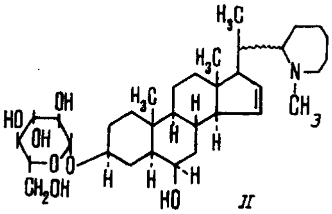
are β-oriented hydroxy groups at C$_3$ and C$_6$. However, in the NMR spectrum of (V) [0.98 ppm (19-CH$_3$) 0.57 ppm (18-CH$_3$), 0.81 ppm (21-CH$_3$) (in CDCl$_3$ + CD$_3$OD)], the signal from the 18-CH$_3$ proton is shifted upfield by 3 Hz as compared with that of (VII).



II

The facts given show that (V) is a diastereoisomer of (VII) at the C$_{20}$ or C$_{22}$ asymmetric center, the configurations of these centers having been determined for neither of these alkaloids. In the molecule of (II), according to biogenetic considerations, the D-glucose residue is attached at carbon atom 3 [8]. The results of a determination of molecular rotation differences between (II) and (V) according to Klyne's rule [9] have shown that in the (II) molecule the D-glucose is attached to the (V) by a β-glycosidic bond.

On the basis of what has been said, it may be concluded that sevkorine has the structure and partial configuration of 3β-O-D-glucopyranosylsevkoridinine (II).

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## AN INVESTIGATION OF THE ALKALOIDS OF *Reseda luteola*

M. M. Tadzhibaev, K.L. Lutfullin,
V. M. Malikov, and S. Yu. Yunusov

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Ten species of plants of the genus *Reseda* grow on the territory of the USSR [1], and none of them have been investigated for their alkaloid content [2]. The present paper gives preliminary information on a study of the alkaloids of *R. luteola*. The plant was collected in the flowering period in the Samarkand oblast by U. Rakhmankulov. The comminuted raw material (17 kg) was extracted with a 1% solution of sulfuric acid. The extract was passed through KU-1 and KU-2 cation-exchange resins. The alkaloids were desorbed with a 1% ethanolic solution of ammonia. The ammoniacal ethanolic solution was concentrated under vacuum, and the alkaloids were extracted successively with petroleum ether, diethyl ether, and chloroform. This gave 55.64 g of total alkaloids. By chromatographing the combined ether-soluble alkaloids in a column of silica gel (1:20) we isolated two new bases, which we have called *resedine* (5.5 g) and *resedinine* (3.5 g).

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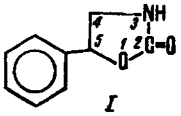
Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR, Tashkent. M. I. Kalinin Andizhan Medical Institute. Translated from Khimiya Prirodnykh Soedinenii, No. 2, pp. 270-271, March-April, 1976. Original article submitted September 23, 1975.



I

Resedine (I) is a white crystalline weak base with the composition $C_9H_9NO_2$ ($M^+$ 163.0662), mp 88-89°C (benzene), $[\alpha]_D^{20}$ ±0° (c 0.1; chloroform). In the UV spectrum of (I) there are the following absorption bands: $\lambda_{max}^{ethanol}$ 253, 258 nm (log ε 2.23, 2.33). The IR spectrum had absorption bands at (cm$^{-1}$) 3400-3200 (=NH), 1720 (—NHCOO), and 710, 770 (monosubstituted benzene ring). The mass spectrum of (I) has the peak of the molecular ion $M^+$ 163 (95%), confirming the composition of the base, and also peaks of ions with m/e 119, 106, 91, and 79. In the NMR spectrum of (I) ($CDCl_3$, δ scale, JNM 100/100 MHz, HMDS as internal standard), in the weak-field region there are broadened singlets at 7.40 ppm (5 H) and 6.85 ppm (1 H), due to the protons of a monosubstituted benzene ring and of an —NH group, respectively. The presence of the NH group is also confirmed by the formation of an N-acetyl derivative (2.30 ppm, 3 H, singlet). In addition, the NMR spectrum of (I) shows three one-proton triplets at 5.52, 5.42, and 3.40 ppm. All that has been said enabled the formula of resedine to be developed in the following form: $(C_6H_5)(C_2H_3)$ (NHCOO). If one takes into account the fact that resedine is a saturated base (it is not hydrogenated by Adams's method), the $(C_2H_3)$ (NHCOO) residue must be a heterocyclic ring attached to a phenyl radical.

Thus, it is possible to propose the following structural formula, of 5-phenyloxazolidin-2-one [3], for resedine (see scheme above).

The alkaline (20% KOH) hydrolysis of (I) [4] formed a substance (II) with mp 112-114°C. The mass spectrum of (II) had the peaks of ions with m/e 137 $M^+$, 107, 79, 77, and 30. This resembles the mass spectrum of β-phenyl-β-hydroxyethylamine. We are the first to have found this alkaloid in nature.

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