Master thesis in pain research – University Hospital of Würzburg, AG Üçeyler

Who are we? We are a young and successful scientific group in "Translational Somatosensorics" focusing on pain research located at the Department of Neurology, University Hospital of Würzburg.

Whom do we seek? An enthusiastic and reliable Biology master student (m/w/d), eager to work on a project with high clinical relevance via state-of-the-art molecular biological methods.

Background: We generated a human iPSC-derived sensory neuron model of Fabry disease (FD), a lysosomal storage disorder caused by mutations in the alpha-galactosidase A gene. This life-threatening disease causes pain as a major symptom. Now, we want to uncover the underlying cellular pathways via transcriptomic and proteomic approaches, combined with high-resolution fluorescence imaging to derive potential targets for treatment of FD pain.

Tasks for Master candidate:

- Routine cell culture
- Differentiation of human iPSC into sensory neurons
- RNA and protein isolation
- qRT-PCR
- Gene expression pathway analysis
- Immunocytochemistry

What we offer:

- Direct and project related supervision
- Training in human iPSC and neuronal cell culturing
- Introduction into sophisticated transcriptomic (RNA-sequencing) and proteomic (Tandem-MS) data analysis
- Coactive team combining members from the medical and biological field

Prerequisites: Practical experience in cell culture is desirable. Experience in stem cell research or molecular biology methods (RNA/protein) is beneficial. The candidate is motivated to join this exciting project and become part of our enthusiastic research team!

Start and duration: Start is possible from April 2023 on, 9 months (F2 Praktikum + master thesis).

Contact: Please send your application including a motivation letter to Dr. Christoph Erbacher (erbacher_c@ukw.de)