Bradykinin triacetate [2 prolyl 3,4-[^{3}H]-(N)] serves as the tracer and separation of antibody bound and free antigen is achieved using a double antibody technique. Using an 18 h incubation period a sensitivity of 50 pg is obtained. This compares favourably with previously reported radioimmunoassays (Spragg, Austen & Haber, 1966) and with bioassay.

Immunoreactive bradykinin has been measured in exudate from normal and inflamed human skin. The exudate was collected using a suction bullae technique (Black, Greaves, Hensby & Plummer, 1976) and placed into a solution containing Trasylol and EDTA.

Our preliminary results support a role for bradykinin as a mediator of inflamed human skin.

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Automatic analysis of blood pressure and electrocardiograph records

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The following communication and demonstration were given at the Middlesex meeting of the British Pharmacological Society, 4–6 January 1978.

Food-intake and locomotor activity: effects of mazindol and spiperone

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Mazindol reduces food-intake, and central dopaminergic (DA) mechanisms may play a mediating role in this action (Kruk & Zarrindast, 1976). Our results show that in male Lister rats, adapted over a 3-week period to consuming their daily food intake in a 4 h period (11.00–15.00), mazindol (2.5 mg/kg) markedly reduced food intake in the first h but not in the subsequent 3 h period (Figure 1a). The dopamine receptor blocking agent spiperone (Anden, Butcher, Corrodi, Fuxe & Ungerstedt, 1970) at a dose of 0.1 mg/kg significantly attenuated this mazindol induced anorexia within the first h of the test, but was without effect on food intake in the remainder of the test (Figure 1a). This finding is consistent with previous reports of attenuation of mazindol anorexia by other DA antagonists (Zambotti, Carruba, Barzaghi, Vicentini, Groppetti & Mantegazza, 1976; Kruk & Zarrindast, 1976). However, spiperone alone, at the dose administered, also produced a significant decrease in food intake in the first h of the test. We sought further evidence to determine if the reduction of feeding under spiperone alone was secondary to a more general depression or interference with motor responses.

Male Lister rats were run in an open-field apparatus (60 cm^2; equipped with 10 infra-red beams and photocells), and activity measured as the total number of beam interruptions at 1 min intervals for 5 minutes. Spiperone (0.1 mg/kg) produced a marked deficit in locomotor activity, while mazindol (2.5 mg/kg) increased activity (Figure 1b). A group of animals injected with both spiperone and mazindol showed a level of activity not different from that following spiperone alone (Figure 1b).

It seemed possible that the antagonism of mazindol anorexia by spiperone, leading to an increase in food intake (Figure 1a), involved a mechanism of action distinct from the non-specific depression of behav-

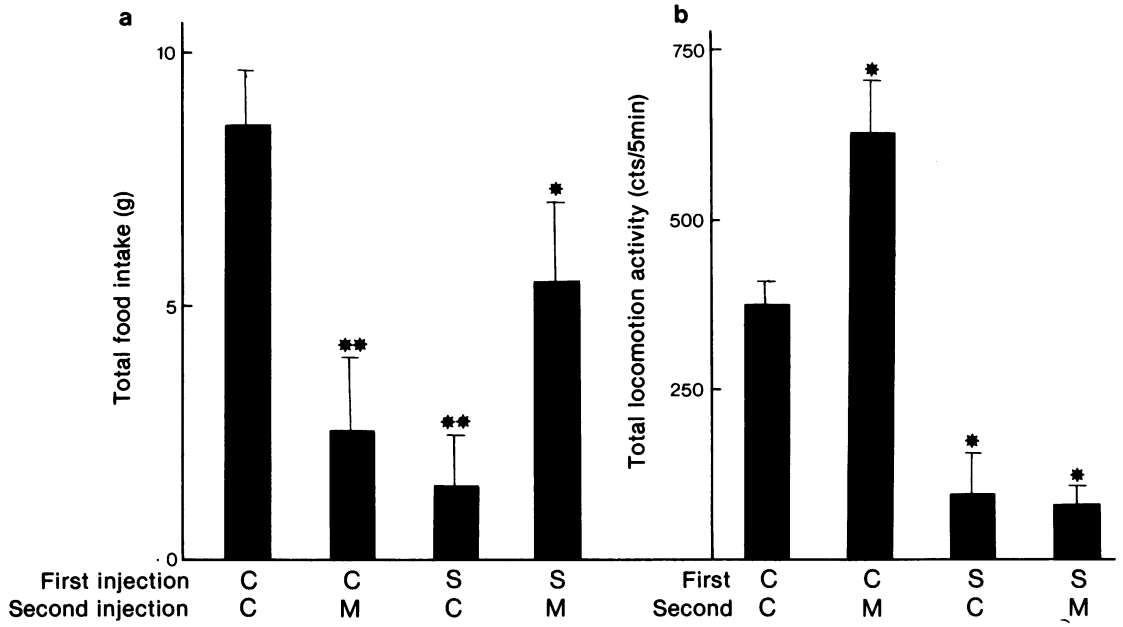

Figure 1a Food intake (g) in a 1 h feeding test, following 20 h food-deprivation (mean + s.d.). Mazindol (2.5 mg/kg s.c.) injected 30 min before the test; spiperone (0.1 mg/kg i.p.) injected 2 h before the test. $n = 10$ per group. **b** Locomotor activity (photobeam interruptions) in a 5 min open-field test (mean + s.d.). Drug doses and injection times as in the feeding experiment. $n = 7$ per group. In both experiments, rats were adapted to a reversed light cycle, and run in the dark phase. C, control; M, mazindol; S, spiperone. $^{*}P < 0.01$; $^{**}P < 0.001$.

ioural responses (including feeding and locomotor responses) seen with spiperone alone. This conclusion was supported by further tests with spiperone (0.03 mg/kg) used in the same two experimental procedures described above. Spiperone, at this lower dose, significantly attenuated the anorexia produced by mazindol (2.5 mg/kg), but did not, when given alone, either reduce food intake or depress locomotor activity. Hence, it is possible to antagonize mazindol-induced anorexia with the dopamine receptor blocking agent, spiperone, under conditions which probably do not involve a non-specific behavioural depressant action of spiperone. This suggests that at a sufficiently low dose, spiperone can be used to antagonize drug-induced anorexia, involving an action relatively specific to feeding.

Mazindol was generously donated by Wander Pharmaceuticals, and spiperone by Janssen Pharmaceutica.

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An appraisal of the anti-inflammatory activity of copper salts

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First reports of the effective use of copper complexes to treat rheumatoid arthritis and other connective tissue diseases appeared in the 1940s (see Sorenson & Hangarter, 1977) although the prophylactic value of copper bracelets in the same diseases has been claimed for considerably longer. More recently copper complexes of nonsteroidal anti-inflammatory