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CONSTITUENTS OF *GUETTARDA PLATYPODA*

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Chemical examination of the roots of *Guettarda platypoda* DC. (Rubiaceae), a plant used in traditional medicine as a febrifuge, gave quinovic acid, 3-(*O*-fucosyl)-quinovic acid, morroniside, sweroside, and 5 α-carboxystrictosidine. From the same plant Bhattacharyya *et al.* (1) isolated quinovic acid, rotundic acid, β-sitosterol, and a saponin.

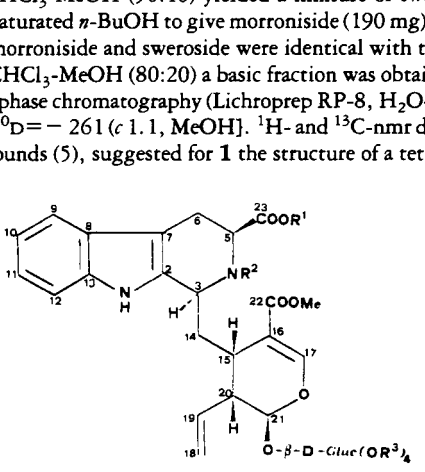
EXPERIMENTAL

GENERAL EXPERIMENTAL PROCEDURES.—^{1}H-nmr spectra were recorded on a Varian EM 360 and ^{13}C-nmr spectra on a Bruker AM 400 spectrometers (TMS as internal reference); ms on an AEI MS 902 instrument, 70 eV; tlc and cc: Kieselgel 60 (Merck).

PLANT MATERIAL.—Roots of *G. platypoda* were collected near Itamaraca (Recife, Brazil) in March 1982. A voucher specimen of the plant (no. 5341), identified by Alda Chiappeta, is deposited at the Herbarium of the Instituto dos Antibioticos, Universidade Federal de Pernambuco, Recife, Brazil.

ISOLATION AND IDENTIFICATION.—The roots of *G. platypoda* (0.5 kg) were extracted three times with MeOH at room temperature (25 g). By means of cc of a fraction of the residue (14 g) eluting with $CHCl_3$-MeOH (95:5), we obtained quinovic acid (150 mg) and 3-(*O*-fucosyl)-quinovic acid (350 mg) which were identified by direct comparison (^{1}H nmr, ms, mp) with authentic samples and literature data (2). Elution with $CHCl_3$-MeOH (90:10) yielded a mixture of two iridoids, which were re-chromatographed using H_2O-saturated *n*-BuOH to give morroniside (190 mg) and sweroside (130 mg). The ^{13}C- and ^{1}H-nmr spectra of morroniside and sweroside were identical with those previously reported (3,4).

Eluting with $CHCl_3$-MeOH (80:20) a basic fraction was obtained (300 mg), which was further purified using reversed-phase chromatography (Lichroprep RP-8, H_2O-MeOH, 1:1) to give compound **1** [mp 225°, with dec; $[\alpha]^{20}D = -261$ (*c* 1.1, MeOH]. ^{1}H- and ^{13}C-nmr data, in comparison with those reported for analogous compounds (5), suggested for **1** the structure of a tetrahydrodesoxycordifoline.



	R^1	R^2	R^3
1	H	H	H
2	Me	H	H
3	Me	Me	H
4	Me	Ac	Ac

Because of the absence in the literature of spectral data of the four possible stereoisomers at C-3 and C-5, **1** was treated with CH_2N_2 giving the monomethyl derivative **2** and the dimethyl derivative **3**. By acetylation of **2** with pyridine /Ac_2O, we obtained the carbomethoxypentaacetyl derivative of **1**, compound **4**, which showed the same physical and spectroscopic data as 5 α-carbomethoxypentaacetylstrictosidine $[\alpha]^{20}D = -46$ (*c* 1, $CHCl_3$); ms M^+ at *m/z* 798; ^1H nmr (C_6D_6) δ 1.70 (9H, s, $3\times OCOCH_3$); 1.90 (6H, s, $NCOCH_3$ and $OCOCH_3$); 2.5-2.7 (2H, m, H_2-6); 3.15 (6H, s, $2\times OCH_3$); 3.1-4.3 (6H, m, H-20, H-15, H-3, H-5′ and H_2-6′); 4.7-5.5 (7H, m, H-21, H_2-18, H_4-1′-4′); 5.7-5.8 (1H, m, H-19); 6.0 (1H, m, H-5); 7.1-7.6 (5H, m, H-17, H-9, H-11 and H-12); 9.0 (1H, bs, NH). On the basis of the aforementioned data compound **1** was identified as 5 α-carboxystrictosidine already isolated from *Rhazia orientalis* (6,7). ^{13}C-nmr spectra of **1** and its mono and dimethyl derivatives are reported here for the first time (see Table 1).

TABLE 1. ^{13}C-nmr Data of **1-3**

Atom no.	Compounds		
	1 (CD_3OD)	**2** (CD_3COCD_3)	**3** (CD_3COCD_3)
C-2	133.2	137.1[a]	135.8
C-3	53.2	52.0	59.8
C-5	60.1	56.9	64.4
C-6	25.2	25.6	21.8
C-7	109.0[a]	107.4	107.0
C-8	128.0	127.7	128.1
C-9	118.8	118.0[b]	118.4
C-10	120.1	118.4[b]	119.7
C-11	122.6	121.2	121.7
C-12	112.1	111.6	111.9
C-13	138.4	136.8[a]	137.2
C-14	35.6	33.1	33.0
C-15	32.4	31.6	31.4
C-16	109.9[a]	110.8	112.1
C-17	156.1	154.0	153.1
C-18	119.6	119.2	119.2
C-19	135.2	135.8	135.5
C-20	45.7	44.9	45.9
C-21	97.6	97.0	97.7
C-22	170.9	168.5	168.7
C-23	176.5	173.7	173.7
OMe	52.6	51.1, 51.6	51.6, 52.0
NMe	—	—	35.1
C-1′	100.5	99.7	100.3
C-2′	74.7	74.1	74.7
C-3′	78.0[b]	77.5	78.1
C-4′	71.9	71.3	71.9
C-5′	78.6[b]	77.5	78.1
C-6′	63.1	62.4	63.0

[a-b]Within the same column the assignments with the same letter may be reversed.

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