

TRITERPENES FROM LATEX OF *EUPHORBIA BALSAMIFERA*

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Key Word Index—*Euphorbia balsamifera*; Euphorbiaceae; tabaiba dulce; germanicol; germanicone; lupeol; lupenone; β -amyrin; cycloartenol; dihydroagosterol; cycloartanone.

Plant. Euphorbia balsamifera Ait. Source: Collected on the coast of Guia de Isora, Tenerife, Canary Isles. Previous work: germanicol, cycloartenol and lanosterol [1–3].

Present work. The unsaponifiable of the latex (11) was chromatographed on silica gel, yielding the following compounds which were characterized by their physical and spectroscopic data: *germanicol* (3.1 g), *germanicone* (89 mg), *lupeol* (4.5 g), *lupenone* (38 mg), β -*amyrin* (140 mg) and *cycloartenol* (300 mg) which were identified by comparison with authentic samples; *dihydroagosterol* (80 mg), obtained as alcohol, was characterized as the acetate, mp 165–171° (MeOH), $[\alpha]_D +62$ (CHCl₃; c 0.76); its UV spectrum [λ_{max} (EtOH) nm (log ϵ): 236 (3.89), 243 (3.95), 253 (3.79)] was in agreement with an homoannular dienic system which was corroborated by the NMR (CDCl₃) signal at δ 5.74 (2H, m, $W_{1/2}$ 15 Hz);

cycloartanone (50 mg), isolated for the first time in nature, mp 95–99° (MeOH), IR ν_{max} (CHCl₃) cm⁻¹: 3020, 1695; MS (probe) 70 eV m/e (rel. int.): 426 M⁺, 411 (M⁺–15; 100), 355, 342, 313, 288, 257, 245, 231, 175, 163, 161, 159, displaying characteristic fragments of tetracyclic triterpenes with a cyclopropane ring between C-9 and C-10 [4,5]; NMR (60 MHz, CDCl₃): δ 0.60 (2H, dd); its IR and NMR spectra were superimposable with those of a synthetic sample.

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TRITERPENOIDS OF THE STEMS OF SIX *CASTANOPSIS* SPECIES OF HONG KONG

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Key Word Index—*Castanopsis concinna*, *C. cuspidata*, *C. eyrei*, *C. fabri*, *C. fissa* and *C. hickelii*; Fagaceae; triterpenoids; rearranged oleananes, lupanes, hopanes and ursanes; steroids.

Plants. Castanopsis concinna A. DC., *C. cuspidata* (Thunb.) Schky., *C. eyrei* (Champ.) Tutch., *C. fabri*

Hance, *C. fissa* Rehd. and Wils., and *C. hickelii* A. Camus.