



PhD Position

in treatment-response fluid biomarkers for ASO treatments
at the Hertie Institute for Clinical Brain Research

The Hertie Institute for Clinical Brain Research (HIH), together with the Department of Neurology, forms the Center for Neurology at the University of Tuebingen. It is dedicated to basic and translational research in neurological diseases. Together with the several other highly advanced neuroscience institutes, it is part of the TuebingenNeuroCampus (TNC), here working closely together also with the German Center for Neurodegenerative Diseases (DZNE) and being part of the Gene & RNA Therapy Center (GRTC). Scientists in the more than 100 active research groups of the TNC pursue theoretical, system-neuroscientific, molecular, and clinical research approaches in their entire breadth using a wide range of methods.

The research division „Translational Genomics of Neurodegenerative Diseases“ of Prof. Synofzik is currently looking for a **PhD student for 3 years (extension possible) - position available immediately.**

About us

Our division focuses on genomics, pathophysiology and translational biomarker research in the field of neurodegenerative diseases, with a special focus on genetic ataxias, motor neuron diseases, and dementias. Prof. Synofzik coordinates several large trans-European consortia on translational neurodegeneration in rare movement disorders and serves as PI of several large-scale national and international longitudinal cohort studies. We offer excellent projects and training in neurodegeneration and molecular biology research. A wide range of molecular, protein biochemical and cell biological methods are applied in the lab (e.g. cutting-edge ultra-sensitive protein analysis including Simoa, Luminex and Singulex technology, ELISAs, western blotting, exome/genome sequencing, qPCR, and antisense oligonucleotide [ASO] development from bench to bedside and back). Biomarkers are identified in cell culture models, human and murine blood and/or CSF, and validated in patient cohorts.

The PhD Project

You will be integrated in several translational projects as the key person to identify and validate novel fluid biomarkers as treatment-response biomarkers of precision therapies in dementia and ataxia disorders – in particular to capture treatment-response of our ASO development program, but also other precision therapies. You will identify novel biomarkers in fluids from humans, mice and cell culture disease models with unbiased mass spectrometry proteomics and targeted immunoassays; and validate their treatment-response characteristics upon ASO treatments. You will receive excellent training in cutting-edge molecular biology methods and assay development (including MSD, Simoa, Singulex and Luminex technology plus translational ASO development), which are all directly available and established on site), collaborate with biotechnology cores across the Tuebingen research campus, and work collaboratively with our team to report the results and progress at conferences and scientific journals.

Your background

- You have a Master's degree in Biochemistry, Biology, Bioinformatics, Molecular Genetics, or related life sciences.
- Experience with development and validation of methods in molecular biology, ideally (but not mandatory) also with translational application of immunoassays using fluid biospecimens
- You should have good communication skills, attention to detail, and flexibility to work both independently and collaboratively.
- Very good proficiency in English (oral and written) is mandatory.
- You have not have resided or carried out your main activity (work, studies, etc.) in Germany for > 12 months in the last 36 months .

We offer

- A challenging interdisciplinary translational project is **integrated into the EU-funded Integrated Doctoral Network “Medicine Made to Measure” (MMM) supported by the European Union Horizon Marie Skłodowska-Curie Actions programme (MSCA)**. This PhD training network will allow for excellent continuous training and mobility allowances across top-labs in Europe working on the same topic.
- Supervised hands-on training in molecular and cell biology with a broad-range of well-established methodologies in our lab
- Integration into a dynamic, multi-professional international team comprising Post-Docs, PhD students, and technicians, fostering collaborative exchange and diverse perspectives
- Weekly multi-professional interactive lab meetings, where you'll actively participate in discussions, present research findings, and exchange insights with peers
- Personalized project mentoring, teaching, and multi-step career guidance through regular one-on-one meetings with the PI
- Affiliation with the Graduate Training Center of Neuroscience offers an interdisciplinary program encompassing research opportunities, workshops, seminars, and networking events to equip graduate students with the skills and knowledge needed for successful careers in neuroscience.
- Salary will be determined according to EU MSCA salary regulations. Appointment is full time and will be initially for three years (possibility of extension). We give priority to severely disabled applicants with essentially equal qualifications.

Application

Please send your full application within one PDF file including: Cover letter (~750-1000 words); CV; Names and email addresses of two professional references (e.g., current or previous research advisors); transcripts, your master's thesis and/or publications.

Please send this PDF to Selina Reich: selina.reich@uni-tuebingen.de,

Deadline: 19.08.2024

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