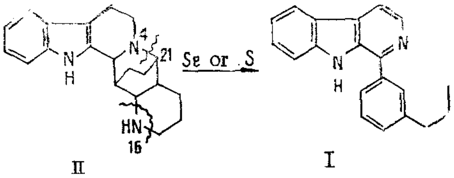

II I

No migration of the propyl group apparently takes place, otherwise we should have expected the formation of a substance with an isopropyl substituent.

Thus, the alkaloid komaroine has the structure of 1-(3'-propylphenyl)-β-carboline.

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STRUCTURE OF STENANZAMINE

K. Samikov, R. Shakirov,
and S. Yu. Yunusov

UDC 547.944/945

The new alkaloid stenanzamine $C_{27}H_{43}NO_2$ (I) has been isolated previously from the epigeal part of *Rhinopetaleum stenantherum* Regel [1]. The IR spectrum of the base contained absorption bands at (cm^{-1}) 3400, 1070 (OH), 2940-2860, 1430 (—CH_3; —CH_2), 2775 (trans-quinolizidine), and 1660 (C=C). Stenanzamine instantaneously decolorized a dilute solution of potassium permanganate. As in korseveridine and severzine, the double bond in (I) was not hydrogenated in acetic acid in the presence of platinum black [2, 3].

The mass spectrum of (I) (taken on an MKh-1310 instrument) showed the peaks of ions with m/z 98, 111, 112, 125, 137, 138, 139, 149, 150, 164, 166, 178, 190, 358, 359, 384, 385, 386, 395 $(M - 18)^+$, 396 $(M - 17)^+$, 398 $(M - 15)^+$, 413 M^+ (100%), which are characteristic for the C-nor-D-homosteroid alkaloids of the cevine group [2-4].

The PMR spectrum ($CDCl_3$) contained a singlet at 0.93 ppm (3H, 19-CH_3), doublets at 1.00 and 1.82 ppm (21-CH_3; and 27-CH_3), and the signals from two protons geminal to hydroxy groups at 3.78 and 3.58 ppm.

The action on (I) of acetic anhydride in the presence of pyridine formed diacetylstenanzamine (II), M^+ 497. In the IR spectrum of (II) there were absorption bands at (cm^{-1}) 2775 (trans-quinolizidine), 1740, 1245, and 1030 (ester C=O) but no absorption bands of hydroxy groups. The PMR spectrum of (II) contained a singlet at 0.88 ppm (19-CH_3), doublets at 0.93 and 0.82 ppm (21-CH_3 and 27-CH_3); and signals from two methyls of acetyl groups at 1.95 ppm and from protons geminal to acetoxy groups at 4.65 and 4.92 ppm.

The results of a discussion of the IR, mass, and PMR spectra of compound (I) and (II) permitted us to suggest for (I) the heterocyclic skeleton of cevanine [2-4] with two secondary hydroxy groups and a tetrasubstituted double bond.

The absorption bands in the IR spectra of (I) and (II) at 1070 and 1030 cm^{-1}, respectively, showed that one of the hydroxy groups was located at C_3 and had the β orientation. This was confirmed by the presence of a multiplet at 4.65 ppm from the 3α-H atom in the PMR spectrum of diacetylstenanzamine [5, 6].

Stananzamine was not oxidized by periodic acid, which shows the absence of vicinal hydroxyls.

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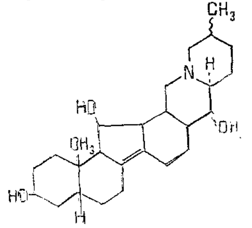
The upfield shift of the proton of the 19-CH$_3$ group in the PMR spectrum of (II) by 0.05 ppm as compared with (I) showed that the second hydroxy group was present at C$_{11}$ in the β orientation [7].

The presence in the mass spectra of (I) and (II) and the peaks of ions with m/z 111, 112, 125, 149, 164, 166, and 178 and also the absence from the PMR spectra of (I) and (II) of the signals of olefinic protons permitted the assumption that in (I) the double bond could be present between C$_8$ and C$_{14}$ or between C$_8$ and C$_9$. The chemical shifts of the protons of the 19-CH$_3$ group in (I) were close to the calculated values — 0.91 ppm according to [7] and 0.95 ppm according to [8]. Consequently, the position at C$_8$ and C$_{14}$ remained for a double bond. According to the chemical shifts of the protons of the 19-CH$_3$ group, rings A/B are trans-linked.

On the basis of the facts presented above, stenanzamine has the most probable structure and partial configuration of 3β,11β-dihydroxy-$\Delta^{8(14)}$-cevanine (I).



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STRUCTURE OF DIPTALINE

S. F. Aropova and O. Abdilalimov

UDC 547.944/945

Continuing a study of the combined alkaloids of the seeds of *Dipthychocarpus strictus* (Fisch.) Trautv., collected close to the village of Dzhilga, Chimkent province, after the isolation of the main alkaloids the mother liquors from the ethereal and chloroform materials were chromatographed on a column of silica gel (1:30). Elution with chloroform–methanol (9:1) gave an optically active oily substance with the composition $C_{13}H_{28}N_2O_2S$, M^+ 276, $[\alpha]_D$ −10.20° (methanol), readily soluble in chloroform, methanol, and water and sparingly soluble in ether, benzene, and acetone, with R_f 0.45 (benzene–chloroform–methanol (5:3.5:1.5) system), R_f 0.52 (chloroform–benzene–methanol (5:3.5:1.5) system), which we have called diptaline (I).

The IR spectra of (I) showed absorption bands at 3220 and 3380 cm^{-1} (NH, NH$_2$), and 1660 cm^{-1} (amide carbonyl group), and the absorption band of a sulfoxide group (1030 cm^{-1}). Mass spectrum: 276 (M^+; 5%), 261 (13), 259 (5), 213 (24), 188 (46), 142 (100), 126 (33), 114 (86), 83 (38), 71 (33), 64 (54). The PMR spectrum of (I) revealed the signals of the protons of methylene groups (1.10-2.10 ppm, 18 H, m) and of a sulfinyl group (2.52 ppm; 3 H, s);

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