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Fitoterapia 72 (2001) 848–849

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FITOTERAPIA

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Phytochemical communication

## Cucubalugenin A, a new triterpenoid from *Cucubalus baccifer*

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Received 24 April 2001; accepted in revised form 29 May 2001

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### Abstract

A new triterpenoid, cucubalugenin A (**1**), has been isolated from the whole plant of *Cucubalus baccifer*. Its structure was elucidated by spectral methods. © 2001 Elsevier Science B.V. All rights reserved.

*Keywords:* *Cucubalus baccifer*; Cucubalugenin A; Triterpenoids

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**Plant.** *Cucubalus baccifer* L. (Caryophyllaceae) whole plant was collected from Chenggong County of Yunnan Province, in September 1999 and identified by Dr Y.M. Shui. A voucher specimen was deposited at the herbarium of Kunming Institute of Botany, Academia Sinica.

**Uses in traditional medicine.** Nephritis, hydropsy, bone-fractures, pulmonary tuberculosis and scrofula [1].

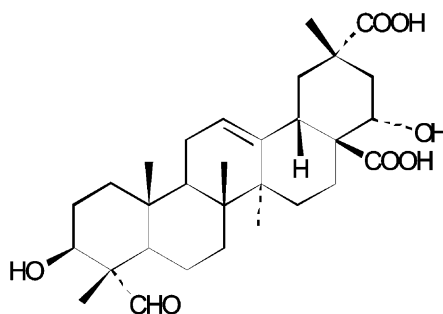
**Previously isolated constituents.** Oligosaccharides [2,3], tocopherol and tocotrienol [4], phytoecdysterones [5].

**New-isolated constituents.** Cucubalugenin A (**1**) (30 mg from 24.0 kg of air-dried plant).

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## 1

*Cucubalugenin A* (1).  $C_{30}H_{44}O_7$ , white solid, mp 224–226°C; IR bands (KBr): 3448, 2938, 1698, 1465, 1388, 1122, 1051  $cm^{-1}$ ;  $^1H$ -NMR (500 MHz,  $py-d_5$ ): 4.08 (1H, *t*, *J* 7.8 Hz, H-3), 5.70 (1H, *br s*, H-12), 3.33 (1H, *m*, H-15a), 2.58 (1H, *br d*, *J* 13.9 Hz, H-15b), 2.33 (2H, *br d*, *J* 13.3 Hz, H-16), 3.75 (1H, *dd*, *J* 3.8, 14.5 Hz, H-18), 3.54 (1H, *t*, *J* 12.4 Hz, H-19a), 2.09 (1H, *dd*, *J* 3.9, 12.4 Hz, H-19b), 5.25 (1H, *br s*, H-22), 9.58 (1H, *s*, H-23), 1.34 (3H, *s*, H-24), 0.91 (3H, *s*, H-25), 1.01 (3H, *s*, H-26), 1.81 (3H, *s*, H-27), 1.73 (3H, *s*, H-30);  $^{13}C$ -NMR (125 MHz,  $py-d_5$ ): 38.7 (C-1), 27.2 (C-2), 71.7 (C-3), 56.4 (C-4), 47.9 (C-5), 21.2 (C-6), 31.4 (C-7), 40.4 (C-8), 47.3 (C-9), 36.1 (C-10), 23.9 (C-11), 122.8 (C-12), 144.8 (C-13), 42.3 (C-14), 32.9 (C-15), 36.3 (C-16), 49.0 (C-17), 40.7 (C-18), 42.2 (C-19), 42.8 (C-20), 31.9 (C-21), 74.6 (C-22), 207.3 (C-23), 9.7 (C-24), 15.9 (C-25), 17.6 (C-26), 27.3 (C-27), 180.1 (C-28), 181.8 (C-29), 21.2 (C-30); pos. HRFABMS:  $[M + H]^+$  517.3231 (calc. 517.3165); pos. FABMS *m/z*: 517  $[M + H]^+$  (60), 499 (100).

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