The Hertie Institute for Clinical Brain Research (Dept. of Neurodegenerative Disease) is inviting applications for a

PhD student, TVL E13, 65%, 3 years (extension possible)
in OMICS-biomarker and Genomics of Frontotemporal Dementia.

The Hertie Institute for Clinical Brain Research (HIH), together with the Department of Neurology, forms the Center for Neurology at the University of Tübingen. 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 TübingenNeuroCampus (TNC), here working closely together also with the German Center for Neurodegenerative Diseases (DZNE). 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 group of Prof. Matthis Synofzik (Systems Neurodegeneration, HIH) focuses on genomics, biomarkers, and translational research in neurodegenerative disorders, with a specific focus on dementias and movement disorders. Matthis 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, including the transatlantic Genetic FTD Initiative (GENFI) which covers all modules of preparing targeted molecular treatment trials in genetic FTD.

The PhD project. You will work on two parallel, but complementary OMICS sub-projects in genetic FTD. (i) The main focus will be to identify and validate a *multi-omics fingerprint of disease trajectories of genetic FTD* (MAPT, C9orf72 and GRN) based on unbiased transcriptomics and proteomics in exosomes from neuronal cells and patient CSF. You will here optimize exosome purification protocols, analyze whole transcriptome and label-free LC-MS/MS-based proteome datasets derived from these exosomes, and integrate these individualized transcriptomic and proteomic signatures into a multi-omics fingerprint of genetic FTD. The large-scale longitudinal GENFI biomaterial aggregations present a rich resource for your work. (ii) In parallel, you will use latest high-level genomics techniques (WGS, deep-WES, transcriptomics) to *identify novel FTD genes* in both molecularly still undefined familial and sporadic FTD. This large genomics datasets and expertise available via our consortia will provide you with a comprehensive background for this work.

This position will be funded by the '**Bundesministerium für Bildung und Forschung' (BMBF) via funding for novel JPND consortium "GENFI-prox" (**https://www.genfi.org).

What we are looking for:

We are looking for an enthusiastic and ambitious candidate with an excellent Master's degree in Biochemistry, Biology, Bioinformatics, Molecular Genetics, or related life sciences.

What we are offering:

We offer a challenging interdisciplinary project that is integrated into major national and European research consortia at the interface of genomics and translational medicine, well-equipped laboratories with top-notch facilities, excellent supervision in a highly collaborative international environment and affiliation with the Graduate Training Center of Neuroscience.

The position is available immediately. Salary will be determined according to the German collective wage agreement in public service (TVL 13, 65%), 3 years.
Application:
If you are interested in either of the two projects please send your full application including a motivation letter, your CV, transcripts, your master's thesis and/or publications to Mrs Selina Reich (Research Group Prof Synofzik): selina.reich@uni-tuebingen.de

Sincerely,
Matthis Synofzik

Hertie Institute for Clinical Brain Research
Department of Neurodegenerative Disease
Research Group „Systems Neurodegeneration"