



PhD Position

Retinal organoids, endothelial cells and blood-retina barrier

The Institute of Neuroanatomy & Developmental Biology (INDB) focuses on the investigation of human neurosensory systems including the senses of vision and olfaction. We employ human pluripotent stem cell models, which can be differentiated *in vitro* towards 3-dimensional organoids. In close cooperation with the Fraunhofer Institute IGB in Stuttgart we have developed a Retina 3D microphysiological system (MPS) that integrates hiPSC derived organoids harboring all retina-specific neuronal and glial subtypes, inside a microfluidic device. This allows for a precise control of environmental conditions along with reduced shear stresses and reagent consumption, enabling a faster and animal free development of potential pharmaceutical compounds as well as improving modelling of retina associated diseases and embryonic development. Now, we aim to establish a vessel system inside and around the organoid, potentially mimicking the inner and outer blood-retina-barrier

Your Profile:

A highly motivated scientist (diploma or master in natural sciences) with a strong interest in stem cell biology, including culture systems of human pluripotent stem cells, cellular reprogramming towards pluripotent stem cells, genomic editing, cloning applications and a wide range of molecular-biological techniques (DNA, RNA, protein analysis, flow cytometry, immunohistochemistry, microscopy). A plus would be experience in human *in vitro* differentiation towards organoid cultures and/or with microfluidic systems.

The candidate should be a communicative character with motivating team spirit, excellent presentation and organization skills, familiar with scientific project management in academic research and should be dedicated to neuroscience. Fluently spoken and written English is obligatory as well as software knowledge (Office, Prism, Photoshop, Powerpoint, Illustrator, Image J)

We offer:

A familial team spirit with excellent technical support by our advanced technicians and the surrounding core facilities as well as an outstanding range of projects in neurosensory research and a successful track record as given by recent publications. We can also offer a great research environment receiving support from various funding agencies. We guarantee an inspiring research field by daily interaction with clinical and academic research groups in Tübingen. The position is scheduled for three years with payment according to TV-L 13 50%. Afterwards there is a performance-related prolongation option.

The Institute hosts 6 PostDocs, two technicians and several Medical/Master/PhD students. The retina group is constructed of 1 PostDoc, 2 PhD students, 1 Master student, several Medical students and 1 Technician.

Completed applications must be received no later than February 28th, 2019.

Disabled persons will be preferred in case of equal qualification. The Eberhard Karls University aims at increasing the number of women in research and academic teaching and invites applications of accordingly qualified women

Please send your complete application documents (CV, references, publication list) electronically to:

Prof. Dr. Stefan Liebau
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