





PhD Position in Parkinson's Disease as a model for mechanisms of body weight regulation

 [University of Lübeck](http://www.uni-luebeck.de)  Lübeck

The Graduiertenkolleg 1957 "Adipocyte-Brain Crosstalk" was established in 2014 with the funding from the German Research Foundation. It aims at providing structured doctoral training at the interface of neuroscience, biology and translational medicine. The DFG-funded Graduiertenkolleg 1957 "Adipocyte-Brain Crosstalk" studies the effects of adipose tissue hormones on CNS function and, in turn, the control of adipose tissue physiology by the brain. We are looking for highly motivated candidates for the following PhD project (supervisors in brackets). Tentative start: **May 2020**. Earlier start date from January 2020 could be discussed with the PIs in the interview.

Activities and responsibilities

Supervisor: Prof. Norbert Brüggemann / Dr. Britta Wilms, Department of Neurology

Project Description:

Parkinson's disease (PD) is often accompanied by significant changes of body weight depending on disease stage and concomitant therapy. Following deep brain stimulation (DBS) of the subthalamic nucleus (STN), PD patients frequently show a massive weight gain, whereas non-operated PD patients typically lose weight over the disease course. Several mechanisms must be considered when studying weight changes in PD including ongoing neurodegeneration of dopaminergic neurons in the substantia nigra, degeneration of extranigral neurons, involvement of peripheral tissues and dopaminergic treatment. With regard to anti-Parkinsonian therapy, dopamine was shown to increase thermogenesis and mitochondrial mass in brown adipocytes. The aim of the project is to prospectively study drug-naïve PD patients and healthy controls to understand the impact of neurodegeneration and dopaminergic replacement therapy on the body weight, body composition and adipose tissue alterations.

Experimental Methods:

- Two groups of subjects: drug-naïve PD patients and healthy controls
- Resting and movement related energy expenditure by indirect calorimetry
- Body composition by air displacement plethysmography
- BAT activation by infrared thermography camera
- Resting state functional magnetic resonance imaging (fMRI) and neural response to food stimuli (task-related fMRI)
- Gene expression of adipokines and metabolically relevant parameters, e.g. glycolysis, β -oxidation, lipolysis

<https://www.grk1957.uni-luebeck.de/research/3rd-generation-projects/parkinsons-disease-as-a-model-for-mechanisms-of-body-weight-regulation.html>

Qualification profile

- Research-based master's degree or equivalent (e.g. diploma) passed with an above-average grade in neuroscience, biology, biochemistry, molecular life science, nutrition & biomedicine, pharmacology or a related subject (if you are working on the master thesis and expect to graduate until end of 2019/beginning of 2020, you can still apply - please state it in your motivation letter and upload the transcript to date)
- Excellent English language skills in speaking and writing
- Pro-active attitude, good communication skills and ability to work independently in an interdisciplinary team

We offer

- 3-year employment contract, salaries according to German civil service tariff (TV-L 13, 65%)
- All research groups are located at the Center of Brain, Behavior and Metabolism (CBBM) with state-of-the-art lab facilities incl. MRT scanner, metabolic core unit, LC-MS, microscopy
- Comprehensive academic support, e.g. project-specific courses, soft skills training, funding for research stays abroad and international conferences, individual career coaching
- Relaxed life style in city of Lübeck among many UNESCO World Heritage sites and directly on the Baltic Sea coastline and part of the Metropolitan area of Hamburg, Germany's second largest city and home to a wide range of cultural and leisure attractions

Send application to

Application deadline: 30.10.2019

<https://www.grk1957.uni-luebeck.de/grk-1957/application-form.html>

The complete application should include

- a letter of motivation
- a detailed CV
- master's degree certificate AND transcript
- a summary of the master thesis
- bachelor's degree certificate AND transcript
- two letters of recommendation (if you do not have the letters immediately available, please give us the contact details of two referees)

Documents issued in a language other than English or German must be translated into English AND certified by a public notary/German Consulate with an official seal.

 Full-Time, Temporary  PhD Project  Updated on 04.10.2019