



Der Vorsitzende des Promotionsausschusses

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## EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

**Frau M.Sc. Selina Hemmer**  
Experimentelle und Klinische Toxikologie  
(Prof. Dr. Markus R. Meyer)

am

**Montag, 22. April 2024, 16:00 Uhr s.t.**

per Videokonferenz; Link für MS Teams: <https://bit.ly/3TqJpGx>

Raum für die Prüfung: Goßer HS Biochemie/Pharmakologie  
Geb. 45, Campus HOM

### **Thema der Dissertation:**

#### **Optimization and Application of In Vitro and In Vivo Toxicometabolomics Studies**

Toxicometabolomics has become an important tool in toxicology for conformation of drug abuse and risk assessment. To improve the identification of new drug metabolites and to elucidate changes in the endogenous metabolism after drug consumption, the present study investigated and optimized various untargeted toxicometabolomics techniques. Furthermore, two substances with potential for abuse were investigated in vitro and in vivo. The optimization of various techniques demonstrated that each parameter, from sampling to biological interpretation should be adapted to the research question and carefully considered beforehand, since any parameter can influence the outcome of the study. The two untargeted metabolomics studies indicated that toxicometabolomics studies can provide both toxicokinetic data and information on the mode of action of drugs (of abuse).

Saarbrücken, 8. April 2024

Prof. Dr. Uli Kazmaier