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Four new bioactive metabolites from *Penicillium purpurogenum* MM

Mohamed Shaaban^{1,2}, Mohammad Magdy El-Metwally³ and Hartmut Laatsch²

¹National Research Centre, Egypt

²University of Göttingen, Germany

³Damanhour University, Egypt

Four new bioactive compounds, namely (3R,4S)-isostreptenol III, (S)-tenellic acid B dimethyl acetal, (3R,3'S)-isotalarone, and (3R,5R)-cis-5-methyl-3-(2-oxobutyl)-dihydrofuran-2-one, were isolated from the terrestrial fungus *Penicillium purpurogenum* MM, together with 15 known metabolites: talaroflavone, pestalasin A, altenuene, penicillide, 3'-O-methyl-dehydroisopenicillide, rubralactone, tenellic acid B, diaporthin, butyrolactone 1, butyrolactone-V, 4-hydroxy-2-methoxyacetanilide, ergosterol, ergosterol peroxide, linoleic acid and glycerol monolinoleate. The chemical structures of the four new compounds were confirmed by extensive 1D and 2D NMR and ESI HR mass measurements, and by comparison with literature data. The absolute configurations of the new compounds, and of talaroflavone and tenellic acid B, were determined by ab initio calculations of ECD, ORD, and NMR data. The antimicrobial and cytotoxic activities of the crude extract and of the isolated compounds were studied using a set of microorganisms and by the brine shrimp assay, respectively. The isolation and taxonomic characterization of *P. purpurogenum* MM is reported.

Biography

Mohamed Shaaban has completed his PhD from Göttingen University, Germany, and Postdoctoral studies from Göttingen University, Germany during a short DAAD-Post-doc (2008) followed by Egyptian-German Research project (2009-2011) along with an Egyptian –Tunisian Project (2007-2011). He is one of the leader Professors in the field of Marine products chemistry at the National Research Centre, Cairo, Egypt, concerning with isolation and structural elucidation of bioactive metabolites isolated from diverse marine (Algae, soft corals, sponges, marine bacteria and fungi) and terrestrial (Medical plants, Streptomyces and fungi). He has published more than 45 papers in reputed journals and serving as an Editorial Board Member of repute.

mshaaba_99@yahoo.com

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