PULVERIN, A NEW CHROMONE FROM THE FRUITS OF *NEOCHAMAELEA PULVERULENTA**

ANTONIO G. GONZÁLEZ, BRAULIO M. FRAGA and OLIVA PINO

Department of Organic and Biochemistry, University of La Laguna, Instituto de Investigaciones Químicas, C.S.I.C., Tenerife, Spain

(Received 27 January 1975)

Key Word Index—*Neochamaelea pulverulenta*; Cneoraceae; leña santa; chromones; 3,3-dimethylallylspatheliachromene; pulverin; sitosterol; spatheliabischromene.

Plant. Neochamaelea pulverulenta Erndt (Vent) [1] (*Cneorum pulverulentum* Vent.) A voucher specimen is deposited in the Herbarium of the Botanical Department, University of La Laguna. *Source*. Guaza Mountain, Tenerife, Canary Islands, in August. *Uses* Medicinal. *Previous work*. Aerial parts [2,3].

Present work. Green fruits (300 g) were extracted with hot EtOH, concentrated *in vacuo* and chromatographed over SiO₂. Elution with C₆H₆, C₆H₆-EtOAc and EtOAc gave: 3,3-dimethylallylspatheliachromene [4,5], the new natural product *pulverin* (45 mg), *sitosterol* and *spatheliabischromene* [4,5].

Pulverin. (2-methyl-6,8-di-C-prenyl-5,7-dihydroxychromone) (1), (Found: C, 73.29; H, 7.42; C₂₀H₂₀O₄ requires: C, 73.15; H, 7.37%) mp 147–149°, MS: *m/e* 328 (M⁺), 313, 285, 273, 257, 229, 217 (100%) 205, 177, 128. UV $\lambda_{\text{max}}^{\text{EtOH}}$ 214, 230, 265, 305(sh) nm. IR $\nu_{\text{max}}^{\text{CHCl}_3}$ 3350, 2960, 2900, 2850, 1660, 1600, 1420, 1100, 860 cm⁻¹. NMR (CDCl₃, τ) -2.96 (1H, phenolic proton at C₅), 3.62 (1H,

* Part 6 in the series *Chromenes and Chromones*. For Part V see González, A. G., Fraga, B. M. and Pino, O. (1975) *Rev. Real Acad. Ciencias* **69**, 347.

s, pyronic hydrogen), 4.75 (2H, *m*, 2 C=CH-), 6.55 (4H, *d*, *J* 8 Hz, 2 -CH₂-Ar), 7.66 (3H, *s*, pyronic methyl), 8.18 (6H, *s*, 2 Me-C≡) and 8.25 (6H, *s*, 2 Me-C≡). This compound was synthesized by Seshadri *et al.* [6], mp 149–150°, identical NMR spectrum. The other compounds isolated were identified by comparison with authentic samples.

Acknowledgements—We thank Prof. Primo and J. Sendra (Instituto de Agroquímica, Valencia) for the MS and Prof W. Wildpret and E. Barquín (Botanical Department, University of La Laguna) for supplying us with the material.

REFERENCES

1. Erdmant, G. (1952) *Pollen Morphology and Plant Taxonomy, Angiosperms*, 115, Almqvist-Wiksell, Stockholm.
2. González, A. G., Fraga, B. M. and Castañeda, J. P. (1972) *Anal. Quim.* **68**, 447.
3. González, A. G., Fraga, B. M. and Castañeda, J. P. (1974) *Anal. Quim.* **70**, 452.
4. Taylor, D. R. and Wright, J. A. (1971) *Rev. Latinoam. Quim.* **2**, 84.
5. González, A. G., Fraga, B. M. and Pino, O. (1974) *Phytochemistry* **13**, 2305.
6. Jain, A. C., Lal, P. and Seshadri, T. R. (1969) *Ind. J. Chem.* **7**, 1072.