Hertie-Institut
für klinische Hirnforschung

Zentrum für Neurologie

Universität und Universitätsklinikum Tübingen

Hertie-Institut für klinische Hirnforschung · Otfried-Müller-Straße 27 · 72076 Tübingen

Abt. Neurologie mit Schwerpunkt Epileptologie

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Tübingen, 07.12.2017

Postdoctoral and PhD student positions available at the University of Tübingen – Hertie Institute for Clinical Brain Re-search 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 bi-ology, 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:

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(PostDoc candidates only)