2 PhD positions in neuroimaging and -physiology of lower urinary tract function

Description

The Department of Neuro-Urology at the Spinal Cord Injury Center, University of Zürich and Balgrist University Hospital in Zürich, Switzerland, is offering two PhD positions for two highly motivated and scientifically interested PhD candidates to conduct clinical research in joining neurophysiology and neuroimaging with neuro-urology in humans. This position is embedded in an interdisciplinary research environment team of health care professionals, neuroscientists, physicists, biologists, human movement scientists, pharmacologists, and electrical engineers. You will be involved in a nation-wide randomized, sham-controlled, double-blind clinical trial investigating transcutaneous tibial nerve stimulation in patients with acute spinal cord injury to prevent neurogenic detrusor overactivity (http://p3.snf.ch/Project-179644, supported by the Swiss National Science Foundation (SNSF).

You will be using neuroimaging techniques (magnetic resonance imaging (MRI), neurophysiological assessments, electroencephalography) in several projects also in collaboration with internationally highly recognized centres in the field of neuro-urology. Extending ongoing and previous successful projects in the interdisciplinary team at the Balgrist University Hospital (http://www.sci-research.uzh.ch/research), you will specifically work on the investigation and characterization of neural correlates in healthy subjects and different patient populations with neurogenic lower urinary tract dysfunction.

These projects are likely to have large impact in the fields of neuro-urology, neuroimaging, neurology, and neuro-rehabilitation, hopefully resulting in new clinical assessment tools and further improving medical care. You will perform neurophysiological and/or MRI measurements (depending on your background and interest) in close collaboration with study nurses, research assistants and other PhD students. Together, you will be responsible for the organisation and daily conduct of the studies (at the patient bedside and in different study centers), data recording, image acquisition (MRI scanning) and analysis, the presentation of results on conferences, and the preparation of publications in internationally peer-reviewed journals.

Education / Requirements

- Highly motivated, open-minded personality with a strong interest in clinical research, who shows extraordinary initiative and durability to cope with challenges
- Master's degree or equivalent in natural sciences, pharmacology, medicine, biomedical engineering, neuroscience or related field
- Strong interest in neurophysiology and/or neuroimaging techniques
- Good statistical and computer skills (R, SPSS, Matlab, Microsoft Office)
- Proficiency in English and fluent in German (additional French is a plus)
- Good communication, organisational, and motivational skills
- Team minded, flexible with the required tact and sensitivity for dealing with (disabled) patients
- Experience with neuroimaging software - e.g. MATLAB, eeglab, Brain Vision products, SPM, FSL, Python – is desired
- Experience with neurophysiological techniques (EMG, ECoG, or MEG) and (f)MRI is an advantage

Contact

The position is available immediately and PhD salary rates of the SNSF apply. If you are looking for an exciting PhD position in a highly motivated team, please send your application as a merged PDF file including a CV, publication list, motivation letter, and names of two references to Martina Liechti, PhD (neuro-urology@balgrist.ch).

Address: Department of Neuro-Urology, Spinal Cord Injury Center, Balgrist University Hospital, Forchstrasse 340, 8008 Zürich