

The inhibitory effect of polymyxin B sulphate on *Ps. aeruginosa* was enhanced in the presence of all concentrations of Tween 80 tested (0.004–0.5%); the effect increasing with increasing concentrations of Tween 80.

Preliminary experiments using end-point methods have confirmed these results and shown that the activity of our test agents is substantially increased by the presence of Tween 80.

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Pharmacologically active constituents of *Girardinia heterophylla* (Dcne)

SIR,—*Girardinia heterophylla* (Dcne), a stinging nettle obtained from the Kumaoun hills (India) was tested for the active constituents.

An acetone extract (100% w/v) from the leaves of the plant was prepared. The acetone was immediately evaporated at room temperature and the volume of the extract was made up to the original by adding normal saline. The presence of 5-hydroxytryptamine (5-HT) in the acetone extracted material from *G. heterophylla* was indicated by a spasmogenic response on atropinised oestrus rat uterus, which was completely blocked by brom-lysergic acid diethylamide. Identification of histamine was done after boiling the acetone extracted material with strong hydrochloric acid and removing the acid by distillation (Gaddum, 1953). This acid-treated extract contracted the atropinised guinea-pig ileum and elicited a fall in the cat blood pressure, the two responses were blocked after mepyramine.

Chromatographically, 5-HT was detected by the method of Jepson & Stevens (1953) and histamine by that of Pratt & Auclair (1948). The R_f values obtained by using the solvents (a) n-butanol:acetic acid:water (4:1:5 v/v) were for 5-HT and the extract each 0.25; for histamine and the extract 0.19 and (b) n-butanol:ethanol:acetic acid:water (8:2:1:3 v/v) were for 5-HT and the extract each 0.60; for histamine and the extract 0.20.

Thus, the presence of 5-HT and histamine in *G. heterophylla* (Dcne) has been demonstrated both biologically and chromatographically.

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