ture of bases. Separation of the combined alkaloids yielded hyoscyamine (66%), hyoscine (14.5%), skimmiamine, and tropine. The combined bases isolated from the epigeal part of *D. stramonium* collected in the Tashkent oblast in the "Kommunist" kolkhoz, amounted to 0.25% of the weight of the dry plant. From the benzene-soluble fraction we isolated hyoscyamine (68%) and hyoscine (20%). Separation of the mother liquors yielded apohyoscine, tropine, and 2,6-dihydroxytropane.

The roots of this plant collected in the fruit-bearing phase contained 0.18% of combined alkaloids, 57% of which consisted of hyoscyamine and 17% of hyoscine. The mother liquors contained apohyoscine, apoatropine, tropine, and 2,6-dihydroxytropane.

The seeds of *D. stramonium* in the full fruit-bearing period contained 0.47% of a mixture of alkaloids from which we isolated hyoscyamine (74%).

The mother liquors yielded apohyoscine, tropine, and 2,6-dihydroxytropane.

The isolation of skimmiamine from plants of the family Solanaceae was unexpected, and biogenetically its presence is still not clear.

Thus, from *H. niger* we have isolated hyoscyamine, hyoscine, and skimmiamine. We have also detected apohyoscine, apoatropine, tropine, and α- and β-belladonnines in this plant. From *D. stramonium* we have isolated hyoscine, hyoscyamine, skimmianine, apoatropine, 2,6-dihydroxytropane, tropine, and α-belladonnine. The main alkaloids in all the initial mixtures of alkaloids obtained were hyoscyamine and hyoscine.

D. stramonium from the Surkhandar'ya oblast is characterized by the highest content of hyoscine and hyoscyamine (94%) and can be used as a source of these alkaloids.

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GORTSCHAKOINE — A NEW ALKALOID FROM *Corydalis gortschakovii*

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Continuing the separation of the combined alkaloids of *Corydalis gortschakovii* [1, 2] collected in the upper reaches of the R. Pskem in the flowering period, we have isolated a new liquid base with $[\alpha]_D$ −40° (c 0.3; methanol), which we have called gortschakoine. The base is readily soluble in organic solvents and in solutions of alkalis. UV spectrum: $\lambda_{max}^{ethanol}$ 226, 282 nm (log ε 4.31, 3.68). The IR spectrum of the base shows absorption bands at 1610 cm^{-1} (aromatic ring) and 3510 cm^{-1} (hydroxy group). The mass spectrum of the base shows peaks of the molecular ion with m/e 313 and also of ions with m/e 192 (100%), 177, 148, and 121. The facts given permit gortschakoine to be assigned to the benzyltetrahydroisoquinoline alkaloids [3]. The PMR spectrum of gortschakoine (CCl_4, 0 — HMDS, JNM-4H-100/100 MHz, δ scale) is characterized by the following signals at (ppm) 2.23 (s, 3H, $N{-}CH_3$), 3.63 (s, 3H, OCH_3), 3.73 (s, 3H, OCH_3), 5.94 (br. s, 1H, OH), 6.34 and 6.50 ppm (d, 1H each, ^3J = 7.9 Hz, o-aromatic protons), 6.56 and 7.00 ppm (d, 2H each, ^3J = 8.1 Hz, o-aromatic protons), and 3.88 (q, 1H, ^3J = 3.3 and 8.5 Hz, $C_1{-}H$). A multiplet with an intensity of six proton units at 2.20-3.30 ppm corresponds to three methylene groups. The presence in the mass spectrum of gortschakoine of the ion with m/e 192 as the maximum peak shows that in the

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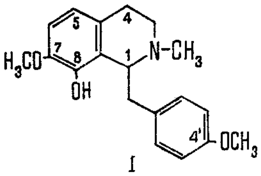
tetraisoquinoline part of the molecule there are a methoxy and a hydroxy group, and the second methoxy group is in the phenyl moiety in the para position, since it is only in this case that the equivalence of the two pairs of ortho-aromatic protons to which the two-proton doublets mentioned above correspond is possible. The results of measurements of the intramolecular nuclear Overhauser effect (NOE) enabled the signals to be assigned and the mutual positions of the methoxy and hydroxy groups to be determined. The intensity of the doublet at 6.50 ppm, i.e., the signal of one of the two ortho-aromatic protons in the tetrahydroisoquinoline moiety of the base, increased by 23% when the protons of the methoxy group corresponding to the singlet at 3.73 ppm were irradiated with a strong radiofrequency field. The magnitude of the NOE for the second proton of the same type (6.34 ppm) was 21%, but it was observed when the methylene protons at C_4 giving a signal at 2.50 ppm were irradiated. No such effect was detected between C_1—H and the aromatic protons under consideration. These facts permit the above-mentioned signals at 3.73, 3.63, 6.34, and 6.50 ppm to be assigned to C_7—OCH_3, $C_{4'}$—OCH_3, C_5—H, and C_6—H, respectively and show that the methoxy and hydroxy groups are located at C_7 and C_8, respectively, as is shown in structure (I), in which the C_1—H must experience a considerable descreening influence from the OH group. In actual fact, a comparison of the spectra of gortschakoine and armepavine in $CDCl_3$ has shown that the signal from C_1—H in the former is shifted downfield by ∿0.3 ppm. According to the results obtained, gortschakoine has the following structure:



I

It must be mentioned that (I) has been obtained previously as an intermediate in the synthesis of the alkaloid petaline [4].

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