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Saponin, Iridoid, Phenylethanoid and Monoterpene Glycosides from Verbascum pterocalycinum} var. mutense

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Abstract: Ilwensisaponin C (= 3-O-{[α-L-rhamnosyl-(1 \to 4)-(β-D-glucopyranosyl-(1 \to 3)]-β-D-glucopyranosyl]-(1 \to 2)-β-fucopyranosyl}-11-methoxy-olean-12-ene-3β, 23, 28-triol) (1), ilwensisaponin A (= mimengoside A = 3-O-{[α-L-rhamnosyl-(1 \to 4)-(β-D-glucopyranosyl-(1 \to 3)]-β -D-glucopyranosyl]-(1 \to 2)-β-fucop- yranosyl}-13β, 28-epoxyolean-11-ene-3β, 23-diol) (2), ajugol (3), picroside IV (= 6\prime-O-trans- p-hydroxycin- namoylcatalpol) (4), verbascoside {= acteoside, [β -(3,4-dihydroxyphenyl)-ethyl]-(3^{\prime-O-α-L-rhamnopyra- nosyl)-(4^{\prime-O-caffeoyl)-β-D-glucopyranoside} (5) and 1-(β -D-glucopyranosyl)-8-hydroxy-3, 7-dimethyl-oct-2(E), 6(E)- dienoate (6) were isolated from the flowers of Verbascum pterocalycinum var. mutense Hub.-Mor. The structures of the compounds were determined primarily from 1D and 2D NMR experiments. This is the first phytochemical study performed on V. pterocalycinum var. mutense and the first report of the presence of 1-(β -D-glucopyranosyl)-8-hydroxy-3, 7-dimethyl-oct-2(E), 6(E)- dienoate (5) as a monoterpene glycoside along with picroside IV (= 6^{\prime}-O-trans-p-hydroxycinnamoylcatalpol) (4) from the genus Verbascum.

Key Words: Verbascum pterocalycinum var. mutense, Scrophulariaceae, saponin glycosides, ilwensisaponin C and ilwensisaponin A, iridoid glucosides, ajugol and picroside IV, phenylethanoid glycoside, verbascoside, monoterpene glucoside, 1-(β-D-glucopyranosyl)- 8-hydroxy-3, 7-dimethyl-oct-2 (E), 6(E)- dienoate

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