



Open PhD position in Neuron-glia interactions at the Hertie Institute for Clinical Brain Research

The Hertie Institute for Clinical Brain Research (HIH), together with the University of Tübingen's Neurology Hospital, forms the Center of Neurology. It is dedicated to research, treatment, and teaching focused on the diseases of the human brain.

The independent **research group of Dr. Nicolas Snaidero** at the HIH is looking for a

PhD student

The project will focus on the dynamics of cortical myelination, specifically, on how oligodendrocytes chose the axons they myelinate, how these axons then respond to being sheathed by myelin and how the shaping of cortical myelin influences higher brain functions. The work will involve functional and morphological characterization of cortical axons and oligodendroglia using advanced imaging techniques established by Dr. Snaidero, ranging from intravital two-photon microscopy to correlative electron microscopy, combined with advanced molecular labeling tools, genetically-encoded biosensors and injury/disease models in mice

Your profile

The applicant should have a Master degree in neuroscience or a related field and have interest in the fields of neuroimmunology, neuroanatomy and neurophysiology. Previous experience with rodent models is an advantage, but not necessary. The lab's language is English. We are looking for someone, who simply loves science and shares our passion for the hard work of exploring the unknown continent of our brain and for developing translational therapies for major cortical demyelination and myelin pathologies.

Description of the research group

The lab is a dynamic and newly established group at the Hertie Institute for Clinical Brain Research that builds up on cutting-edge in vivo imaging and complex demyelinating disease models used by Dr. Snaidero, to study the mechanisms of CNS myelination. The lab focusses on glial dynamics, involved in cortical myelination and disease models with a focus on neuronal cell biology of axon-glia interactions, communication and integrity.

Your application

To apply (**until 31.08.2021**) or with further questions, please send an email to:

nicolas.snaidero@uni-tuebingen.de

Please include your CV, a list of referees and a cover letter explaining your previous experiences as well as your motivations to join our group in a single pdf document.

For more information, please visit the lab website:

<https://www.hih-tuebingen.de/en/research/independent-research-groups/research-group-snaidero/>

Selected recent publications from Dr. Snaidero:

Jafari M#, Schumacher AM#, **Snaidero N# et al.**, Phagocyte-mediated synapse removal in cortical neuroinflammation is promoted by local calcium accumulation. **Nat Neuro** 2021. #: equal contribution.

Snaidero N* et al., Myelin replacement triggered by single-cell demyelination in mouse cortex. **Nat Comm** 2020. *: corresponding.

Schumacher AM,... , **Snaidero N***. Imaging the execution phase of neuroinflammatory disease models. **Exp Neurol** 2019. *: corresponding.

Snaidero N et al., Antagonistic Functions of MBP and CNP Establish Cytosolic Channels in CNS Myelin. **Cell Rep** 2017.

Snaidero N et al., Myelin membrane wrapping of CNS axons by PI(3,4,5)P3-dependent polarized growth at the inner tongue. **Cell** 2014.