



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Frau Apothekerin Hannah Britz

Klinische Pharmazie

(Prof. Dr. Thorsten Lehr)

am

Freitag, 22. November 2024, 16:00 Uhr s.t.

per Videokonferenz; Link für MS Teams: <https://msteams.link/DNQ2>

Raum für die Prüfung: Gebäude C1.7, Raum 0.07, EG

Thema der Dissertation:

**Physiologically Based Pharmacokinetic Modeling of CYP_{3A4}, CYP_{1A2}
and Transporter Substrates, Inhibitors and Inducers
for the Prediction of Drug-Drug Interactions**

Adverse drug reactions, resulting from drug-drug interactions (DDIs), pose a significant risk for patients on polypharmacy. Therefore, investigating potential DDIs is crucial during drug development. Model-informed drug development techniques like physiologically based pharmacokinetic (PBPK) modeling are increasingly used and supported by regulatory agencies. This thesis focuses on developing PBPK models for key cytochrome P450 (CYP) enzymes and transporters involved in drug metabolism and excretion. Models were developed for ten index drugs, including substrates, inhibitors and inducers of CYP3A4, CYP1A2, P-glycoprotein and organic anion transporters. Two DDI networks covering 14 unique combinations were established. All models can predict complex interaction scenarios, thus supporting clinical dose recommendations.

Saarbrücken, 7. November 2024

Prof. Dr. Uli Kazmaier