

Targeted Discovery of Tetrapeptides and Cyclic Polyketide-Peptide Hybrids from a Fungal Antagonist of Farming Termites.

Schalk F, Um S, Guo H, Kreuzenbeck NB, Görls H, de Beer ZW, Beemelmans C (2020) Targeted Discovery of Tetrapeptides and Cyclic Polyketide-Peptide Hybrids from a Fungal Antagonist of Farming Termites. *Chembiochem* , [PubMed](#)

ILRS Authors

[Felix Schalk](#)

Projects

Functional and genomic analysis of bacterial and fungal natural products derived from the fungus-growing termite

[Details](#)

Abstract

Herein, we report the targeted isolation and characterization of four linear nonribosomally synthesized tetrapeptides (pseudoxylaramide A-D) and two cyclic nonribosomal peptide synthetase-polyketide synthase-derived natural products (xylacremolide A and B) from the termite-associated stowaway fungus *Pseudoxylaria* sp. X187. The fungal strain was prioritized for further metabolic analysis based on its taxonomical position and morphological and bioassay data. Metabolic data were dereplicated based on high-resolution tandem mass spectrometry data and global molecular networking analysis. The structure of all six new natural products was elucidated based on a combination of 1D and 2D NMR analysis, Marfey's analysis and X-ray crystallography.

Identifier

doi: 10.1002/cbic.202000331 PMID: 32470183