

A MORPHINAN ALKALOID FROM *ANTIZOMA ANGUSTIFOLIA*¹

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In our continuing search for biologically active compounds from indigenous South African flora, we have investigated *Antizoma angustifolia* (Burch.) Miers ex Harv. (Menispermaceae). In the folk medicinal context, *A. angustifolia* was used against abdominal disorders (1). We report here the high yield isolation and characterization of sinoacutine, a morphinandienone-type alkaloid. Also isolated was β -sitosterol. These compounds have not been reported previously from this source. The slight anti-inflammatory activity of sinoacutine previously reported (2) is in agreement with our results (26% inhibition of phlogistic response at 300 mg/kg dose).

EXPERIMENTAL

PLANT MATERIAL.—The whole plant of *A. angustifolia* used in this investigation was collected on December 2, 1984, 50 km north of Pretoria. A voucher specimen is deposited in the Schweikerdt Herbarium, University of Pretoria.

EXTRACTION AND FRACTIONATION.—Air-dried, milled plant material of *A. angustifolia* (7 kg) was successively extracted with C_6H_6 (121 g extract), EtOAc (170 g extract), and MeOH (273 g extract) at room temperature for 48 h. After removal of the solvents, the crude extracts were fractionated separately over Si gel (Kieselgel 60, 70–230 mesh; Merck). Elution was conducted with mixtures of petroleum ether, EtOAc, and MeOH of increasing polarity. Fractions with corresponding R_f values on the tlc (petroleum ether-EtOAc, 1:1) were combined into two groups.

Group 2 was found to exhibit anti-inflammatory activity (3).

ISOLATION AND IDENTIFICATION OF SINOACUTINE.—The active group was chromatographed over Si gel, and elution with EtOAc-MeOH (9:1) gave sinoacutine that crystallized from EtOAc as colorless prisms (16 g; 2.8% of total extract), mp 197–200° [lit (3) mp 197–199°]; $[\alpha]^{25}_D -78^\circ$ ($c=1.0$, $CHCl_3$), $[\alpha]^{25}_D -177^\circ$ ($c=1.0$, MeOH). ¹H- and ¹³C-nmr spectra and other physical data were essentially as previously reported (4–7); details of the isolation and spectra can be obtained upon request from the major author.

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