

Effect of Magnolia officinalis on immediate type allergic reaction

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We studied the effect of aqueous extract of Magnolia officinalis bark(MOAE) on the immediate type allergic reaction. MOAE(0.01 to 1 g/kg) dose-dependently inhibited compound 48/80 induced systemic anaphylaxis in rats. MOAE(0.1 and 1 g/kg) also significantly inhibited local immunoglobulin E (IgE)-mediated passive cutaneous anaphylactic reaction. When MOAE was pretreated at concentrations ranging from 0.01 to 1 g/kg, the plasma histamine levels were reduced in a dose-dependent manner. MOAE(0.001 to 1 mg/ml) dose-dependently inhibited the histamine release from rat peritoneal mast cells(RPMC) activated by compound 48/80 or anti-dinitrophenyl(DNP) IgE. The level of cAMP in RPMC, When MOAE(0.01 and 0.1 mg/ml) had a significant inhibitory effect on anti-DNP IgE-induced tumor necrosis factor- α (TNF- α) production from RPMC. These results indicate that MOAE inhibits immediate type allergic reaction in vivo and in vitro.

[PD3-3] [04/19/2001 (Thr) 13:30 - 14:30 / Hall 4]

Microphysiometry of Corni Fructus extracts on SaOS-2 Cells

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The microphysiometry instrument manufactured under the name Cytosensor is a relative new bioassay device developed to measure proton excretion rates of living cell populations. Cell physiology and metabolism are linked to acidification of the extracellular environment. Extracellular acidification rate (ECAR) data is generated and plotted against time to display changes in cell metabolism coincident with the addition of chosen receptor antagonist.

The major physiological function of parathyroid hormone(PTH) is maintenance of Ca²⁺/Pi homeostasis in human via the parathyroid hormone receptor(PTHr) in bone cells. PTH(1-34, 1-27) has been shown to elicit a significant extracellular acidification response in SaOS-2 cells by microphysiometric measurement.

For the first time, application of a herbal medicine, extracts of Corni Fructus to SaSO-2 cells was studied by this instrument for effects on extracellular acidification and compared to PTH driven responses. The result from this experiment can indicate that Corni Fructus extracts may act as a increasing factor of ECAR in human osteoblast-like cells compared with PTH and can be used for screening other herbal extracts or components with known antiosteoporotic effects for PTHR binding activity.

[PD3-4] [04/19/2001 (Thr) 13:30 - 14:30 / Hall 4]

Differentiation of the three kinds of traditional chinese medicine, Sa-Mul-Tang, Bo-Jung-Ik-Ki-Tang, and Shin-Ki-Hwan, from the two behavioral parameters using the elevated plus-maze test.

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