

B113 A new lupane triterpene from *Euphorbia portlandica*A.M. Madureira^a, C. Serrão^a, M.T. Duarte^b, M.F.M. Piedade^b, J. Ascenso^b and M.J.U. Ferreira^a^a Centro de Estudos de Ciências Farmacêuticas, Faculdade de Farmácia de Lisboa, Av. das Forças Armadas, 1600-083 Lisboa, Portugal. ^b Centro de Química Estrutural, Instituto Superior Técnico, Av. Rovisco Pais, 1096 Lisboa, Portugal.

Euphorbia portlandica L., an Euphorbiaceae, is commonly found in the coast of Portugal, especially in sand and rocks near the beaches. The *Euphorbia* genus, with more than 1600 species, has been a source of biological active compounds.

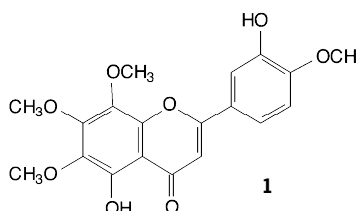
The whole dried plant was extracted with acetone. The acetone extract was suspended in MeOH/H₂O and extracted with *n*-hexane. Fractionation of the hexane extract yielded a new pentacyclic triterpene alcohol with a lupane skeleton which was established as 3 α -hydroxy-19 α -H-lup-20(29)-ene (**1**). The known pentacyclic triterpene glutinol, identified by comparison of its spectroscopic data with those described in the literature (**1**), was also isolated. The characterisation of the new compound and its acetylated derivative was based on NMR data, including 2D NMR, and mass spectrometry. Its structure and configuration was confirmed by X-ray diffraction analysis, using Cu radiation. The molecule crystallises in the monoclinic non centrosymmetric space group P2. The compound is an isomer of lupeol with a 3 α -hydroxyl group at C-3 and a β isopropenyl chain at C-19.

Lupeol and its esters, structurally related with compound **1**, are known for their biological activity, namely their anti-inflammatory and antitumour activities (**2**, **3**, **4**).

References: **1.** Siddiqui, B.M. et al. (1993) *Fitoterapia* 64: 339-403. **2.** Miles, D.H. et al. (1976) *J Pharm Sci* 65: 284-285. **3.** Pish, E. et al. (1995) *Nature Medicine* 1: 1046-1051. **4.** Geetha, T. et al. (1999) *Gen Pharmacol* 32: 495-497.

B114 Methoxylated flavones from *Artemisia rupestris*S. Halike^{a,b} and P.J. Houghton^b^a Xinjiang Uyghur Autonomous Region Institute of Drug Control, 9 South Xinhua Road, Urumchi, 830002, China. ^b Department of Pharmacy, King's College London, Franklin-Wilkins Building, 150 Stamford Street, London SE1 9NN, UK.

Artemisia rupestris L. (Compositae) is used by the Uyghur people of Xinjiang Uyghur Autonomous Region of China, for a variety of anti-inflammatory conditions including influenza, dermatitis, measles, burns, hepatitis and snakebite (**1**). Previous research on this plant have resulted in isolation of seven known compounds, including flavonoids and sesquiterpenes such as rupestric acid, rupestonic acid and iso rupestonic acid (**2-4**). Methanolic extracts of the aerial parts of air-dried, powdered plant material followed by preparative chromatography using a polyamide column yielded three compounds. The most abundant compound was identified as 5,3'-dihydroxy-6,7,8,4'-tetramethoxyflavone **1**, also known as gardenin D, by UV, MS and NMR spectroscopic methods. These compounds may possibly contribute to the anti-inflammatory effect, since several lipophilic flavonoids have been shown to inhibit eicosanoid synthesis (**5**). The anti-inflammatory and anti-oxidant screening of extracts and other constituents is in progress.



Acknowledgements: The project has been sponsored by The Chinese Scholarship Council.

References: **1.** Medicinal Plant of Xinjiang Uyghur Autonomous Region (1975), Urumqi, Xinjiang People's Press. **2.** Liu, Y.M., Yu, D.Q. (1985) *Acta Pharm. Sin.* 20: 514-516. **3.** Xu, G.S., Chen, X.Y. (1988) *Acta Pharm. Sin.* 23: 122-123. **4.** Xu, G.S. et al. (1991) *Acta Pharm. Sin.* 26: 505-507. **5.** Williams C.A et al. (1999) *Phytochemistry* 51: 417-423.