ALKALOIDS OF *Thalictrum baicalense*

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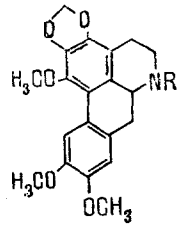
Continuing a study of the alkaloid composition of *Thalictrum baicalense* [1], we have investigated the epigeal part of *Th. baicalense* Turcz., collected on June 26, 1978, in the environs of the village of Ignashino, Skovorodino region, Amur province. By the usual method, 0.54% of total bases was obtained, and these were separated into phenolic and nonphenolic fractions. From the nonphenolic fractions, by chromatography on a column of alumina (eluent benzene) followed by preparative separation on plates with a fixed layer of silica gel in the benzene–ethyl acetate–methanol (20:20:3) system we have isolated a base (I) with mp 146–147°C (acetone), $[\alpha]_D$ +55° (methanol). The UV spectrum ($\lambda_{max}^{ethanol}$: 217, 242, 291, 306, 318 nm) and the NMR and mass spectra of (I) are characteristic for aporphine alkaloids. The NMR spectrum ($CDCl_3$, ppm, δ scale, HMDS — 0) showed signals in the form of a three-proton singlet at 2.44 from a N–CH_3 group, three-proton, and six-proton singlets at 3.76 and 3.81, respectively, from three methoxy groups, and two one-proton singlets at 6.64 and 7.71, due to protons at C-8 and C-11. Two close one-proton doublets at 5.4 and 5.89 showed the presence of a methylenedioxy group at C-2–C-3 [2]. The mass spectrum had the peaks of ions with m/z 369 (M^+), 368, 354, 326, 311. Analysis of the facts given above showed that (I) was a new pentasubstituted base. We have called it baicalidine. A comparison of the results obtained with the corresponding bonding characteristic of baicaline (II) and its N-methyl derivative [1] permitted us to propose for (I) the structure of N-methyl-2,3-methylenedioxy-1,9,10-trimethoxyaporphine. A direct comparison of (I) with N-methylbaicaline (R_f, melting point, IR spectrum) obtained by the Hess methylation of (II) [1] confirmed the proposed structure. In addition to baicalidine, from the epigeal part of *Th. baicalense* we also isolated berberine, glaucine, and baicaline.



I. R = CH_3
II. R = H

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