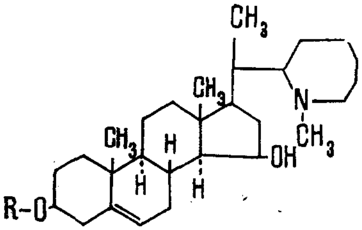

I. $R = C_6H_{11}O_5$

III. $R = H$

The results of a determination of the difference in molecular rotations between rhinoline and rhinolidine according to Klyne's rule [13] showed that in the rhinoline molecule the glucose is attached to the rhinolidine by a β-glycosidic bond.

On the basis of these facts, for rhinoline we can suggest the most probable structure and configuration as rhinolidine 3β-D-glucopyranoside (I).

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ALKALOIDS OF *Korolkowia sewerzowii*

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Sevcorine, korseveriline, korseveridine, korseveridinine, severine, and a base with mp 145-147°C have been isolated previously from the epigeal part of *Korolkowia sewerzowii* Rgl. collected in the Katrantau (KirgSSR) [1-3]. Continuing the separation of the mother liquor from the combined ether-soluble material according to basic strength, by chromatography on a column of silica gel from chloroform eluates we isolated korsidine [4].

The mother liquor from korseveriline [2] was chromatographed on a column of alumina with elution by chloroform and chloroform–methanol (10:0.5). From the chloroform–methanolic eluates we isolated an alkaloid with mp 212-214°C (acetone), identical with sevedine [5]. The mother liquor from korseveridine [2] was separated on a column of silica gel. The initial chloroform eluates yielded a base with mp 320-322°C (methanol), identical with korseverinine [6, 7].

The mother liquor from the base with mp 145-147°C and severine [3] was chromatographed on alumina. From the chloroform eluates we obtained a base with mp 241-243°C (acetone) having the composition $C_{28}H_{47}NO_2$ (I). The IR spectrum of (I) had ν_{max} (cm^{-1}) 3400, 3125 (OH), 2795 ($N-CH_3$, 1670 (C=C), and in the mass spectrum the main peaks were those of ions with m/e 112 (110%), 125, 138, 150, 164, 178, 358, 400 $(M - 29)^+$, 411 (M − 15), 429 (M^+), which

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are characteristic for the typical steroid alkaloids edpetilidine and sevcorine [1, 8, 9].

The physicochemical properties of (I) agree well with those of sevcoridinine obtained by the hydrolysis of sevcorine [1]. A mixture with an authentic sample of sevcoridinine gave no depression of the melting point, and their IR spectra were identical.

In order to establish the native character of the alkaloid (I), sevcorine was dissolved in 5% sulfuric acid and the mixture was left at room temperature for a day and was then made alkaline with 25% ammonia solution and extracted with chloroform (the conditions for the isolation of sevcorine from the plant extract). Under these conditions sevcorine underwent no hydrolysis but was covered quantitatively. Consequently, the alkaloid (I) is native.

Thus, from the epigeal part of *K. sewerzowii* growing in the Katrantau we have isolated korsidine, korseveriline, and sevedine and have found sevcoridinine in the plant for the first time.

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ISOLATION OF LYCORINE FROM *Ungernia tadshicorum*

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Lycorine hydrochloride is used as an expectorant and also for the treatment of acute and chronic bronchitises and bronchial asthma [1]. In the medicinal industry, lycorine hydrochloride is obtained from the leaves of *Ungernia sewerzowii* [2, 3]. We have begun a study of other species of *Ungernia* in order to find an additional source of lycorine. We have investigated the epigeal part of *Ungernia tadshicorum* growing in the TadzhSSR [4].

We have studied the possibility of using ion-exchange resins for isolating lycorine from aqueous extracts of the leaves of this plant and, in particular, processes of the extraction, sorption, and desorption of lycorine. The experiments showed the economic desirability of using a 1% solution of hydrochloric acid for the extraction of lycorine, sorption of the lycorine on KU-1 cation-exchange resin, and desorption from the resin with a 1.5% solution of ammonia in 85% ethanol.

The comminuted raw material (75 kg) collected on April 20 on the slopes of the Hissar range (TadzhSSR) in the stage of the vegetation of the leaves was loaded into a battery of three extractors and was extracted continuously with 1% hydrochloric acid. The acid extract of the alkaloids was passed through a battery of adsorbers consisting of three columns charged with KU-1 cation-exchange resin in the H^+ form (2.5 kg each). The rate of flow of the extract was 600-700 liters/h·m^2.

After sorption, the alkaloids were desorbed from the cation-exchange resin with a 1.5% solution of ammonia in 85% ethanol. The rate of flow of the eluate was 200 liters/h·m^2. The

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