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Inhibitory effect of HSR-6071, a new anti-allergic agent, on experimental asthma in rats and guinea pigs.

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HSR-6071 inhibited the IgE-mediated asthma in rats. The IgE- or IgG-mediated bronchoconstriction (BC) in guinea-pigs was also prevented by HSR-6071. HSR-6071 suppressed antigen-induced histamine (Hi) and SRS-A release from lung of guinea-pigs, where as SRS-A release was inhibited more potently than that of Hi was. HSR-6071 scarcely affected Hi- or Ach-induced BC in guinea-pigs, but inhibited LTC₄-induced BC. HSR-6071 inhibited cyclic AMP phosphodiesterase activity and relaxed guinea-pig isolated trachea. The anti-allergic action of HSR-6071 may be due to suppression of antigen-induced Hi and SRS-A release from lung and to antagonism of SRS-A.

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Anti-allergic effects of ketanserin on animal models of allergic reactions.

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Ketanserin (KE), a selective 5₂-serotonergic antagonist, inhibited IgE and IgG-mediated homologous PCAs in mice, and an increase of capillary permeability caused by histamine (Hi), serotonin (5HT) and LTC₄ in mouse skin. KE had little effect on antigen-induced release of Hi from rat peritoneal mast cells. KE inhibited an antigen-induced contraction of guinea-pig trachea at an early period after the antigen and also inhibited Hi- and 5HT-induced contractions. But KE did not inhibit the contraction by carbachol and LTC₄. KE inhibited a Forssman antibody-induced increase of airway resistance of guinea pigs at a late phase. KE inhibits anaphylactic reactions probably due to the antagonistic action of Hi and 5HT.

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Anti-allergic action of gomisin A (TJN-101),

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TJN-101 inhibited homologous PCA in mice and reversed cutaneous anaphylaxis in rats, passive Arthus reaction in rats and picrylchloride-induced contact dermatitis in mice. TJN-101 also inhibited the contraction of guinea pig tracheal muscle induced by antigen, histamine, LTD₄ and CaCl₂ in vitro were also inhibited by TJN-101 in a dose related fashion. Additionally, TJN-101 inhibited the antigen-induced histamine release from rat peritoneal mast cells. These results indicate that TJN-101 shows an anti-allergic action. Anti-allergic mechanism of TJN-101 in guinea pig tracheal muscle seems to be related to the inhibition of histamine release, antagonisms to the chemical mediators and inhibition of calcium movement.