〔Japan. J. Pharmacol., **54**, 468 (1990)〕

Effect of a non-protein fraction from an extract of the inflamed skin of rabbits inoculatcd with *vaccinia* virus (Neurotropin) on Meth A-induced delayed type hypersensitivity.

HIROSHI MORI*, YOSHIYUKI KURIMOTO, QIANG XU and AKIHIDE KODA

The effect of a non-protein fraction from an extract of inflamed skin of rabbits inoculated with vaccinia virus (NSP) was studied on Meth A tumor-indued delayed type hypersensitivity (Meth A-DTH) in BALB/c mice. NSP enhanced the Meth A-DTH. NSP also enhanced the DTH suppressed with 5-fluorouracil (5-FU). Moreover, NSP inhibited the fatal effect of 5-FU and restored the decrease of body weight caused by 5-FU. However, NSP reduced partially but significantly the suppression of the tumor growth by 5-FU. NSP may be useful for cancer treatment in combination with chemotherapeutic agents, if NSP does not inhibit their antitumor activity.

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The effect of substance P on the antigen-induced bronchoconstriction in gninea pigs.

HIROICHI NAGAI*, FUMIO TSUJI and AKIHIDE KODA

The effect of substance P (SP) on bronchoconstriction in vitro and in vivo was investigated in guinea pigs. SP (1 to 100 ng/ml) caused the contraction of isolated tracheal muscle. Antigen-induced contraction of the muscle was slightly enhanced by the pretreatment with SP (1 ng/ml). The enhancement was augmented by eliminating the epithelium of the muscle. SP caused the bronchocnstriction at an i. v.-infusion rate of 1 μg/min, but not between 0.01 and 0.1 μg/min. Antigen-induced respiratory disorder was accelerated by the subthreshold SP (0.1 μg/min). The reactivity of bronchial muscle to acetylcholine (Ach) was potentiated by the subthreshold SP. These results suggest the dual actions of SP, the direct contractile activity and enhancing activity of the antigen- and Ach-induced constriction.

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Potent inhibitory activity of HSR-6071, a new antiallergic agent, on passive cutaneous anaphylaxis (PCA).

EIICHI MAKINO, TETSUO OHASHI, HIROMI TAKAHASHI, HDEO KATO, YASUO ITO, HIROICHI NAGAI*, AKIHIDE KODA and HIROSHI AZUMA

HSR-6071, 6-(1-pyrrolidinyl)-N-(1H-tetrazol-5-yl)-2-pyrazinecarboxamide, inhibited 48-hr homologous PCA in rats by i. v. and p. o. treatment (ED50 : 0.0096 mg/kg and 0. 18 mg/kg, respectiyely). HSR-6071 also inhibited the IgE-mediated histamine(Hi) release from rat peritoneal cells (IC50 : 4.6×10^{-10} M) and compound 48/80-induced Hi release, but not A23187-induced one. HSR-6071 unaffected an increase in vascular permeability induced by Hi, serotonin (5HT) and bradykinin, and an contraction of guinea pig ileum by Hi, acetylcholine and 5HT. HSR-6071 might show a potent anti-allergic activity through suppressing chemical mediator release from mast cells.