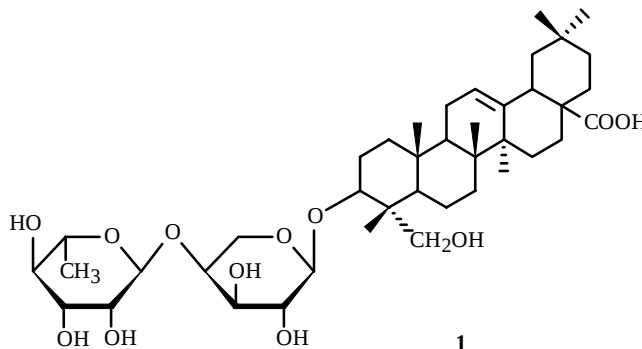


STRUCTURE OF DIPSACOBIOSIDE

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The structure of dipsacobioside (**1**), which was isolated from roots of *Dipsacus azureus* Schrenk (Dipsacaceae), has been reported [1]. However, an incorrect identification of the methylated monosacchrides made it necessary to revise the structure of this glycoside. We studied samples of dipsacobioside and dipsacoside B (**2**) [2] isolated by A. A. Akimaliev.



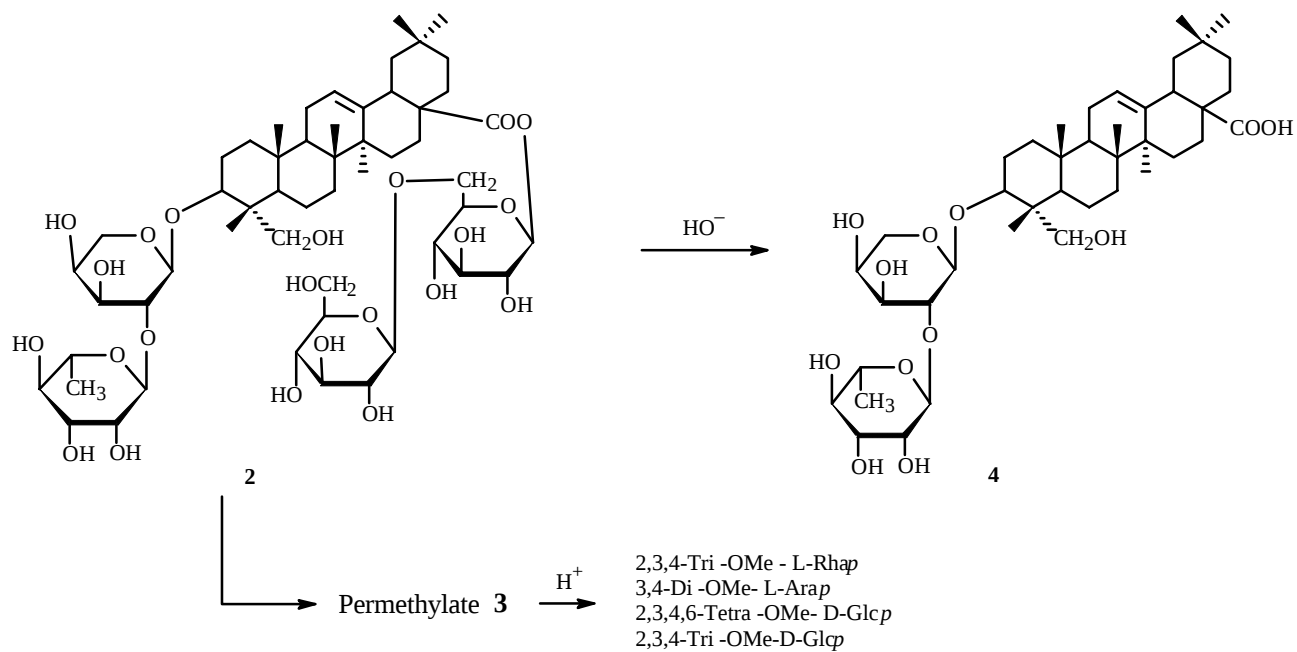
PMR spectra of dipsacoside B (100 MHz, C_5D_5N , δ , ppm, 0 = HMDS, J/Hz): 0.72 ($2 \times CH_3$, s), 0.84 (CH_3 , s), 0.88 (CH_3 , s), 0.95 (CH_3 , s), 1.03 (CH_3 , s), 1.45 (CH_3 L-rhamnose, d, $^3J = 6$), 4.80 (H-1 of terminal D-glucose, d, $^3J = 7$), 4.91 (H-1 of L-arabinose, d, $^3J = 6$), 5.22 (H-12, br.s), 5.94 (H-1 of L-rhamnose, br.s), 5.97 (H-1 of D-glucose on C-28, d, $^3J = 8$).

Methylation of dipsacoside B according to Hakomori [3] gave permethylate **3**. PMR spectrum of **3** (100 MHz, C_5D_5N , δ , ppm, 0 = HMDS, J/Hz): 0.79-1.14 ($6 \times CH_3$, s), 1.30 (CH_3 of L-rhamnose, d, $^3J = 6$), 3.21-3.55 ($13 \times CH_3O$, s), 4.40 (H-1 of terminal D-glucose, d, $^3J = 7$), 4.50 (H-1 of L-arabinose, d, $^3J = 6$), 5.21 (H-12, m), 5.49 (H-1 of L-rhamnose, br.s), 5.68 (H-1 of D-glucose on C-28, d, $^3J = 8$). GC [4] detected in the methanolysis products of **3**, as expected, 2,3,4-tri-OMe-L-rhamnose (T_{rel} 0.50, 0.56), 3,4-di-OMe-L-arabinose (T_{rel} 0.68, 0.81), 2,3,4,6-tetra-OMe-D-glucose (T_{rel} 1.00, 1.25), and 2,3,4-tri-OMe-D-glucose (T_{rel} 1.18, 1.43).

Base hydrolysis of dipsacoside B gave kalopanax-saponin A (**4**) [5], which is called [2, 6] dipsacoside A. **4** is identical to dipsacobioside according to chromatographic behavior in various solvent systems and PMR spectral parameters [1].

Thus, the structure of **1** that was assigned to dipsacobioside is erroneous. Dipsacoside A, dipsacobioside, like kalopanax-saponin A, has formula **4**.

*Deceased.



REFERENCES

1. A. A. Akimaliev, Zh. M. Putieva, P. K. Alimbaeva, and N. K. Abubakirov, *Khim. Prir. Soedin.*, 204 (1989).
2. M. M. Mukhamedziev, P. K. Alimbaeva, T. T. Gorovits, and N. K. Abubakirov, *Khim. Prir. Soedin.*, 153 (1971).
3. S. Hakomori, *J. Biochem.*, **55**, 205 (1964).
4. M. A. Agzamova, M. I. Isaev, M. B. Gorovits, and N. K. Abubakirov, *Khim. Prir. Soedin.*, 719 (1986).
5. A. Ya. Khorlin, A. G. Ven'yaminova, and N. K. Kochetkov, *Dokl. Akad. Nauk SSSR*, **155**, 619 (1964).
6. M. M. Mukhamedziev and P. K. Alimbaeva, *Khim. Prir. Soedin.*, 451 (1969).