MSc Pharmaceutical Sciences: Master Thesis Project in the field of Clinical Pharmacy

Announcement of topics:

- Topics will be announced here: http://www.bcp.fu-berlin.de/pharmazie/klinische_pharmazie/arbeitsgruppe_kloft/lehre/MSc_Pharmaceutical_Sciences/index.html
- Next availabilities: Winter Semester 2025/2026 (see below)

Application:

- Send your application for an offered subject to the respective responsible person,
  CC: charlotte.kloft[at]fu-berlin.de and leon.grasmaier[at]fu-berlin.de
- Applications must include a letter of motivation, CV and relevant credentials
- Prerequisite: Pharmaceutical Research Project in field of Clinical Pharmacy successfully completed (or equivalent)

Master Project
Clinical Pharmacy & Biochemistry

Ansprechpartner/Contact persons:	Ella Signe Kassandra Widigson Katharina Braun
Email:	ella.widigson@fu-berlin.de k.braun@fu-berlin.de
Raum-Nr./room No:	130A 130A
Tel./phone:	01529 2611073 030 838 50662

EXTERNAL EVALUATION OF A POPULATION-PHARMACOKINETIC MODEL FOR TREATMENT OF INFLAMMATORY BOWEL DISEASES WITH VEDOLIZUMAB

Description, tasks:

Vedolizumab is a monoclonal antibody used to treat inflammatory bowel disease, originally approved for intravenous (IV) administration and later for subcutaneous (SC) administration in the home environment. An existing population pharmacokinetic model combines an established IV model from one publication with a SC dosing component from a separate publication, forming an updated and clinically relevant mixed-administration model. This project aims to evaluate this model using therapeutic drug monitoring data from a Danish biobank, including patients receiving IV administration and those transitioning to SC administration. The student will conduct exploratory data analysis and assess the model's predictive performance through simulation-based techniques.

Learning objectives:

- Understanding principles of population-pharmacokinetic models
- Fundamental programming skills in R applied to data wrangling, exploratory analysis of clinical datasets, and model-based simulations
- Learning about and conducting selected external model evaluation techniques
- Preparation of a scientific report and oral presentation on the research findings

Requirements:

- Interest in pharmacometrics, pharmacokinetics, and clinical pharmacy
- Enthusiasm for learning new computational and statistical methods
- Ability to work independently with the help and advice of the supervisors
- Very good oral and written English

Datum: 11.10.25

gez./signed Prof. Dr. Charlotte Kloft

Beginn/Start	Flexible
1 Student	Student of the Pharmaceutical research master program or equivalent
Application	Until 31.03.2026 by e-mail to Ella and Katharina, CC to Prof. Dr. Kloft (charlotte.kloft@fu-berlin.de) with a short application presenting a **motivation** for the topic and a **CV**.

Datum: 11.10.25

gez./signed Prof. Dr. Charlotte Kloft