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ISO- AND NEO-FLAVONOIDS FROM *DALBERGIA RIPARIA**

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Key Word Index—*Dalbergia riparia*; Leguminosae; isoflavonoids; neoflavonoids.

Plant. *Dalbergia riparia* (Mart.) Bth., shrub or creeper, subfamily Leguminosae-Lotoideae.²

Source. Flooded banks of the Amazon river and its tributaries.

Wood. The powdered wood (5 kg) was extracted with EtOH. The C₆H₆ soluble portion of the extract was chromatographed on silica, yielding in order tectorigenin (300 mg),³ (*S*)-4-methoxydalbergione (30 mg),⁴ (6*aS*,11*aS*)-demethylhomopterocarpin (100 mg),⁵ dalbergin (300 mg),⁴ 7-hydroxy-6-methoxy-3',4'-methylenedioxyisoflavone (50 mg), afro-mosin (30 mg)⁶ and caviunin (150 mg).⁷ The benzene insoluble portion of the extract was chromatographed on silica yielding in order dalbergin (10 mg), a 7-*O*-glycosylcaviunin (100 mg) and tectoridin (2 g).⁸ The identification of the known compounds was confirmed by direct comparison with authentic samples. The structure of 7-hydroxy-6-methoxy-3',4'-methylenedioxyisoflavone, was deduced by spectral means. Its methyl ether proved to be identical, by direct comparison, with 6,7-dimethoxy-3',4'-methylenedioxyisoflavone,⁹ kindly provided by Prof. S. H. Harper. The identification of tectoridin involved hydrolysis to glucose and tectorigenin. The sugar of the 7-*O*-glycosylcaviunin was not characterized. It can only occupy the 7-position since the heteroside sustains a free hydroxyl at C-5 (shift of UV maxima upon addition of AlCl₃).

7-Hydroxy-6-methoxy-3',4'-methylenedioxyisoflavone. White crystals, m.p. 260–262° (MeOH–CHCl₃). $\nu_{\max}^{\text{KBr}}$ (cm⁻¹): 3472, 1625, 1495–1433, 1285, 1245, 1034, 867, 815. $\lambda_{\max}^{\text{EtOH}}$ (nm): 262, 295, 324 (ϵ 8100, 4700, 4400); no shift upon addition of AlCl₃ or H₃BO₃ + NaOAc; $\lambda_{\max}^{\text{EtOH}+\text{NaOH}}$ (nm): 225, 259, 299 inf., 351 (ϵ 8000, 8100, 3900, 7500); spectrum in presence of NaOAc very similar. PMR (C₅D₅N, τ). 1.85 (*s*, H-2), 2.11 (*s*, H-5), 2.51 (*d*, *J* 2.0 Hz, H-2'), 3.04 (*d*, *J* 8.0 Hz, H-5'), 4.04 (*s*, O₂CH₂), 5.1 (broad, OH), 6.28 (*s*,

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OCH_3). MS. M 312 (100%), m/e (%) 298 (33), 283 (5), 277 (10), 255 (3), 239 (4), 166 (19), 146 (19), 141 (7), 127 (10), 123 (6).

7-O-Glycosylcaviunin. White crystals, m.p. 190–192° (EtOH–H₂O, 4:1). $\lambda_{\text{max}}^{\text{EtOH}}$ (nm): 267, 295 (ϵ 38 050, 23 050); no shift upon addition of NaOAc; $\lambda_{\text{max}}^{\text{EtOH} + \text{AlCl}_3}$ (nm): 278, 300, 390 (ϵ 38 050, 28 950, 6400). $\nu_{\text{max}}^{\text{KBr}}$ (cm^{-1}): 3452, 1660, 1627, 1591, 1526, 1492. MS. M 536 (2%), m/e (%) 374 (100), 359 (34), 356 (12), 345 (4), 344 (6), 343 (12), 341 (7), 330 (21), 192 (3), 191 (6), 183 (3), 149 (4), 145 (3), 144 (5). **Pentaacetate.** White crystals, m.p. 184–185° (purified by silica chromatography). $\nu_{\text{max}}^{\text{KBr}}$ (cm^{-1}): 1740, 1640, 1620, 1515. PMR (CDCl_3 , τ): 2.18 (s, H-2), 2.93 (s, H-6'), 3.18 (s, H-8), 3.41 (s, H-3'), 4.30–4.50 (m, five H), 5.60–5.80 (m, two H), 6.06 (s, OCH_3), 6.13 (s, OCH_3), 6.16 (s, OCH_3), 6.23 (s, OCH_3), 7.55 (s, OCOCH_3 at C-5), 7.84 (s, OCOCH_3), 7.90 (s, three OCOCH_3). **Hydrolysis.** 7-O-Glycosylcaviunin (25 mg), MeOH (2 ml) and 2 N HCl (15 ml) were heated under reflux (48 hr). The mixture was cooled and extracted with CHCl_3 . The CHCl_3 was washed, dried and evaporated. The residue was recrystallized from MeOH, giving caviunin (5 mg).

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FLAVONOIDS FROM *POECILANTHE PARVIFLORA**

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In central Brazil 'coração de negro' or 'pau-ferro' designate a number of species belonging to different families which, such as *Poecilanthe parviflora* Benth. (Leguminosae–Lotoideae), yield durable timber. In an attempt to isolate the antifungal principles, the trunk wood of *P. parviflora*, collected in the Linhares Reserve, near Vitória, Espírito Santo State, was examined and found to contain, besides nerolidol and (2*S*)-sakuranetin (Ia),² a colourless compound and a yellow crystalline product which was apparently homogenous upon examination by TLC. Elementary, MS and functional analysis established the formula $\text{C}_{20}\text{H}_{13}\text{O}_3$ (OH)₃ for this yellow compound. This and the UV spectrum were consistent with a feebly acidic (absence of 7-OH) 5-hydroxyisoflavone (AlCl_3 -shift). While the PMR

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