Functionally distinct modules operate two consecutive alpha, beta-->beta, gamma double-bond shifts in the rhizoxin polyketide assembly line.


Abstract

Shift work: Biochemical analysis of the rhizoxin pathway revealed that the diene moiety is not shifted all at once, but through distinct enzymatic operations. The first shift occurs by a formal β,γ-dehydration in module 7, while the second double bond is first generated by module 8 and then shifted by an unprecedented “shift module” with a novel type of DH* domain (see scheme). ACP=acyl carrier protein, DH* = dehydratase-like shift domain.

Involved Units and Groups

*Biomolecular Chemistry Bio Pilot Plant*

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Identifier