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UNSER **TEAM** BRAUCHT SIE!

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The Neurobiological Research Laboratory, Section of Experimental and Clinical Otology, Dept. of Oto-Rhino-Laryngology, Medical Center - University of Freiburg, Dr. Nicole Rosskoth-Kuhl, is seeking to 01.05.2022 or later for a

Neuroscientific PhD Student (m/f/d)

Research topic: Spatial hearing with cochlear implants - Plasticity of the auditory system depending on the hearing experience

In the Neurobiology Research Laboratory of our clinic, we study the plasticity of the central auditory system under electrical stimulation of the auditory nerve in animal models. We use the most successful neuroprosthesis in the world, the cochlear implant (CI). Specifically, we are interested in the influence of auditory experience on the physiological and molecular adaptability of the auditory system. In cooperation with the company MED-EL we would like to identify the causes for the poor directional hearing of early deafened CI users. The central question aims to analyze the causes of poor binaural auditory perception and should put special emphasis on a lack of experience and inappropriate stimulation of these patients. To answer this question, behavioral studies, immunohistochemical techniques, and electrophysiological methods will be combined.

We offer:

- participation in an established, highly motivated and committed research group with excellent infrastructure

and reputation (e.g. Rosskothén-Kuhl et al., eLife 2021; Weltin, Rosskothén-Kuhl et al., Biosens Bioelectron. 2022)

- scientific work on an innovative and cutting-edge research topic
- a translational project between basic auditory neuroscience and clinical research
- close and direct supervision and intensive training
- a close research cooperation with a leading international implant company (MED-EL)
- a close cooperation with leading international research groups, e.g. with Prof. J. Schnupp
- continuous support for the development of your scientific profile

We offer a doctoral position (TV-L 13, 65%) limited to 3 years.

Your responsibilities:

- work with animals in a laboratory environment
- deafening the auditory system of animals
- measurement of hearing thresholds
- construction of implants for animal experiments
- implantation of CIs in animal models
- behavioral training of CI-supplied rats (e.g. 2-alternative-forced choice behavioral tests)
- possibly also behavioral tests in CI patients
- electrophysiological measurements on mammalian brains
- taxidermy of histological tissue/ immunohistochemical staining of brain slices
- analysis of electrophysiological and behavioral data using Python
- adaptations of the behavioral scripts by using Python

The ideal candidate (m/f/d) should have:

- a master's degree in neuroscience, biology, (bio-)engineering or similar disciplines
- extensive training in (in-vivo) electrophysiology in animal models and/or behavioral biology
- experience in working with animals in a laboratory setting
- experience in programming (preferred Python, MathLab)
- a course on laboratory animal science (FELASA, Category B) or the willingness to complete it
- a keen interest in translational hearing research, immunohistochemistry, and working with animals
- interest in learning new methods (e.g. surgical techniques, construction of implants)
- enthusiasm and great commitment to independent and goal-oriented research
- very good written and spoken proficiency in English and/or German
- excellent communication and team-working skills
- exceedingly high motivation and personal initiative

We encourage applicants who have experience in some, but not necessarily all, of the areas mentioned above. This is a starter position for a motivated researcher who wants to expand his/her skills and advance in this field.

Your applications must contain the following documents: CV, motivation letter, copies of certificates, as well as names and contact details of two referees. The application deadline is the 20.04.2022. Please send all documents (attachments in pdf format) to:



Universitätsklinikum Freiburg

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klinische Otologie,
Neurobiologisches Forschungslabor,
Dr. Nicole Rosskothén-Kuhl

Killianstr. 5, 79106 Freiburg (Germany)

**For further information, please contact Dr.
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Allgemeiner Hinweis: Die Vergütung erfolgt nach Tarif. Vollzeitstellen sind grundsätzlich teilbar, soweit dienstliche oder rechtliche Gründe nicht entgegenstehen. Schwerbehinderte werden bei gleicher Eignung besonders berücksichtigt. Einstellungen erfolgen durch die Abteilung Personalbetreuung.