FLAVONOIDS OF THE ROOTS OF Scutellaria orientalis

É. P. Bekirov, A. A. Nasudari,
T. P. Popova, and V. I. Litvinenko

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The roots of Scutellaria orientalis L. (oriental skullcap), family Labiatae, were collected in the flowering phase of the plant (July 4, 1970) on the slopes of the mountains close to the town of Shemakha, Azerb. SSR. The species was determined by Prof. L. I. Prilipko (Institute of Botany of the Academy of Sciences of the Azerbaidzhan SSR).

The qualitative composition of the flavonoids extracted by water and ethanol was represented by two aglycones and two glycosides. The substances were separated by fractional extraction with choloroform and ethyl acetate and by chromatography from polyamide columns. Four substances were isolated: (I), $C_{15}H_{10}O_5$, with mp 260-262°C; (II), $C_{21}H_{18}O_{11}$, with mp 222-224°C, $[\alpha]_D - 110°$ (c 1; dimethylformamide); (III), $C_{16}H_{12}O_5$, mp 201-203°C; and (IV), $C_{22}H_{20}O_{11}$, mp 194-196°C, $[\alpha]_D - 15°$ (c 1; dimethylformamide).

The IR spectra of substances (II) and (IV) showed, in addition to the bands characteristic for the usual flavone glycosides, a band at 1740 cm^{-1} due to a carboxy group. The hydrolyzates of these compounds contained substances (I) and (III), and also glucuronic acid.

Substances (I), (II), (III), and (IV) were identified by their physicochemical properties and by their UV spectra with complex-forming and ionizing reagents as baicalein, baicalin, wogonin, and wogonoside (wogonin 7-glucuronide), respectively. By spectrophotometry after paper-chromatographic separation (15% CH_3COOH) 8-10% of baicalin was found in the roots.

Consequently, the roots of the species investigated can be used for obtaining medicinal preparations similar to those recommended from the roots of the Baikal skullcap.

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