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The signaling components of high affinity IgE receptor (FcεRI) were searched by yeast-hybrid screening of the cDNA library constructed from RBL-2H3 cells. The cytoplasmic part of the FcεRI-β chain was found to specifically interact with PLCγ2, and further comparatives studies were conducted focusing on the differential regulation of two PLC- isoforms through FcεRI. The inhibitors of Src, Syk, and protein kinase C similarly affected the tyrosine phosphorylations of PLCγ1 and PLCγ2 but the inhibitors of PI3-kinase and p42/44 ERK effectively inhibited the activation of PLCγ1 but not PLCγ2. Our results provide for the first time the functional roles of the NH2-terminal of the chain in the signal transduction of FcRI, and the meaning for the existence of two closely related PLCγ isoforms in the mast cells.

[PA1-49] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Protective effect of metabolized Chungpesagan-tang on Hypoxia/ Reperfusion induced-PC12 cell damage

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This research was performed to investigate the protective effect of Chungpesagan-tang (CPS) against ischemic damage in PC12 cells. To elucidate the mechanism of the protective effect of CPS on ischemic insult, cell viability and changes in activities of Superoxide dismutase, Glutathione Peroxidase, Catalase, Caspase 3 and the production of Malondialdehyde were observed after treating PC12 cells with CPS which was metabolized by rat liver homogenate. Pretreatment of CPS with liver homogenate increased its protective effect against ischemic insult by reducing the harmful effect of CPS itself. The result showed that CPS had the highest protective effect against hypoxia/reperfusion at the dose of 1 mg/ml in PC12 cells, probably by recovering the redox enzyme activities and MDA to control level. (Supported by HMP 01-PJ9-PG1-01CO03-0003 and BK21 project, Korea)

[PA1-50] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

CJ-11668, A new selective and potent COX-2 inhibitor, reduces inflamation, fever and pain in animal models

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CJ-11668 is a new potent and selective COX-2 inhibitor. CJ-11668 showed COX-2 inhibition (IC50) of 65nM and selectivity ratio (COX-1/COX-2) of 770 in the cell based assay. In the human whole blood assay, CJ-11668 showed COX-2 inhibition (IC50) of 370nM and selectivity ratio (COX-1/COX-2), 135. The treatment of CJ-11668 (5 mg/kg, p.o.) produced a significant inhibition (35%) of inflamed rat paw volume in the carrageenan-induced acute inflammation. CJ-11668 also suppressed the PGE2 level (69% inhibition, 1 mg/kg, p.o.) in the zymosan-induced mouse air pouch model after 3 hrs. Furthermore, CJ-11668 showed a prolonged effect (36% inhibition, 1 mg/kg, p.o.) at 12 hrs post-dosing, whereas the same dose of Celebrex had no effect. The anti-fever and anti-hyperalgesia effects were also determined in rats. In conclusion, CJ-11668 is a selective COX-2 inhibitor with potent anti-inflammatory, anti-pyretic and analgesic activity.

[PA1-51] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Calcium signal dependent cell death by presenlin-2 mutation in PC12 cells and in cortical neuron from presenlin-2 mutation transgenic mice

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