



Master thesis project in the Department of Molecular Neurology

Topic: Fate-mapping of microglia during chronic gut inflammation

Details

Inflammatory bowel disease (IBD) is characterized by chronic inflammation in the gut, but also linked to diseases of the central nervous system (CNS) including Parkinson's Disease. Microglia, the resident macrophages of the brain, play a fundamental role in the brain immune network during health and disease. Recent data from our group provides evidence for an involvement of microglia in the regional brain immune response to chronic gut inflammation. To more specifically analyze and target microglia during chronic gut inflammation, we employ a sophisticated microglia-specific mouse model that expresses a red fluorescent protein in microglia upon administration of tamoxifen.

In the Department of Molecular Neurology, we offer an interesting position for a master student at the intersection of neuroscience, immunology, and gastroenterology, starting from April/May 2024.

The aim of the master thesis is to characterize gene recombination in microglia as well as in other CNS-associated and peripheral macrophage populations that is induced by different tamoxifen treatment paradigms.

Are you interested in the role of macrophages in the central nervous system and want to gain experience in the work with sophisticated animal models?

What you will learn and do

- You will perform multicolor flow cytometry analysis of brain tissue
- You will perform and evaluate immunofluorescence stainings of brain and gut tissue
- You will analyze your research results statistically
- You will present your experimental outcomes in the weekly lab seminar

Your background

- You are studying molecular medicine, integrated immunology, or a related course of study
- You are motivated to learn new methods
- You work reliably, structured, and independently
- You have experience in basic lab work

What you can expect

- Flexible working times
- International lab with great working atmosphere
- Close supervision by a doctoral student
- Established methods, directly available tissue samples
- Interesting and innovative projects
- Networking in the scientific community
- Project duration approx. 6 months

Apply now by providing informative application documents (PDF: Cover letter including research background and scientific interests, CV, Transcript of Records) to Rebecca Masanetz (rebecca.masanetz@uk-erlangen.de) until **April 15th, 2024**.

We are looking forward to get to know you!