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SCUTELLARIN AND HISPIDULIN-7-*O*-GLUCURONIDE FROM THE LEAVES OF *CLERODENDRUM INDICUM* AND *CLERODENDRON INFORTUNATUM*

S. SANKARA SUBRAMANIAN and A. G. RAMACHANDRAN NAIR

Department of Chemistry, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry-6, India

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Key Word Index—*Clerodendrum indicum*; *Clerodendron infortunatum*; Verbenaceae; 7-*O*-glucuronides of scutellarein and hispidulin.

Plant. Clerodendrum indicum L.[1] (Syn. *Clerodendron siphonanthus* R. Br., (voucher specimen No. 14/72 deposited at JIPMER), collected from Dehra Dun, North India. *Uses.* Medicinal.[1] *Previous work.* on sister sp.[2-4]

Present work. Flavonoids of leaves. Shade-dried leaves extracted with hot 80% EtOH and the concentrate fractionated into light petrol., C_6H_6, Et_2O, EtOAc solubles and the aq. mother liquor.

C_6H_6 *fraction.* Hispidulin (0·4%) m.p. 286–288°, λ_{max} MeOH (nm) 276, 338; triacetyl, m.p. 168–169°, demethylation, direct comparison and co-PC with authentic sample. Et_2O *fraction.* Scutellarein (0·5%) m.p. > 320°, λ_{max} 286, 339; tetra acetyl, m.p. 235–237°, direct comparison and co-PC; and hispidulin (0·1%).

EtOAc *fraction.* No crystalline flavonoid isolated, PC indicated two spots same as in aq. mother liquor.

Aq. mother liquor was diluted with 1:1 H_2SO_4 to a conc. of 7% and left in the ice chest for 24 hr. Colourless crystalline solid, m.p. 182–185° (1·0%) containing two flavonoids separated by fractional crystallization from MeOH (and by fractional crystallization of their acetates from EtOH) into scutellarin(scutellarein-7-*O*-glucuronide) not melting below 320°, λ_{max} 285, 337; acetyl, m.p. 205–206°, R_f, products of acid and enzyme hydrolysis, direct comparison and co-PC and hispidulin-7-*O*-glucuronide, m.p. 220–222°, λ_{max} 274, 337; acetyl, m.p. 236°, R_f, products of hydrolysis and co-PC.

Plant. C. infortunatum L.[1] (voucher specimen No. 15/72 deposited at JIPMER), collected from Dehra Dun. *Uses.* Medicinal.[1] *Previous work.*[1] Clerodin and sterol from leaves.

Present work. Flavonoids of leaves. On working up the leaves as described above, yielded the same flavone glucuronides (about 0·1%)—scutellarin and hispidulin-7-*O*-glucuronide with practically no free aglycones.

Comment. The flavonoid pattern of *C. indicum* and *C. infortunatum* is similar to *C. phlomides*[3] and *C. nerifolium*[4] in having the 6-oxygenated flavones occurring mainly as their glucuronides, and agrees with the general flavonoid character of the Tubiflorae.[5,6]

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