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New ursane type sulfated saponins from the aerial parts of *Zygophyllum fabago* Linn. and their urease inhibitory activity

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The genus *Zygophyllum* belongs to the family *Zygophyllaceae* and consists of about 285 species and 22 genera, distributed in deserts and steppes from Mediterranean to Central Asia, South Africa and Australia. In Turkey only one specie *Zygophyllum fabago* is found (locally named as *YabaniKimynu*). Aerial parts of the plant collected at flowering stages have been used as an anti-rheumatic, anti-helminthic, cathartic and anti-asthmatic. Extracts may also contain photo-sensitizers. Antiviral activities were only observed at high concentrations closer to the upper limit for testing. These important pharmacological properties of the species prompted us to work on its phytochemical investigation as discussed elsewhere. The present studies describe the isolation and structure elucidation of seven new triterpenoid glycosides. Their structures were elucidated through spectral studies including 2D-NMR experiments (HMQC, HMBC, COSY and NOESY). The urease inhibitory effect as well as their molecular docking studies also been carried out to check the structure activity relationship.

Biography

Saleha Suleman Khan completed her PhD work in the field of organic Chemistry from H.E.J. Research Institute of Chemistry, University of Karachi and also worked in lab of Prof. Dr. James S. Nowick at the University of California Irvine, USA as a synthetic chemist on Higher Education Commission Pakistan Scholarship. Currently, she is working in Herbion Pakistan Pvt. Ltd., in Research & Development department and her main work is to develop new methods for the quantitative and qualitative determination of markers & biomarkers of medicinal herbs. She has published more than 23 papers in internationally reputed journals with more than 30 impact factor. She has been awarded Research Productivity Award in 2011 & 2012 to acknowledge her contribution in development of science in Pakistan by Pakistan Council of Science & Technology (PCST).

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