The **Molecular and Cellular Opsin Engineering Lab** at the Institute for Auditory Neuroscience and the Else-Kröner-Fresenius-Center for Optogenetic Therapies is offering a

PhD Student Position (m/f/d) – New Opsins for Optogenetic Therapies

We are looking for a highly motivated PhD student with a background in biophysics, biochemistry, molecular biology or neuroscience and a strong interest in protein engineering and optogenetics to advance our efforts in the **engineering of light-gated ion channels** and the **development of a new generation of optogenetic actuators for therapeutic applications**.

The Molecular and Cellular Opsin Engineering Lab has recently moved to Göttingen and is part of the highly interdisciplinary and collaborative research environment of the Institute for Auditory Neuroscience and the Else Kröner-Fresenius Center for Optogenetic Therapies. The Center brings together biochemists, neuroscientists, engineers, and medical researchers from different disciplines with the shared goal of advancing optogenetic technologies toward clinical applications.

Göttingen is an internationally renowned center for neuroscience and biomedical research. The Georg-August University and University Medical Center Göttingen, the Max Planck Institute for Multidisciplinary Sciences, the European Neuroscience Institute, and the German Primate Center provide an exceptionally strong and internationally connected research environment. PhD students can additionally benefit from the interdisciplinary training and networking opportunities offered by the Göttingen Graduate Center for Neurosciences, Biophysics, and Molecular Biosciences (GGNB).

Your tasks

- Molecular cloning, genetic modification, and expression of new opsins in mammalian cell cultures and primary neurons
- Functional characterization of new opsins using molecular biology, biochemical assays, fluorescence microscopy, live-cell imaging, and whole-cell patch-clamp electrophysiology
- Development and optimization of experimental workflows for higher-throughput screening, including automated data analysis where applicable
- Design of new optogenetic tools and subcellular targeting strategies, together with the development of new experimental approaches
- Regular presentation of your work in lab meetings, thesis advisory committee meetings, and scientific conferences, and contribution to collaborative scientific publications in international peer-reviewed journals
- Opportunity to gain experience in supervising Bachelor's and Master's students

Your qualifications

- We are looking for an open-minded, enthusiastic, and highly motivated junior researcher with strong analytical and interpersonal skills, the ability to think independently and a demonstrable interest in basic biological research questions.
- Completed Master's degree or equivalent in biology, biophysics, physics, biochemistry, molecular medicine, neuroscience, or a related discipline
- Practical laboratory experience and basic knowledge of working with biological samples
- Experience with quantitative data analysis and scientific presentation
- Proficient communication and writing skills in English
- Previous experience in one or more of the following areas would be advantageous but is not required: molecular biology, electrophysiology, live-cell imaging, automated data analysis, or work with photoreceptors and light-sensitive samples. Training in complementary techniques will be provided.

We offer

- A **65%** position according to **TV-L E13, initially funded for three years**, with **a possibility for extension**
- A highly collaborative and interdisciplinary research environment with excellent scientific networking opportunities, structured supervision through a thesis advisory committee, and comprehensive scientific training and career-development opportunities
- Access to state-of-the-art infrastructure for molecular biology, imaging, electrophysiology, and optogenetic research
- The opportunity to join a newly established and growing research group, combining the advantages of a small lab — close scientific supervision, direct mentoring, and the freedom to shape your research questions and experimental strategies — with the excellent infrastructure and collaborative environment of a leading international research institution

The position is **available immediately, with a flexible starting date**, and we encourage interested candidates to apply as soon as possible.

Your application should include:

- A detailed curriculum vitae
- A cover letter describing your research interests and motivation
- Contact details for at least two referees

Please send your application directly to **Prof. Dr. Johannes Vierock** at **Johannes.vierock@med.uni-goettingen.de**.

...and do not hesitate to contact us if you have any questions.

We look forward to receiving your application!