Ostruthin: An Antimycobacterial Coumarin from the Roots of Peucedanum ostruthium

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Following a bioassay-guided fractionation, ostruthin (6-geranyl-7-hydroxycoumarin) was isolated from the roots of Peucedanum ostruthium Koch (Apiaceae) as a compound with pronounced in vitro activity against several species of rapidly growing Mycobacteria, namely Mycobacterium abscessus, M. aurum, M. fortuitum, M. phlei and M. smegmatis. Minimum inhibitory concentrations (MIC) ranged between 3.4 to 107.4 μM and were comparable to those of ethambutol and isoniazid. Imperatorin (8-isopent-2-enyloxy-6,7-furanocoumarin) showed no activity at concentrations up to 1.9 mM. Umbelliferone (7-hydroxycoumarin) was only weakly active (MIC = 0.79 mM).

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