Alnuheptanoid A: A New Diarylheptanoid Derivative from Alnus japonica

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Abstract:

Extensive chromatographic investigation of the ethanolic extract of Alnus japonica Steud stem bark led to the isolation of a new diarylheptanoid named alnuheptanoid A [(5S)-7-(3,4-dihydroxyphenyl)-1-(4-hydroxyphenyl)-5-methoxyheptan-3-one] (8), together with seven known diarylheptanoid derivatives: platyphyllenone (5), (5S)-1,7-bis(4-hydroxyphenyl)-5-methoxyheptan-3-one (6), 1-(3,4-dihydroxyphenyl)-7-(4-hydroxyphenyl)-4-hepten-3-one (7), hirsutenone (9), (5R)-O-methylhirsutanonol (10), hirsutanonol (11) and oregonin (13), three triterpenes: -amyrin (1), betulinaldehyde (3) and betulinic acid (4), and two sterols: -sitosterol (2) and daucosterol (12). Compound 6 was isolated for the first time from natural source. The structures of the isolated compounds were determined on the basis of spectroscopic measurements (UV, IR, HR-ESI-MS, 1D and 2D NMR).

Published In:

Nat. Prod. Res. , Vol. 28, No. 20 , pp. 1765-1771