

Pseudoxylallemycins A-F, cyclic tetrapeptides with rare allenyl modifications isolated from *Pseudoxylaria* sp. X802: A competitor of fungus-growing termite cultivars.

Guo H, Kreuzenbeck NB, Otani S, Garcia-Altare M, Dahse HM, Weigel C, Aanen DK, Hertweck C, Poulsen M, Beemelmans C (2016) Pseudoxylallemycins A-F, cyclic tetrapeptides with rare allenyl modifications isolated from *Pseudoxylaria* sp. X802: A competitor of fungus-growing termite cultivars. *Org Lett* 18, 3338-3341.

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Abstract

Based on fungus-fungus pairing assays and HRMS-based dereplication strategy, six new cyclic tetrapeptides, pseudoxylallemycins A-F (1-6), were isolated from the termite-associated fungus *Pseudoxylaria* sp. X802. Structures were characterized using NMR spectroscopy, HRMS, and Marfey's reaction. Pseudoxylallemycins B-D (2-4) possess a rare and chemically accessible allene moiety amenable for synthetic modifications, and derivatives A-D showed antimicrobial activity against Gram-negative human-pathogenic *Pseudomonas aeruginosa* and antiproliferative activity against human umbilical vein endothelial cells and K-562 cell lines.

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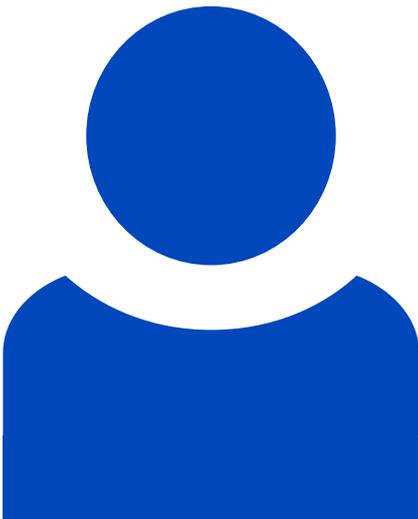
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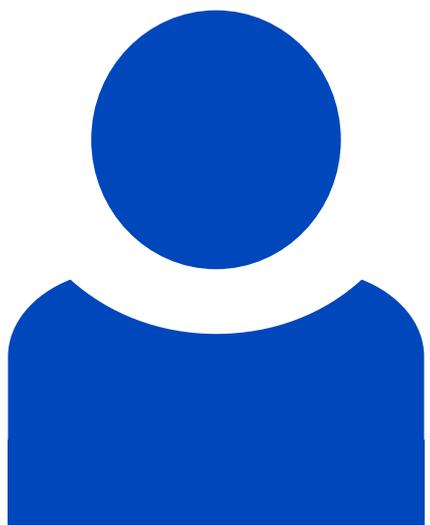
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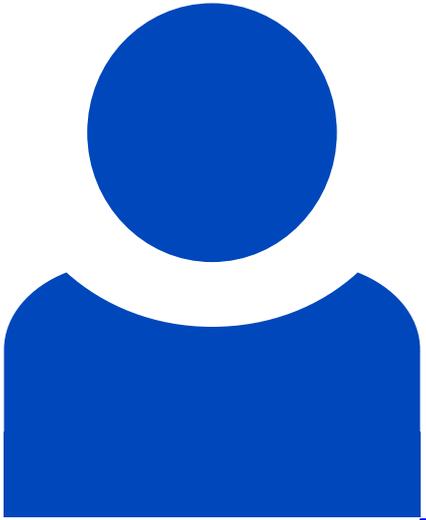
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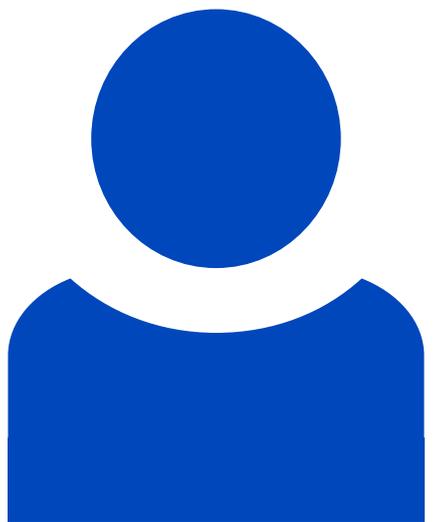
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