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References

Birkhofer, L. & Hempel, K. (1963). *Chem. Ber.*, **96**, 1373–1381.
Carlsson, A. & Lindqvist, M. (1962). *Acta physiol. scand.*, **54**, 87–94.
Carlsson, A. & Waldeck, B. (1963). *Acta pharmac. tox.*, **20**, 371–374.
Carlsson, A. & Waldeck, B. (1965). *J. Pharm. Pharmac.*, **17**, 243–244.
Creveling, C. R. (1963). In *Pharmacology of Cholinergic and Adrenergic Transmission*. Editors: Koelle, G. B., Douglas, W. W. & Carlsson, A. Oxford, 1965. Pergamon.
Fischer, J. E., Musacchio, J. M., Kopin, I. J. & Axelrod, J. (1964). *Life Sci.*, **3**, 413–419.
Hillarp, N.-Å. & Malmfors, T. (1964). *Ibid.*, **3**, 703–708.
Kirshner, N. (1962). *Science, N.Y.*, **135**, 107–108.
Malmfors, T. (1965). *Acta physiol. scand.*, **64**, Suppl. 248.
Potter, L. T. & Axelrod, J. (1963). *J. Pharmac. exp. Ther.*, **142**, 299–305.
Rutledge, Ch. O. (1966). *Ibid.*, in the press.
Stjärne, L. (1966). *Acta physiol. scand.*, **67**, 441–454.
Weiner, N. & Rutledge, Ch. O. (1966). In *Mechanisms of Release of Biogenic Amines*. Editors: Euler, U. S. von, Rosell, S. & Uvnäs, B. Oxford: Pergamon.

Similar pharmacological properties of ergometrine and methysergide

SIR,—Ergometrine (*N*-[1-(hydroxymethyl)ethyl]-D-lysergamide) and methysergide (*N*-[1-(hydroxymethyl)propyl]-1-methyl-D-lysergamide) are closely related chemically, and we find that they share anti-5-hydroxytryptamine (5-HT) and oxytocic activities.

With the uterus of the rat in di-oestrus, suspended in de Jalon solution at 30°, approximately equal contractions were obtained with 1·0 μg ergometrine and 3·5 μg methysergide. A similar potency ratio was observed using the ileum of the guinea-pig but the doses required to produce contractions were ergometrine 10–50 μg and methysergide 20–200 μg.

In experiments made on three preparations from rats in oestrus, the amounts of the two substances which inhibited 5-HT contractions of the isolated uterus were, methysergide 0·15, 0·2, and 0·3 μg, and ergometrine 0·5, 0·5, and 0·7 μg. The mean potency ratio from these three experiments was methysergide : ergometrine = 2·7 : 1.

These experiments on the uterus of the rat show that ergometrine possesses appreciable anti-5-HT activity, being only 2·7 times less potent than methysergide, while methysergide itself is only 3·5 times less potent than ergometrine in oxytocic activity.

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