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## CONSTITUENTS OF *PITHECELLOBIUM MULTIFLORUM*

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*Pithecellobium multiflorum* Benth. (Fabaceae), known locally as "canafistula de boi", has shown strong uterine stimulating activity (stem bark, aqueous extract) (1), and a petroleum ether-soluble fraction of the roots showed ED<sub>50</sub> 1.0 µg/ml in the P-388 lymphocytic system in cell culture (2). On fractionation, this activity was not observed and no active compounds could be isolated; lupeol and α-spinasterol were obtained.

#### EXPERIMENTAL

**PLANT MATERIAL.**—Roots of *Pithecellobium multiflorum* Benth. (Fabaceae) were collected in the Department of Loreto, Peru, in August, 1976. A sample is in the Herbarium of the National Arboretum, U.S.D.A., Washington, D.C.

**ISOLATION.**—Root material (1 kg) was extracted with light petroleum ether to afford a residue (0.73 g) which, when chromatographed on silica gel, (30 g) yielded lupeol (9 mg, 0.0009%), mp 213–214°, [α]<sub>D</sub><sup>25</sup>+31.2° (c 0.3, pyridine); [Lit. (3) mp 215°, [α]<sub>D</sub><sup>25</sup>+33°]; nmr, (CDCl<sub>3</sub>) δ 1.68 (3H, s, 20-CH<sub>3</sub>), 3.21 (1H, dd, J=6.2, 7.9 Hz, 3α-H) and 4.57, 4.67 (2H, bd s, 24-H<sub>2</sub>); ms, m/z 426 (M<sup>+</sup>, 100%), 218 (65), 189 (48), 135 (50), 121 (41), 109 (56), and 95 (49). The chromatography also yielded α-spinasterol (28 mg, 0.0028%), mp 168–169°, [α]<sub>D</sub><sup>25</sup>+0° [Lit. (4) mp 166–168°, [α]<sub>D</sub><sup>25</sup>+0°]; nmr, (CDCl<sub>3</sub>) δ 3.58 (1H, m, 3α-H) and 5.09 (3H, m, 7, 22 and 23-H); ms, m/z 412 (M<sup>+</sup>, 100%), 300 (20), 271 (80), 255 (28), 246 (20) and 81 (33).

*P. multiflorum* had not been examined previously; *P. dulce* has also afforded lupeol and α-spinasterol, together with other triterpenes (4).

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