Precursor-directed Diversification of Cyclic Tetrapeptidic Pseudoxylallemycins.

Guo H, Schmidt A, Stephan P, Raguž L, Daniel Braga D, Kaiser M, Dahse HM, Weigel C, Lackner G, Beemelmanns C (2018) Precursor-directed Diversification of Cyclic Tetrapeptidic Pseudoxylallemycins. *Chembiochem* 19(21), 2307-2311. PubMed

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Projects

Modular synthetic approaches towards natural sphingoid base-type signaling molecules
Details

Combinatorial biosynthesis of nonribosomal peptide antibiotics
Details

Abstract

Cyclic peptides containing non-proteinogenic amino acids often exhibit a broad bioactivity spectrum and many have entered clinical trials with good prospects for drug development. We recently reported the discovery of six cyclic tetrapeptides, the pseudoxylallemycins A-F (1-6), from a termite-associated Pseudoxylaria sp. X802. These compounds contain a rare O-homoallenyl-L-tyrosine moiety and showed promising antimicrobial activity against the Gram-negative pathogenic bacterium Pseudomonas aeruginosa. To perform more detailed structure-activity studies, we pursued a precursor-directed diversification strategy. Here, we report the purification, identification and testing of 21 new pseudoxylallemycin derivatives.

Identifier

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