cells. TNF-α-stimulated IL-8 secretion and mRNA expression were assessed in HT29 intestinal cell line in the presence of luteolin (1~100μM). Luteolin suppressed TNF-α-induced IL-8 secretion and mRNA expression in dose-dependent manner. Furthermore, activation of p38 and ERK mitogen-activated protein kinase was inhibited by luteolin. These results suggest that luteolin inhibited TNF-α-stimulated IL-8 secretion by blocking phosphorylation of both p38 and ERK pathway.

[PA1-37] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Selective B cell activation by polysaccharide isolated from the root of Acanthopanax koreanum

Han SangBae°, Ahn HyoJung, Yoon YeoDae, Kim YoungHo*, Lee JungJoon, Moon JaeSun, Lee ChangWoo, Lee KiHoon, Park SongKyu, Kim HyungChin, Kim HwanMook

Kor Res Inst Biosci Biotech (KRIBB):*College of Pharmacy, Chungnam Natl. Uni.

Many polysaccharides isolated from plants have been shown to enhance various immune responses in vivo and in vitro. Here we demonstrate that polysaccharide isolated from the root of Acanthopanax koreanum (AK) has a unique mode of immunostimulation with regard to its cell-type specificity. AK was found to markedly increase polyclonal IgM antibody production and the proliferation of B cells. However, AK did not affect the proliferation of T cells, the IL-2 and IFN-g expression of Th1 cells, or the IL-4 expression of Th2 cells. AK also did not increase iNOS transcription and NO production in macrophages. AK activity was not affected by polymyxin B, a specific inhibitor of LPS, suggesting that AK had different mode of action from LPS. AK activity in B cells from C3H/HeJ, known to have a defective TLR4, was decreased in comparison with that in control B cells from C3H/HeN mice. Anti-TLR2, anti-TLR4, anti-CD19 and anti-CD79b, but not anti-CD38, antibodies blocked B cell proliferation, indicating the possible cellular binding sites of AK. AK-induced B cell proliferation was significantly inhibited by PTK inhibitor genistein, PI3K inhibitor wortmannin, and p38 inhibitor SB203580, but not by MEK-1 inhibitor PD98059. In conclusion, our results demonstrate that AK, plant-derived polysaccharide, has a distinct mode of action in that it selectively activated B.

[PA1-38] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

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

Lee EunSoo°, Kim KunTae, Park Ji-Ho, Kang Chulhun, Sohn Nak-Won, Soh Yunjo

Dept Neuroscience, Graduate School of East-West Medical Science, Kyung Hee University, Yongin-si, Kyungki-do

This research was performed to investigate the protective effect of Yangguksanwha-tang(YST) agaist ischemic damage in PC 12 cells. To elucidate the mechanism of the protective effect of YST on ischemic insult, cell viability and changes in activities of Superoxide dismutase, Glutathione Peroxidase, Catalase, capase 3 and the production of Malondialdehyde were observed after treating PC12 cells with YST which was metabolized by rat liver homogenate. Pretreatment of YST with liver homogenate increased its protective effect against ischemic insult by reducing the harmful effect of YST itself. The result showed that YST had the highest protective effect agaist hypoxia/reperfusion at the dose of 2㎍/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)

[PA1-39] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]