GLYCOSIDES OF HOLOTHURIANS OF THE GENUS *Bohadschia*

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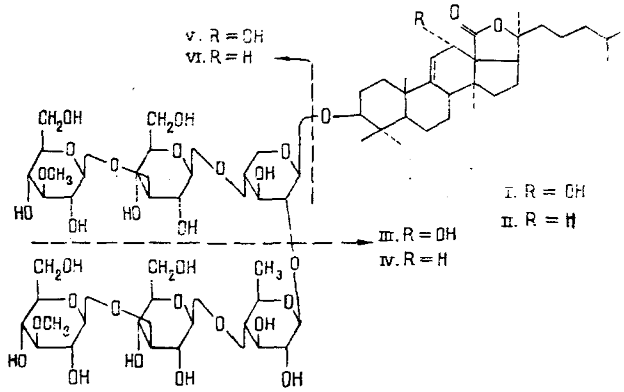
Continuing a comparative study of the triterpene glycosides of the tropical zone of the world ocean [1], we have studied the main components of the glycosidic fractions from *Bohadschia argus*, *B. marmorata*, *B. vitiensis*, and *B. tenuissima*. The animals were collected in various regions of the Indian Ocean during the expedition voyages of the Scientific-Research Vessel "Professor Bogorov."



From the combined glycosides of *B. argus* we obtained the individual glycosides (I), mp 220-222°C, $[\alpha]_D^{20}$ −9° (c 0.1; pyridine), and (II), mp 219-221°C, $[\alpha]_D^{20}$ −32° (c 0.1; pyridine). In the products of the acid hydrolysis of both glycosides, D-xylose, D-quinovose, D-glucose, and 3-O-methyl-D-glucose were identified in the form of the peracetates of the corresponding aldononitriles by GLC in a ratio of 1:1:2:2. The Hakomori methylation of (I) and (II) followed by methanolysis and acetylation led to identical sets of the corresponding methylated and acetylated methyl α- and β-glycosides, which were identified by GLC-MS. The Smith degradation of (I) and (II) gave the progenins (III), mp 303-305°C, $[\alpha]_D^{20}$ −12.2° (c 1.0; chloroform—methanol (1:1)), and (IV), mp 202-205°C, $[\alpha]_D^{20}$ −34° (c 1.0; chloroform—methanol (1:1)), respectively, each containing D-xylose and 3-O-methyl-D-glucose residues 1:1:1). The methylation of (III) and (IV) likewise led to identical sets of the corresponding derivatives. The Smith degradation of progenins (III) and (IV) gave the aglycons (V) and (VI), which we have described previously [2]. We determined the configurations of the glycosidic bonds in (I) and (II) as β on the basis of the ^{13}C NMR spectra, which we have also published previously [3]. On the basis of the facts given above, we determined the structures of the main components of the combined glycosides from *B. argus* as (I) and (II). The glycosides from *B. marmorata*, *B. vitiensis*, and *B. tenuissima* were identical with (I) and (II), according to their physical constants, the results of acid hydrolysis, and ^{13}C NMR spectroscopy. Glycosides with a similar structure — bivittosides C and D — have been isolated previously from the holothurian *B. bivittata* by Japanese workers [4].

Thus, glycosides (I) and (II), identical with the bivittosides C and D from *B. bivittata* known previously, have been isolated from *B. argus*, *B. marmorata*, *B, vitiensis*, and *B. tenuissima*.

LITERATURE CITED

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