



1. Obesity-driven microglial activation – functional role of cerebral sterol metabolism

[Leipzig University](#), [Faculty of Medicine](#), [Institute of Laboratory Medicine](#), [Clinical Chemistry and Molecular diagnostic](#)

The Collaborative Research Centre 1052 “Obesity Mechanisms” was established in 2013 with funding from the German Research Foundation (DFG). The doctoral researcher position is limited to 3 years. The salary is paid according to the German TV-L system (the salary agreement for public service employees).

Supervisor: [Prof. Dr. Uta Ceglarek](#)

15 September 2021

PhD research Project

Funded PhD Project (Students Worldwide)

More Details

The Collaborative Research Center 1052 “Obesity Mechanisms” was established in 2013 with funding from the German Research Foundation (DFG). The CRC1052 combines interdisciplinary basic and clinical research across biochemistry, biophysics and chemistry, endocrinology, neuroscience, paediatrics, and cardiology. It aims to provide structured doctoral training centrally aligned in three main research areas – A, Overeating, B, Fat deposition and inflammation, and C, Adipokines. In [CRC project A9](#), the impact of obesity-related high-fat diet on cerebral sterol metabolism and neuroinflammation will be investigated. Mass spectrometric based metabolomics and proteomics methods will be applied for functional experiments and patient cohorts.

Tasks & responsibilities

- Analyze biological samples from cell, animal and clinical studies by LC-MS/MS methodologies and advanced statistical software tools.
- Develop a blood-brain barrier model to study obesity-related influencing factors on plant sterol transport into the brain across capillary endothelial cells and microglia
- Perform immunoblotting, immune staining and gene expression profiling

Your profile

- You are a highly qualified and motivated student holding a (or being close to obtaining) M.Sc. or equi-valent degree in Biochemistry, Cell / Molecular Biology, Analytical Chemistry, Neuro-science or related fields
- Ideally, you have first practical scientific expertise, in preparation techniques for biological sample material (e.g. plasma, tissue etc.)
- You are interested in statistical analysis and handling big data

How to apply

For application and further information, please contact the lead supervisor, [Prof. Ceglarek](#) (uta.ceglarek@medizin.uni-leipzig.de)

The applications will be accepted until 15th of September via e-mail, including a full academic CV, publication list (if any), copies of your degree certificates and contact details of two referees (if any).

