

OP1. NOVEL CYCLOARTANE GLYCOSIDE FROM *ASTRAGALUS MUCIDUS*

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Plants containing triterpenoids and flavonoids growing in Uzbekistan attract the attention of chemists and pharmacologists with different chemical structures and a variety of high physiological activity and promising possibilities of creating drugs based on them. The sources of triterpene glycosides of the cycloartane series are plants of the genus *Astragalus* of the Fabaceae family. The plant *Astragalus mucidus* was harvested during the flowering period at the end of April 2018 in the Yunusabad district of the Tashkent city, Uzbekistan. Our research on the isolation, purification of the desired triterpene glycosides and the establishment of new chemical structures continues. New glycosides was isolated from the aerial part of this plant and called by uscyclomucidoside C. Sequentially purifying the fractions by chromatography on a silica gel column using system of solvents - chloroform-methanol, (4:1), we isolated a compound designated on Fig.

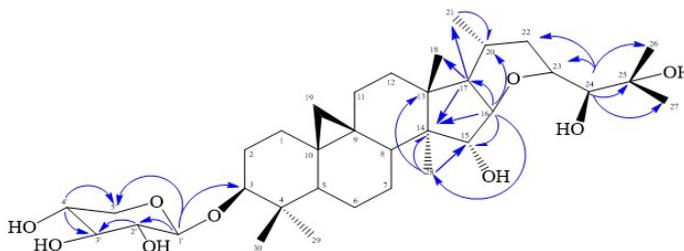


Fig. Structure of cyclomucidoside C

The presence of two one-proton doublets of AX system and also signals for seven methyl groups in the high field in the ¹H NMR spectrum of a new compound had allowed us to relate this substance with cycloartane triterpenoids. Elementary composition of cyclomucidoside C is C₃₅H₅₈O₉. In the mass spectrum of this compound peaks of an ions were marked at *m/z* (%): M + 622, 473 (25), 455 (75), 437 (100), 419 (38). IR spectrum, ν^{KBr} cm⁻¹: 3450-3200 (OH), 3045 (cyclopropane ring). The chemical shift of the anomeric carbon atom of the D-xylopyranoside residue showed that it was attached to C-3 hydroxy group. On the basis biogenetic facts that we have previously isolated cyclomucidoside A from the *A. mucidus*, and the values of the chemical shifts proton signals and carbon atoms of which are close to those glycoside, it can be assumed that proton shifts at the δ 5.37 and its doublet cleavage due to H-16. The carbon C-16 is bound with C-23 oxygen, and the proton signal resonates at δ 4.06. Thus, on the basis of the experimental data of ¹H and ¹³C NMR, COZY, HMQC, HMBC, IR spectrum, mass spectroscopy, the chemical structure of cyclomucidoside C was established as (23R)-3-O- β -D-xylopyranoside-16 β , 23-epoxycycloartane-3 β , 15, 24, 25-tetraol.

Keywords: Astragalus, cycloartane, isolation.