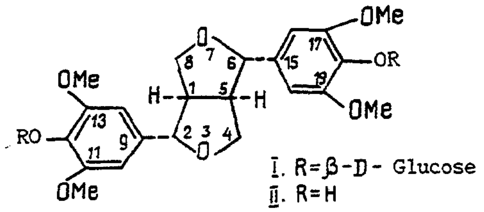
(OCH_3), 1580, 1605, 1405 (Ar), 885 (β-glycosidic bond). UV spectrum: λ_{max} (ethanol), nm: 209, 233, 272. FAB mass spectrum, m/z: 581 $[M + H]^+$, 418 $(M + H - 163]^+$, 401 $[M+H-163-OH]^+$.



I. R=β-D- Glucose
II. R=H

NMR spectral characteristics for the aglycon (II): PMR spectrum (200 MHz, $CDCl_3$): 3.07 (m, H-1, H-5), 4.77 (d, J = 4 Hz, H-2, H-6), 3.96 (dd, J = 9 and 3.5 Hz, $H-4_a$, $H-8_a$), 4.32 (dd, J = 9 and 7 Hz, $H-4_b$ $H-8_b$), 6.59 (s, H-10, H-14, H-16, H-20), 3.83 (s, OCH_3). ^{13}C NMR spectrum (200 MHz, $CDCl_3$): 56.37 (OCH_3), 54.34 (C-1, C-5), 71.80 (C-4, C-8), 86.06 (C-2, C-6), 102.71 (C-10, C-14, C-16, C-20), 132.11 (C-9, C-15), 134.31 (C-12, C-18), 147.15 (C-11, C-13, C-17, C-19).

The analysis of the aqueous-ethanolic extract of the biomass of S. hispanica by the HPLC method was conducted on a Milikhrom-1 chromatograph using a Nucleosil-5, C_{18} column; UV detection at a wavelength of 210 nm.

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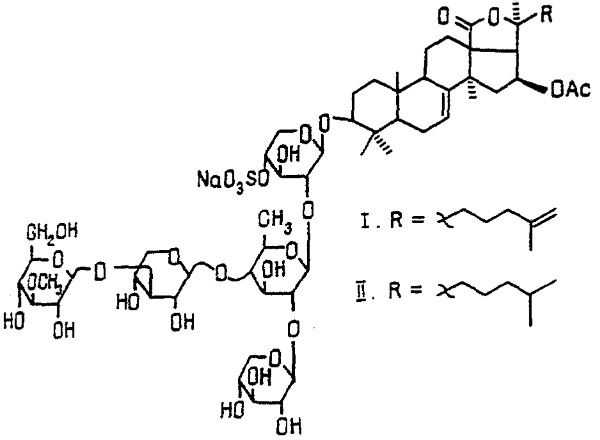
MINOR GLYCOSIDE FROM THE HOLOTHURIAN Cucumaria japonica

O. A. Drozdova, S. A. Avilov, A. I. Kalinovskii,
and V. A. Stonik

UDC 547.996.593.96

With the aid of HPLC (Silasorb C-18, 10 × 150 mm, 45% C_2H_5OH, 3 ml/min) we have isolated from a fraction of weakly polar glycosides of the holothurian Cucumaria japonica a minor glycosidic component which has been called cucumarioside A_0-2 (I), mp 231-233°C, $[\alpha]_{578}$ −44° (c 0.1; pyridine).



Pacific Ocean Institute of Bioorganic Chemistry, Far Eastern Branch, Russian Academy of Sciences, Vladivostok. Translated from Khimiya Prirodnykh Soedinenii, No. 5, pp. 593, September-October, 1992. Original article submitted January 10, 1992.

0009-3130/92/2805-0520$12.50

A comparison of the ^{13}C NMR spectra of (I) and the frondoside A (II) described previously [2], showed that (I) differed from (II) only by the presence of an additional double bond in the side chain of the aglycon. In actual fact, the ^{13}C NMR spectra of (I) showed signals at 145.9 and 110.9 ppm, and in the ^{1}H NMR spectra there were signals at 4.77 ppm (2 H-26) and 1.68 ppm (CH_3-27), which is characteristic for a terminal 25(26) double bond.

