

Citrinin Derivatives from the Soil Filamentous Fungus *Penicillium* sp H9318

Abstract

Investigation of a microbial fermentation organic extract of *Penicillium* sp. H9318 led to the isolation of a new isoquinolinone alkaloid, (5S)-3,4,5,7-tetramethyl-5,8-dihydroxyl-6(5H)-isoquinolinone (1), along with four known citrinin derivatives (2-5). Citrinin (2) exhibited significant inhibitory activity against *Streptomyces* 85E in the hyphae formation inhibition (HFI) assay, while compounds 1, 3-5 were not active when tested at 20 $\mu\text{g}/\text{disk}$ in the HFI assay. Citrinin (2) further demonstrated a weak inhibitory activity against MCF-7 (IC₅₀ 71.93 $\mu\text{mol L}^{-1}$), LNCaP (IC₅₀ 77.92 $\mu\text{mol L}^{-1}$), LU-1 (147.85 $\mu\text{mol L}^{-1}$) and KB (IC₅₀ 65.93 $\mu\text{mol L}^{-1}$) cell lines, respectively, in the cytotoxicity assay.