

Sequential asymmetric polyketide heterocyclization catalyzed by a single cytochrome P450 monooxygenase (AurH).

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Abstract

Two in one: In vitro biotransformations with the cytochrome P450 monooxygenase AurH from the aureothin (1) biosynthetic pathway provided direct experimental evidence that a single monooxygenase can install two CO bonds sequentially to form a tetrahydrofuran ring. Structural elucidation of the intermediate 2 revealed the order of bond formation and the stereochemical course of this unprecedented oxygenation–heterocyclization reaction.

Beteiligte Forschungseinheiten

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