**Master’s thesis project**

**MSc project in an interdisciplinary research group at the Medical University of Vienna / AKH Vienna**

The Center for Medical Physics and Biomedical Engineering in cooperation with the Division for Neuropathology and Neurochemistry at the Medical University of Vienna welcomes applications for a master project from February 2023 (a.s.a.p)

**The central pattern generator in the human spinal cord for locomotion – Identification of specific neurons**

*Supervisor: Ap.Prof. DI Dr.techn. Karen Minassian*

**Motivation:**
The human spinal cord has not yet been studied as one would think. Previous studies are often limited to rodents. We want to identify specific neuronal cell types that, according to mouse studies, are centrally responsible for locomotion in humans and part of the central pattern generator. You will identify these neuronal cell types on a protein level using immunofluorescence and IHC on human autopsy tissue and will learn more about the spinal cord.

**Keywords:**
Human spinal cord, Spinal cord injury, interneurons, spatial contribution, locomotion

**Work description:**
You would work in a multi-interdisciplinary team of neuroscientists, medical doctors, a physicist, a mathematician, biologists and engineers working at the Center for Medical Physics and Biomedical Engineering as well at the Division for Neuropathology and Neurochemistry at the Medical University of Vienna.

**Methods:**
Immunofluorescence (IF), Multiplex-IF, IHC, tissue clearing, fluorescence-, confocalmicroscopy, Western blot

**Qualifications:**
- Molecular biology/molecular medicine/ molecular biotechnology/ neuroscience master student or similar
- Interest in human locomotion
- Lab experience

**Current information and publications:**
https://science.orf.at/stories/3215986/
https://www.nature.com/articles/s41586-022-05385-7 – https://doi.org/10.1038/s41586-022-05385-7

If you are interested, please send us your CV, a short letter of motivation and certificates. We are looking forward to your application.

**Ap.Prof. DI Dr.techn. Karen Minassian**

karen.minassian@meduniwien.ac.at