The catalytic hydrogenation of (I) (Adams catalyst, 20°C, 24 h) led to the dihydro derivative (II) (mp 234-236°C, $[\alpha]_{578}$ −31° (c 0.1; pyridine), coinciding completely in all its physicochemical characteristics and spectra with frondoside A.

Thus, cucumarioside A_0-2 is 16β-acetoxy-3β-O-{O-(3-O-methyl-β-D-glucopyranosyl)-(1→3)-O-β-D-xylopyranosyl-(1→4)-[O-β-D-xylopyranosyl-(1→2)]-O-β-D-quinovopyranosyl-(1→2)-(4-O-(sodiumsulfato)-β-D-xylopyranosyl)}holosta-7,25-diene.

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ALKALOIDS OF THE MONGOLIAN FLORA

II. ALKALOIDS OF Aconitum turczaninowii

N. Batbarya, D. Batsurén, and M. N. Sultankhodzhaeva

UDC 547.944/945

We have investigated the alkaloids of the epigeal part of Aconitum turczaninowii gathered in the budding period near Mungun-Mor't sumon of the Central aimak of Mongolia. Simple chloroform extraction yielded 1.5% of total alkaloids on the weight of the dry plant.

Five bases were isolated by chromatographing the total alkaloids on a column of alumina with elution by hexane containing gradually increasing amounts of chloroform, then with choroform, and then with chloroform to which methanol was gradually added. Four of them were identified, on the basis of a study of their spectral characteristics and comparison with authentic specimens, as aconitine [1], delsonine [2], delcosine [3], and lepenine [4].

Alkaloid (I) was new, and we named it tursoline. It had the composition $C_{25}H_{41}NO_8$ (HRMS, M^+ 483.28366), mp 249-251°C (acetone). The IR spectrum of the base contained absorption bands of hydroxy groups at 3460 cm^{-1} and of ether bonds at 1110 cm^{-1}. In the PMR spectrum (500 MHz, $CDCl_3$, δ scale), we observed the signals of an N-ethyl group (1.08 ppm, 3 H, t), of four methoxy groups (3.32, 3.33, 3.37, 3.43, 3 H each, s), and of a C-14-β proton (4.08 ppm, t, J = 5 Hz). The mass spectrum of the alkaloid was close to that of delsonine and showed that it differed from the latter by the presence of an additional hydroxy group. The mass spectrum was characterized by the following ion peaks (m/z, %): M^+ 483(16), 468(100), 466(58), 452(7), 450(41), 434(6), 432(10), 427(2), 412(6), 396(5), 336(4), 332(16). The maximum intensity of the peak of the ($M^+ - 17$ and $M^+ - 33$ ions showed the presence in the alkaloid of a hydroxy group at C-1 and a methoxy group at C-6 and also of a 7,8-diol system [5].

On the acetylation of (I) with acetic anhydride in the presence of pyridine, an amorphous 1-acetyl derivative (II) was obtained. Mass spectrum: M^+ 525, $M^+ - 59$ (100%). IR spectrum: 1710 cm^{-1} (ester carbonyl). PMR spectrum (100 MHz, $CDCl_3$, δ scale, ppm) 1.02 (3H, t, $N{-}CH_2{-}CH_3$), 1.95 (3H, s, $OCOCH_3$), 3.20; 3.25, 3.35; 3.35 (each 3H, 6, 4 × OCH_3), 4.01 (1H, t, J = 5 Hz, C-14-β-H), 5.21 (1H, q, J_1 = 10 Hz, J_2 = 7 Hz, C-1-β-H). The downfield shift and the multiplicity of the signal of the C-1-β proton in the PMR spectrum of (II) confirmed the presence of a hydroxy group in the alkaloid at C-1 and showed its α-

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Institute of Chemistry, Mongolian Academy of Sciences , Ulan-Bator. Institute of Chemistry of Plant Substances, Uzbekistan Republic Academy of Sciences, Tashkent. Translated from Khimiya Prirodnykh Soedinenii, No. 5, pp. 594-595, September-October, 1992. Original article submitted October 15, 1991.

0009-3130/92/2805-0521$12.50