

The Institute for Auditory Neuroscience of the University Medical Center
Göttingen (Germany) invites applications for a

PhD-Student Position in Synaptic Neuroscience

Your profile:

- Strong background in sensory neuroscience
- Experience in electron microscopy advantageous
- Excellent English skills
- Completed university studies in a life science discipline (MSc or diploma)

Cochlear inner hair cell (IHC) ribbon synapses are specialized structures that are crucial for the conversion of acoustical information into neural signals. Defects in transmission cause hearing impairment – auditory synaptopathy. We investigate the dynamic nanostructure of synaptic vesicle pools at ribbon synapses in IHCs of wild-type and mutant mice. In the proposed project, we analyze exocytosis phases at IHC ribbon synapses by the usage of temporally precise stimulation through optogenetics. This we will combine with high-pressure freezing (HPF)/freeze-substitution and subsequent electron tomography. We will precisely stimulate IHCs of channelrhodopsin2 mice crossbred with KOs for different presynaptic key players in order to understand the influence of these different presynaptic proteins in parameters such as synaptic vesicle number or how they are linked to the active zone.

The offered PhD project is funded by the German Research Foundation (DFG, CRC 889, “Cellular Mechanisms of Sensory Processing”) and is part of the Molecular Architecture of Synapses Research Group of the Institute for Auditory Neuroscience at the Center for Biostructural Imaging of Neurodegeneration (BIN). The position is available for 3+ years. Income is equivalent to E13/65%.

The Göttingen Campus is a leading neuroscience center in Europe hosting numerous prestigious and internationally renowned neuroscience research institutions. This includes the University, three Max Planck Institutes, the European Neuroscience Institute and the German Primate Center, as well as further collaborative research programs.

Women are especially encouraged to apply. Applicants with disabilities and equal qualifications will be given preferential treatment.

Please submit your application preferably in one single PDF document, including cover letter, CV, list of publications (if applicable), names of possible referees, and relevant certificates to carolin.wichmann@med.uni-goettingen.de until March 6th, 2019:

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Travel and application fees cannot be refunded or transferred.

Please send your application only via e-mail as a PDF-file.