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CYCLOPEPTIDE ALKALOIDS FROM *ZIZYPHUS XYLOPYRA*

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In our continuing search (1-7) for cyclopeptide alkaloids from *Zizyphus* species, we report here the isolation and characterization of the cyclopeptide alkaloids mauritine-D and nummularine-B from the bark of *Zizyphus xylopyra* Willd. These alkaloids have not previously been reported from this source.

EXPERIMENTAL

PLANT MATERIAL.—The bark of *Z. xylopyra* used in this investigation is collected from Varanasi district, UP, India. A voucher specimen is kept in the Department of Medicinal Chemistry, Banaras Hindu University.

EXTRACTION AND ISOLATION OF PEPTIDE ALKALOIDS.—Air-dried, finely powdered bark (4 kg) of *Z. xylopyra* was exhaustively extracted with a mixture of C₆H₆-MeOH-NH₄OH (100:1:1), and the crude alkaloids (0.4 g) were isolated in the usual manner (8). The crude alkaloids were fractionated on a silica gel column, eluting with increasingly polar CHCl₃/MeOH mixtures. The cyclopeptide alkaloids, mauritine-D (8 mg) (9) and nummularine-B (7 mg) (10), were obtained by repeated preparative tlc of the appropriate fractions eluted from the above column and identified by ir, uv, ¹H nmr, ms, and hydrolysis.

The structures were confirmed by comparison with authentic samples (mp, mmp, co-tlc, and superimposable ir).

Full details of the isolation and identification of the compounds are available on request to the senior author.

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INDOLE ALKALOIDS AND QUASSIN FROM *QUASSIA AFRICANA*

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In our continuing phytochemical investigation of biologically active constituents from Simaroubaceae spp., we report here the occurrence in root barks of *Quassia africana* Baill. (syn. *Simaba africana* Baill.) of three alkaloids (canthin-6-one, 4,5-dimethoxycanthin-6-one, β -carboline-1-propionic acid) and quassin, an additional quassinoid different from those previously isolated from this plant (1). Their structures were established by spectroscopy and direct comparison with authentic samples.

EXPERIMENTAL

PLANT MATERIAL.—Root samples of *Q. africana* were collected in northeastern Zaïre (October 1983) and in the south Congo (February 1984). A voucher specimen has been deposited at the Botanical Institute of the Free University of Brussels.

ISOLATION OF CANTHINONE ALKALOIDS.—The crude chloroformic extract obtained after alkalization of the dried powder was extracted with 0.1 N HCl. The extraction of the acid aqueous phase with CHCl_3 led to isolation of canthin-6-one (70 mg, 0.07%). 4,5-Dimethoxycanthin-6-one (40 mg, 0.04%) was further isolated by extraction with CHCl_3 after adjustment to pH 10 of the aqueous phase. Purification of both alkaloids was achieved by preparative tlc on Si gel with toluene- Me_2CO -EtOH- NH_4OH (50:30:4:1) (2).

Isolation of β -carboline-1-propionic acid (10 mg, 0.02%).—The dried powder was extracted with MeOH acidified with HOAc. The methanolic extract was concentrated after dilution with H_2O ; the pH value was adjusted to 5 and the alkaloid was precipitated by addition of picric acid. The picrate was dissolved in Me_2CO - H_2O (1:1), chromatographed through an Amberlite IRA 400(Cl^-), and purified by preparative tlc on Si gel with toluene-EtOH-EtOAc- NH_4OH (4:4:2:1) (3).

Extraction of quassin (25 mg, 0.05%).—The dried powder was extracted with MeOH and the residue was fractionated on a short Si gel column with CHCl_3 containing increasing amounts of MeOH. The fraction which contained quassin was further purified by preparative tlc on Si gel using CHCl_3 -MeOH (7:3) (4).

Full details of the isolation and identification of the reported compounds are available upon request.

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