UNIVERSITÄTSMEDIZIN
GÖTTINGEN : UMG

The Klinik für Hals-Nasen-Ohrenheilkunde of the University Medical Centre Göttingen is looking for a new position for the earliest start date

PhD student position (f/m/d) in Experimental Otology

full time, till end of 2028, possible extension
Remuneration according to TV-L

CRC1690 is a newly founded DFG-funded collaborative research center investigating disease mechanisms of sensory and motor disorders and developing novel therapeutic approaches towards sensory and motor restoration.

Hearing impairment is the most common sensory disorder in humans, with more than 700 million people projected to be affected by 2050. Eighty percent of prelingual hearing loss is attributed to genetic causes, and can adversely impact speech, language development, and education. In adults, hearing impairment may lead to social isolation, depression and cognitive decline. The PhD project addressed hereditary hearing impairment linked to malfunction of the voltage-gated calcium channels that critically mediate hair cell synaptic transmission. The successful candidate will work on elucidating the regulation of these channels and

developing and optimizing gene therapeutic approaches in mouse disease models to prepare for putative future causative treatment in the patients. Work will employ genetic tools, manual and automated patch-clamp measurements, immunohistochemistry, confocal/STED imaging, light-sheet fluorescence microscopy, and systems physiology tests.

Göttingen is world renowned for its research in neuroscience. It is a stimulating and highly collaborative scientific environment hosting numerous prestigious and internationally renowned neuroscience research institutions. This includes the University and its Medical Center, lifescience Max Planck Institutes, the European Neuroscience Institute and the German Primate Center. The InnerEarLab (https://www.innerearlab.uni-goettingen.de), which includes several research groups of the Institute for Auditory Neuroscience (https://www.auditory-neuroscience.uni-goettingen.de/) and Dept. of Otolaryngology and outside University, is tightly integrated in the Campus, where it runs numerous stimulating collaborations such as within the collaborative sensory research center SFB1690, and the Multiscale Bioimaging Cluster of Excellence (https://mbexc.de/). Most PhD students are inscribed in the competitive „sensory and motor neuroscience" program of the Göttingen Graduate School for Neurosciences, Biophysics, and Molecular Biosciences (GGNB, http://www.uni-goettingen.de/en/sh/56640.html) which offers attractive interdisciplinary training platform and networking for PhD students.

Your tasks

- Study the disease mechanism of hearing loss caused by defects in voltage-gated calcium channel function/regulation in mouse models
- Develop preclinical gene therapeutic approach to treat hearing impairment, related to calcium channels
- Perform experiments spanning manual and automated patch-clamp measurements, immunohistochemistry with confocal/STED imaging, light-sheet fluorescence microscopy, and systems physiology hearing tests; report, summarize, share and analyze data
- Present your progress in regular thesis advisory committee meetings, lab meetings, scientific meetings and research conferences
- Contribute to joint scientific publications
- Participate in a doctoral qualification program well suited to the research focus of the CRC

Your qualifications

- Master's Degree in Biomedical Sciences, Animal Biology, Neuroscience, Audiology, Physiology, or Molecular medicine or equivalent from an accredited institution
- Previous experience in relevant research methodology and technology and basic knowledge in hearing appreciated
- Completed course on animal experimentation (FELASA B), and basic programming skills (e.g. in Matlab) would be helpful
- The ability to work in an interdisciplinary, collaborative, English-speaking international team of researchers is required

We offer

- Attractive employee compensation and benefit package according to the standards of the German public sector (position available till end of 2028, with possible extension)
- A research- and qualification program in lin with the CRĆs scientific mission Working with a highly engaged and interdisciplinary team of scientists in the field at the Department and Institute for Auditory Neuroscience
- Highly collaborative research environment with excellent scientific networking possibilities
- State-of-the-art research infrastructure
- Structured and multi-layered supervision by a thesis advisory committee
- A comprehensive career development support program

We look forward to receiving your application!