# ALKALOIDS FROM Ungernia spiralis

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By separating according to basicity the combined ether-soluble alkaloids from the roots of Ungernia spiralis collected on May 25, 1974 in the Kara-Kalinskii region of the Turken SSR [1], in addition to lycorine and tazettine, we have isolated a base (I) with the composition $C_{18}H_{21}NO_5$, mp 98-99°C, $[\alpha]_D^{20}$ +10.7° (c 0.65; chloroform), $R_f$ 0.72 in the benzene–methanol (4:1) system in a thin layer of silica gel, and a base (II), $C_{17}H_{19}NO_5$, with mp 148-149°C, $[\alpha]_D^{20}$ +105° (c 0.6; chloroform), $R_f$ 0.69 in the same system; and a base (III), $C_{17}H_{21}NO_5$ with mp 142-143°C (molecular weight confirmed mass spectrometrically), $[\alpha]_D^{20}$ +11° (c 0.45; chloroform).

The UV spectrum of (I) [$\lambda_{max}^{EtOH}$ 227, 272, 314 nm (log ε 4.36; 3.85; 3.73)] is characteristic for alkaloids of the macronine type [2]. The IR spectrum of (I) shows absorption bands at 1710 $cm^{-1}$ (carbonyl group) and 1620, 1510, and 1480 $cm^{-1}$ (aromatic ring).

In the NMR spectrum of (I) (in $CDCl_3$) on a JNM-4H-100 MHz instrument, internal standard TMS, τ scale), there are the following signals: singlets at 2.52 and 3.0 ppm (aromatic protons at $C_9$ and $C_{12}$), 4.02 ppm (2 H, $-O-CH_2-O-$), 6.68 ppm (3 H, $-OCH_3$), and 7.74 ppm (3 H, $>N-CH_3$).

The mass spectrum of (I) has the main peaks of ions with m/e $M^+$ 331, 317, 301, 272, 259, 201, and 175, which are characteristic for macronine. A comparison of the facts given with those for epimacronine [3, 4] shows that (I) is possibly dihydroepimacronine. In actual fact, when epimacronine was reduced by the Adams method, a substance was obtained which was identical with base (I) (in melting point and IR spectrum). Consequently, base (I) has the structure of dihydroepimacronine.

## LITERATURE CITED

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