular medicine or neuroscience. If your background is in (human) medicine, you should preferably have a specialization/Master's degree in neurology, laboratory medicine or a related field. You must have prior in-depth experiences of typical laboratory methods in molecular biology (e.g. molecular cloning, PCR and working with bacteria), cell biology (e.g. mammalian cell culture, transfection, immunofluorescence) and protein biochemistry (e.g. Western blotting, protein assays and immunoprecipitation) as well as associated in silico analyses. Experiences of working with laboratory rodents (e.g. mice) would be an advantage.

Language Requirements: Profound English language skills and extensive experiences of scientific writing, communicating and presenting in English are absolutely mandatory. Proficiency needs to be proven by formal language tests such as IELTS or TOEFL. Communication in our lab is usually conducted in English. Additional basic language skills in German would be helpful but are not required.