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## Some biological active phenolic compounds from *Polygonatum obtusifolium*

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In continuation of the search for biologically active compounds in plants of the Georgian flora, we studied the chemical composition of *Polygonatum* L. (Convallariaceae). Species of the genus *Polygonatum* L. are spread in Caucasus. In traditional medicine they are used as a haemostatic, anti-inflammatory and wound healing activity. Raw materials (air-dried ground roots) were extracted with MeOH (80%, 3x) for 1h at reflux. The solvent was distilled off. The remaining aqueous phase was worked up with hexane to remove lipophilic substances and then extracted successively with CHCl<sub>3</sub>, EtOAc and n-BuOH. After the solvents were removed and the EtOAc and BuOH extracts that contained three stilbenes were combined and chromatographed over a column of sephadex LH-20 with elution by H<sub>2</sub>O:MeOH with increasing two alcohol content. This produced eight fractions and the fractions containing stilbenes were combined and rechromatographed over an analogous column with elution by EtOH to afford two pure compounds 1 (0.078 g, 0.019% calculated per raw material mass) and 2 (0.110 g, 0.027%). Compound

1: C<sub>15</sub>H<sub>14</sub>O<sub>5</sub>, [M]<sup>+</sup> 274, oily liquid. IR spectrum (KBr, ν<sub>max</sub>, cm<sup>-1</sup>): 3360 (OH), 3005, 2850, 1580, 1520, 1440 (aromatic), 1150 (C–O), 860, 845 (substituted rings), 680 (cis-bonded CH=CH). A comparison of the spectral data with the literature identified 1 as cis-3,5,3',5'-tetrahydroxy-4-methoxystilbene. Compound 2: C<sub>14</sub>H<sub>15</sub>O<sub>5</sub>, [M]<sup>+</sup> 274, colorless crystals, Mp 167–169°C. IR spectrum (KBr, ν<sub>max</sub>, cm<sup>-1</sup>): 3270 (OH), 3005, 2840, 1620, 1595, 1520, 1430 (aromatic), 1160 (C–O), 980 (trans-bonded CH=CH), 835, 675 (substituted rings). A comparison of the spectral data with the literature identified 2 as trans-3,5,3',5'-tetrahydroxy-4-methoxystilbene. Compound 3: C<sub>9</sub>H<sub>6</sub>O<sub>3</sub>, [M]<sup>+</sup> 162, colorless prisms or needles, Mp 234–235°C. UV spectrum (EtOH, max, nm): 320, 255. It was identified as umbelliferone (7-hydroxycoumarin). Compound 4: C<sub>10</sub>H<sub>8</sub>O<sub>4</sub>, [M]<sup>+</sup> 192, colorless or yellowish crystals, Mp 202–204°C. UV spect-rum (MeOH, max, nm): 233, 255, 295, 347. It was identified as scopoletin (6-methoxy-7-hydroxy-cou-marin). All compounds were isolated for the first time from *P. obtusifolium*.