P12

Phytochemical Investigation of Valeriana officinalis

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The dried underground parts (roots and rhizomes) of valerian (Valeriana officinalis L.) are used to prepare modern phytomedical products. Valerian is applied as antianxiety and digestive formulations, a tranquillizer for the treatment of nervousness and agitation and as a mild sedative for sleep promotion.

A methanolic extract of the roots was investigated for its phytochemical constituents. Two new compounds were isolated from the roots of Valeriana officinalis. Their structures were established on the basis of 1D and 2D NMR experiments including COSY, HMQC or HMBC as Berchemol-4- β -D-glucoside and 3-(hydroxymethyl)-2-(1-hydroxyprop-2-en-2-yl)-4-methylcyclopentanol-O- β -D-glucoside. Five lignans, namely pinoresinol-4-O- β -D-glucoside, 7,9'-monoepoxylignans massoniresinol-4'-O- β -D-glucoside, berchemol-4'-O- β -D-glucoside, 7,9':7',9-diepoxylignans pinoresinol-4,4'-di- β -O-D-glucoside and 8-hydroxypinoresinol-4'-O- β -D-glucoside, which had already been isolated from valerian in an earlier study, were isolated. In addition, adenosine, uridine, chlorogenic acid, chlorogenic acid, two different dicaffeoylquinic acid isomer, 4-[(1E)-3-hydroxy-1-propenyl]-2-methoxyphenyl-O- β -D-glucopyranoside, patiscabroside II, adoxosidic acid, trans-coniferin, vanilloloside and 1-(3',4'-dihydroxycinnamoyl)-cyclopenta-2,3-diol were isolated.