

Ralfuranone thioether production by the plant pathogen *Ralstonia solanacearum*.

Pauly J, Spiteller D, Linz J, Jacobs J, Allen C, Nett M, Hoffmeister D (2013) Ralfuranone thioether production by the plant pathogen *Ralstonia solanacearum*. *Chembiochem* 14, 2169-2178.

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Abstract

Ralfuranones are aryl-substituted furanone secondary metabolites of the Gram-negative plant pathogen *Ralstonia solanacearum*. New sulfur-containing ralfuranone derivatives were identified, including the methyl thioether-containing ralfuranone D. Isotopic labeling in vivo, as well as headspace analyses of volatiles from *R. solanacearum* liquid cultures, established a mechanism for the transfer of an intact methylthio group from L-methionine or α -keto- γ -methylthiobutyric acid. The methylthio acceptor molecule ralfuranone I, a previously postulated biosynthetic intermediate in ralfuranone biosynthesis, was isolated and characterized by NMR. The highly reactive Michael acceptor system of this intermediate readily reacts with various thiols, including glutathione.

Beteiligte Forschungseinheiten

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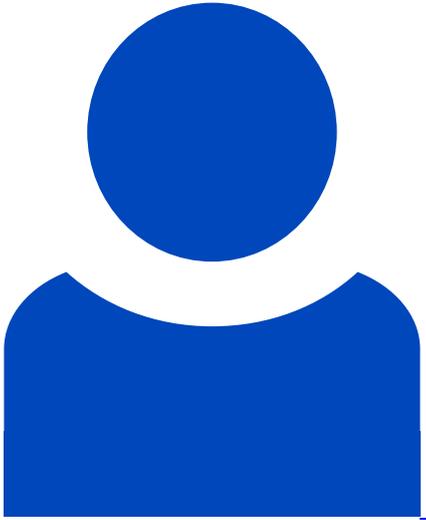
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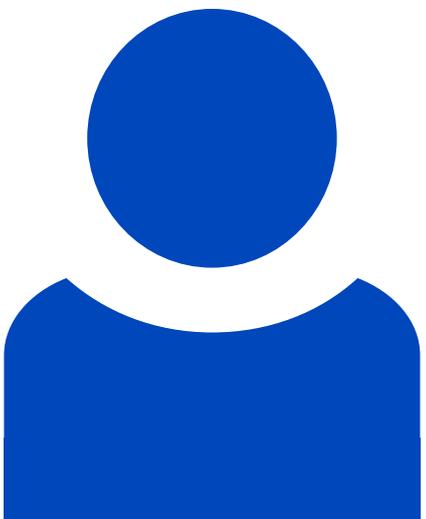
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