

Early Stage Researcher/Ph.D. position in “Genetic Epidemiology of Stroke”

Project Description

The Translational Stroke and Dementia Research Group (Prof. M. Dichgans) at the Institute for Stroke and Dementia Research at LMU, Munich, Germany invites applications for an Early Stage Researcher/Ph.D. position. The successful candidate will focus on the genetic epidemiology of stroke and related phenotypes with a special focus on genome-wide association studies (GWAS) and Mendelian randomization analyses. The project is funded by the DFG-funded Excellence Cluster Munich Cluster for Systems Neurology (SyNergy). Successful applicants will be part of an international team of investigators who collaborate and regularly meet through the international stroke genetics consortium (ISGC).

Job description

You will work on a research project with the following objectives:

- Identify common and rare genetic variants associated with stroke, stroke subtypes, and related vascular phenotypes through GWAS meta-analyses and large scale sequencing data
- Apply post-GWAS analyses including Mendelian Randomization, polygenic risk score analyses, colocalization analyses, and genetic correlation analyses to explore common genetic predisposition and causal relationships between candidate risk factors and stroke, stroke subtypes and related vascular phenotypes using large-scale genetic data from MEGASTROKE and other GWAS consortia, UK Biobank and other biobanks.
- Utilize Mendelian Randomization techniques to a) predict the efficacy of pharmacological interventions targeting specific drug targets with available genetic instruments; and b) predict potential side effects of these interventions using phenome-wide association studies (PheWAS).
- Engage in international collaborations in stroke genomics and other -omics analyses on a multitude of phenotypes

You will have full access to all the facilities available at the Institute for Stroke and Dementia Research, and take part in the international training programme of the Center for Stroke and Dementia Research and SyNergy. The applicant will also have access to high-quality large-scale datasets including the UK Biobank (population-based study of 500,000 individuals), MEGASTROKE (GWAS case-control study for stroke and stroke subtypes of 500,000 individuals) and summary data from other large-scale international genomic consortia. Furthermore, there is the possibility to apply for enrollment in the Graduate School for Systemic Neuroscience (GSN), to which our Institute is affiliated.

Requirements

We are looking for a highly motivated self-driven student with a strong commitment to genetic and epidemiologic research, who:

- is eligible for MSCA-ETN funding, see Funding Notes
- has a MSc degree in epidemiology, genetics, biostatistics, biomedical sciences, or related disciplines
- enjoys working with big data and performing statistical analyses
- is a team player with good communication skills

Previous experience with programming and usage of statistical packages including R, SAS, STATA, or Python is considered a prerequisite.

Contact: please send applications to Prof. M. Dichgans: isd@med.uni-muenchen.de