〔Agents Actions, **35**, 141-148 (1992)〕 [Lab. of Pharmacology]

The Effect of Prednisolone on Substance P-Induced Vascular Permeability in Mice.

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The effect of prednisolone on substance P (SP)-induced vascular permeability increase in male ddY and WBB6 F1-W/W^v (W/W^v) mice was investigated. SP caused a concentration-dependent increase in vascular permeability in ears of both ddY andW/W^v mice. SP-induced vascular permeability increase was inhibited by prednisolone in both strains of mice. Diphenhydramine inhibited SP-induced vascular reaction only in ddY mice. In both strains, atropine inhibited SP-induced vascular reaction, although acetylcholine did not cause a vascular effect. SP-induced histamine release from ddY mouse peritoneal mast cells was inhibited by prednisolone. From these results, the vascular effect of SP is mediated by both mast cell-dependent and independent mechanisms.

〔Br. J. Pharmacol., **105**, 19-22 (1992)〕 [Lab. of Pharmacology]

Effect of Murine Recombinant Interleukin-5 on the Cell Population in Guinea-Pig Airways.

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Intratracheal injection of murine recombinant interleukin-5 (mrIL-5) caused a dose-dependent increase in the number of macrophages, eosinophils, neutrophils and epithelial cells in the bronchoalveolar lavage fluid (BALF) of guinea-pigs. Prednisolone inhibited the mrIL-5-induced increse in macrophages, eosinophils, neutrophils and epithelial cells in the BALF. Ketotifen reduced the increase in eosinophils, neutrophils and epithelial cells. Simultaneous administration of disodium cromoglicate and mrIL-5 into trachea prevented the mrIL-5-induced increase in epithelial cells without affecting changes in the other inflammatory cells.

〔Eur. J. Pharmacol., **221**, 333-342 (1992)〕 [Lab. of Pharmacology]

Leukotriene Receptors in the Skin of Rats differ from those of Mouse Skin or Rat Stomach Strip.

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The effects of specific cysteinyl-leukotriene (cys-LT) receptor antagonists, FPL 55712, LY 171883, MCI-826 and L-648051, on cys-LT-induced cutaneous reactions in rats and mice, and on cys-LT-induced contractile responses in rat stomach smooth muscle were investigated. These antagonists dose-dependently inhibited cys-LT-induced cutaneous reactions in the mouse ear. In rats, however, only MCI-826 inhibited the reactions. Cys-LT-induced contractile responses of rat stomach smooth muscle were inhibited by all these drugs. These results suggest that cys-LT receptors in rat skin have an affinity different from that of receptors in mouse skin or rat stomach.