



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Herrn M.Sc. Sebastian Greif
Pharmazeutische Biotechnologie
(Prof. Dr. Andriy Luzhetskyy)

am

Freitag, 12. Dezember 2025, 9:00 Uhr s.t.

per Videokonferenz: Link für MS Teams: <https://teams.microsoft.com/meet/3244890138995>
Raum für die Prüfung: Seminarraum I, Raumnummer -1.01 Gebäude C4 3, Stockwerk U01.

Thema der Dissertation:

Natural product discovery through heterologous expression in *Streptomyces*

In this work heterologous expression was used to discover and analyze biosynthetic gene clusters of Actinomycetes. In the main project genome mining and heterologous expression were used to analyze the biosynthesis of the antifungal polyketide oxanthromicin. With its dimeric peroxide structure, oxanthromicin represents an interesting and unique scaffold, seen only in one other compound, the plant based bishonokiol A. The focus in this work lay on the three putative SAM-dependent methyltransferases encoded in the biosynthetic gene cluster. Out of the three enzymes two were involved in methyl group transfers, while one seemed to be involved in the dimerization reaction leading to oxanthromicin. Within this project new oxanthromicin intermediates were discovered and analyzed through structure elucidation.

Saarbrücken, 28. November 2025



Prof. Dr.-Ing. Georg Frey