

## Master Thesis Position in Pain Research

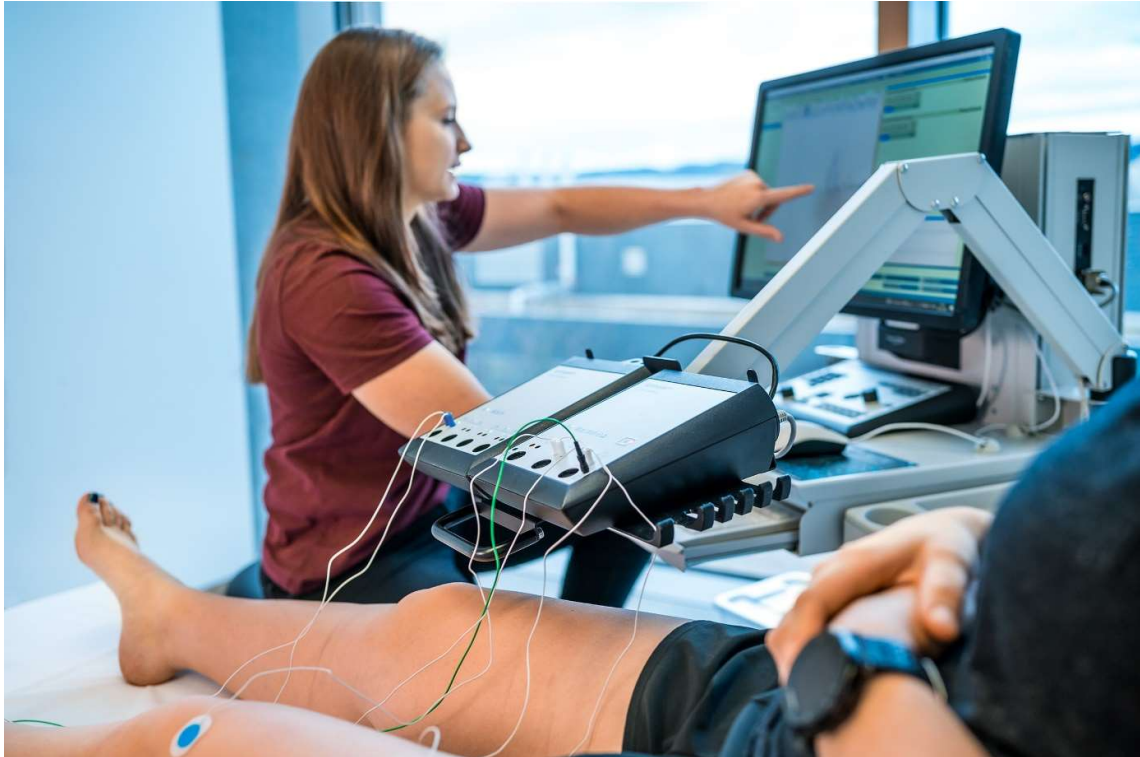
**Open to:** Master students in Neurosciences, Biomedicine, Health Sciences or related fields

**Location:** Balgrist Campus, Department of Chiropractic Medicine, [Integrative Spinal Research Group](#)

**Supervisor:** [Prof. Dr. med Petra Schweinhardt; PhD](#)

**Start Date:** Flexible, between July and September 2025

**Duration:** 6 or 12 months, depending on the requirements of your academic program



*Foto: Universitätsklinik Balgrist*

### **Influences of the Autonomic Nervous System on Experimental Pain Sensitization**

Chronic pain is often linked to central sensitization – a heightened responsiveness of pain-processing neurons in the central nervous system. Recent findings suggest that brain regions involved in autonomic regulation, such as those influenced by the vagus nerve, may play a key role in this process. This opens exciting possibilities for novel treatment approaches.

In this project, we investigate how non-invasive vagus nerve stimulation affects central sensitization, autonomic activity, and spinal excitability. You will work with healthy participants using established protocols, including pain sensitivity testing, electrocardiography (ECG), galvanic skin response (GSR) and nociceptive withdrawal reflex (NWR) measurements.

What you will gain:

- Hands-on experience with neurophysiological and autonomic assessment techniques
- Training in data collection and analysis
- Insight into translational pain research with potential clinical relevance
- A collaborative and supportive research environment at the intersection of neuroscience and medicine

This project is ideal for curious, motivated students who are excited to explore the brain-body connection and contribute to impactful research in pain science – all while enjoying the inspiring atmosphere of the beautiful Balgrist Campus (including a very affordable and delicious mensa!).

Curious to learn more or ready to apply? Contact us at [madeleine.hau@balgrist.ch](mailto:madeleine.hau@balgrist.ch), we'd love to hear from you!