

Master's thesis at the Department of Neurology

Question: Are you passionate about uncovering the secrets of pain? Join us in exploring small fiber neuropathy, a condition causing intense burning pain, possibly linked to genetic factors. You will help us investigate a key genetic variant by transforming patient stem cells into pain-sensitive neurons, potentially paving the way for new treatments!

Our goal: To characterize sensory neurons generated from a patient who suffers from severe pain.

Some background: At our Department, we have seen a young man who suffers from severe burning pain since early adulthood. While searching for the reason of his pain, we found a genetic variant in the encoding gene of a neuronal cation channel, which is involved in pain perception. This channel is named “transient receptor potential cation channel subfamily A member”, TRPA1. Now we want to investigate the pathophysiological relevance of this gene variant for our patient's pain studying his own sensory neurons. These we generate via stem cells.

Your tasks and learning opportunities:

- Cell culture: cultivation of neural crest-like cells and nociceptor-like cells
- Expression analysis: Immunocytochemistry, fluorescence microscopy, & qRT-PCR
- Electrophysiology: Calcium-imaging

It is you, because: You are eager to join our passionate research team and contribute to this project! You are a student of Life Sciences or related faculty. Preferably, you already have some experience in cell culture.

Start and duration: 9/24, 9 months

Team of supervisors: Prof. Dr. N. Üçeyler, Nicole Schottmann, M.Sc. (schottmann_n@ukw.de)
Please contact Nicole Schottmann if you have any questions about the project.

Contact us: Ready to make a difference? We would love to hear from you—apply now and be part of the future of pain research! Please send your application documents (CV and motivation letter) to Prof. Dr. N. Üçeyler: ueceyler_n@ukw.de