Postdoctoral and PhD student positions available at the University of Tübingen – Hertie Institute for Clinical Brain Research and Institute of Physiology

Pathophysiology of genetic epilepsies during brain development

We are looking for motivated and highly skilled postdoctoral (TVL-L 13, 100%) and PhD (TVL-L 13, 65%) candidates for the newly funded DFG Research Unit 2715 “Epileptogenesis of genetic epilepsies”. We offer positions for 3 years, starting as soon as possible.

Our research groups have a long-standing experience in studying genetic and pathophysiological mechanisms underlying neuronal hyperexcitability and network dysfunction. We identified and functionally characterized several new epilepsy genes on the single cell and network level (e.g. Schubert et al. Nat Genet 2014; Syrbe, Hedrich et al. Nat Genet 2015; Hedrich et al. J Neurosci 2014; Wolf et al. Brain 2017) and analysed in vivo physiological and pathological network oscillations (e.g. Adelsberger et al. Nat Neurosci 2005; Busche et al. Science 2008; Maier et al. Nat Med 2014).

The Projects:
The newly established Research Unit will focus on the mechanisms underlying epileptogenesis in genetic epilepsy syndromes. We seek to unravel (i) the genetic mechanisms of rare epileptic encephalopathies and common genetic generalized epilepsies, (ii) brain region-specific epileptogenesis in conditional mouse models using specific viral activation, and (iii) specific mechanisms of epileptogenesis during brain development. We will utilize a variety of techniques including next generation sequencing, molecular biology, single cell and network electrophysiology, large scale and high resolution in vivo calcium imaging and EEG recordings.

PhD candidates are embedded in our established Graduate School (Graduate Training Centre of Neuroscience) which will be complemented by specific modules covering important aspects of the genetics and pathophysiology of epilepsies.

Requirements:
We are looking for highly motivated and qualified researchers interested in the mechanisms of genetic epilepsies. The positions require either a PhD degree (for postdoc candidates) or a Master in Biology / Medicine or a related discipline (e.g. molecular biology, molecular medicine, physics), ideally with a focus on neuroscience. Skills in genetics (next generation sequencing analysis), molecular biology, electrophysiology (patch clamp, EEG recordings) or calcium imaging are highly encouraged. More details can be found under https://www.hih-
tuebingen.de/forschung/neurologie-mit-schwerpunkt-epileptologie/ and "http://www.physiologie2.uni-tuebingen.de/?q=node/7 (PostDoc candidates).

Women and people with disabilities are given preference for the same suitability.

**How to apply:**

The positions will be open until we find appropriate candidates. Please send your application including a letter of motivation, CV, list of publications, copies of certificates and the names of at least two references as a single pdf file to:

Prof. Holger Lerche  
Dept. Neurology and Epileptology  
University of Tübingen  
Hoppe-Seyler-Str. 3  
D-72076 Tübingen, Germany  
E-mail: dimitra.paralikidou@med.uni-tuebingen.de

AND

Prof. Dr. O. Garaschuk  
Institute of Physiology  
University of Tübingen  
Keplerstr. 15,  
72074 Tübingen, Germany  
E-mail: olga.garaschuk@uni-tuebingen.de  
(PostDoc candidates only)