

Offer for a doctoral thesis: Histopathologic characterization of novel models for transplantable genetic white matter diseases

12.02.2024 | Clinic and Polyclinic of Neurology | Research group „Leukodystrophies and Rare Myelin Disorders“ | Medical/experimental doctoral thesis

Field of Research

Neurology

Background of the project

Our research group "Leukodystrophies and Rare Myelin Disorders" is part of the Department of Neurology, University Hospital Leipzig. Our research aims to a better understanding of hereditary leukodystrophies. Underlying pathomechanisms are investigated at the cellular and molecular level using human bio-materials and animal models. We have a special interest in leukodystrophies, that primarily affect microglia cells and those that can be treated by hematopoietic stem cell transplantation. Other projects related with pathomechanisms that involve proteins/signaling pathways relevant for neuropsychiatric diseases are also been developed. We are closely collaborating with the leukodystrophy outpatient clinic at the university hospital Leipzig, where an outstanding cohort of adult patients with hereditary leukodystrophies receives care. Through multiple national and international collaborations, the work group is connected to leading scientists in the field. You will work in a highly motivated international research team with exceptional expertise in genetic white matter diseases.

In the frame of this project a novel mouse model of hereditary leukodystrophies will be characterized by different phenotypic and morphologic study techniques. Its applicability to model disease relevant pathomechanisms will be assessed.

What we offer

The candidate will work on the establishment and maintenance of cell cultures as in vitro models which afterwards will be analysed by different laboratory techniques, including qPCR, immunostainings, fluorescent/confocal microscopy, ELISA, western blot. Characterization of in vivo models, followed by analysis of pathomechanisms related with leukodystrophies will be part of the activities. Furthermore, the student should develop expertise in visualization, statistical analyses and presentation of the obtained data.

We are a highly motivated international team with outstanding expertise in the field of rare white matter diseases and national and international collaborations. We offer interdisciplinary supervision in planning, conducting and analysing the data in the frame of a doctoral thesis.

What we are looking for

We are looking for a highly motivated student (MD or MSc student), that is willing to, after a period of training, dedicate at least one semester to this position solely, which is necessary to achieve a proper development of the project.

A good knowledge of English is required for most work-related topics.

Application

If you are interested, please contact Caroline Bergner directly with a letter of motivation and CV (details below). We look forward to receiving your questions or applications.

Contact

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