

Epidithiodiketopiperazine biosynthesis: A four-enzyme cascade converts glutathione conjugates into transannular disulfide bridges.

Scharf DH, Chankhamjon P, Scherlach K, Heinekamp T, Willing K, Brakhage AA, Hertweck C (2013) Epidithiodiketopiperazine biosynthesis: A four-enzyme cascade converts glutathione conjugates into transannular disulfide bridges. *Angew Chem Int Ed* 52(42), 11092-11095.

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Abstract

Enzyme quartet: Isolation of the first sulfur-bearing intermediate of the gliotoxin pathway in *Aspergillus fumigatus* and successful in vitro conversion of the bisglutathione adduct into an intact epidithiodiketopiperazine by a four-enzyme cascade (including glutamyltransferase GliK and dipeptidase GliJ) revealed an outstanding adaptation of a primary metabolic pathway into natural product biosynthesis that is widespread in fungi.

Involved units

[Biomolecular Chemistry](#) [Christian Hertweck](#) [Read more](#)

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