



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Herrn M.Sc. Patrick Oberhäuser
Pharmazeutische Biotechnologie
(Prof. Dr. Andriy Luzhetskyy)

am

Dienstag, 21. April 2026, 13:00 Uhr s.t.

per Videokonferenz: Link für MS Teams: <https://bit.ly/4rPbg2h>

Raum für die Prüfung: Gebäude C1.7, Hörsaal 008

Thema der Dissertation:

Discovery and characterization of novel natural compounds and biosynthetic gene clusters from *Streptomyces*

Secondary metabolites are essential for the development of new pharmaceuticals, with *Streptomyces* species being prolific producers of bioactive compounds. However, much of their biosynthetic potential remains unexplored due to silent biosynthetic gene clusters. This dissertation focuses on the discovery of novel natural products from *Streptomyces* and on strategies to activate such gene clusters. Novel trisubstituted pyrazinones, Ichizinones A–C, were identified and their biosynthesis elucidated. Regulatory crosstalk between native and heterologous gene clusters was shown to generate new hybrid compounds, including the rare 7-azochromone mansevorone. Finally, the biosynthesis of the new depsipeptide atrevomycin was characterized, revealing the coordinated action of two distinct NRPS/PKS gene clusters.

Saarbrücken, 1. April 2026


Prof. Dr.-Ing. Georg Frey