PLA_2, $cPLA_2$)], all reduced muscarinic receptor-mediated sAPP release, suggesting that all of the three PLA_2 isoforms might be involved in muscarinic receptor-mediated sAPP release. OxoM (a muscarinic receptor agonist)-induced calcium entry was reduced by pretreatment of manoalide (an irreversible PLA_2 inhibitor), TEA-PC and BEL, but not AACOCF3. In addition, we observed that pretreatment of SKF96365 and Gd^{3+} (inhibitors of CCE) inhibited OxoM–induced $cPLA_2$ activation but showed no significant effect on $iPLA_2$ activation induced by OxoM. These results indicate that although both calcium-independent $iPLA_2$ and $sPLA_2$ isoforms does not regulated by CCE, they participate in the muscarinic receptor-mediated activation of CCE, and then the CCE induced by PLA_2 isoform activation involves in muscarinic receptor-mediated increase in sAPP release. On the other hand, $cPLA_2$ activation induced by muscarinic receptor activation could regulate muscarinic receptor-mediated CCE followed by sAPP release.

[PB4-1] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Immuno-modulation effects of cefodizime, a cephalosporin, in rat dendritic cells

Joo SeongSoo, Won TaeJoon, Lee DoIk°
Department of Immunology, College of Pharmacy, Chung-Ang University, Seoul 156-756, Korea

According to recent reports, cefodizime (CEF), a third generation cephalosporin has the capability of chemotactic activity of neutrophils and monocytes and may act as the strong immuno-modulator. This study was planned to demonstrate whether CEF has the proposed effect on rat dendritic cells in vitro. Dendritic cells were taken from rat spleen tissue and cultured for a week. The obtained dendritic cells were treated with 10㎍/㎖, 50㎍/㎖, 100㎍/㎖ cefodizime and 10IU/㎖ IFN-γ+1㎍/㎖ LPS. Through the studies, we found that cytokines, such as IL-1β, IL-6, IL-12, were induced by cefodizime in dendritic cells. This result indicated that cefodizime can be used as one of adjuvant therapies in diseases that need an immuno-boosts during a main treatment, i.e. cancer therapy. In conclusion, we recognized that cefodizime may induce the activation macrophage, NK cell, CTL, B cell in collaboration with activated dendritic cells. The present study suggests that cefodizime may extend its major role for antibiotics to multi-potential immuno-modulators.

[PB4-2] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Antitumor activity of Acanthopanax senticosus extract and its possible immunological mechanism

Shin Kwang-Soon, Yoo Yung-Choon, Yoon Taek-Joon°
Department of Food and Biotechnology, Kyonggi University , College of Medicine, Konyang University

Antitumor and immunomodulatory activities of an aqueous extract (GF100) of Acanthopanax senticosus was examined. In experimental lung metastasis of colon26-M3.1 carcinoma cells, intravenous (i.v.) administration of GF100 2 days before tumor inoculation significantly inhibited lung metastasis in a dose-dependant manner. The i.v. administration of GF100 also exhibited the therapeutic effect on tumor metastasis of colon26-M3.1 cells, when it was injected 1 day after tumor inoculation. In an in vitro cytotoxicity analysis, GF100 at the concentration up to 1000 ug/ml did not affect the growth of colon26-M3.1 cells. In contrast, GF100 enhanced the responsiveness to a mitogen, concanavalin A (ConA), of splenocytes in a dose-dependent manner. Peritoneal macrophage stimulated with GF100 produced various cytokines such as IL-1b, TNF-a, IL-12 and IFN-g in an in vitro experiment. The macrophages obtained from the mice which were injected with GF100 (500 ug) 3 days before the assay showed significantly higher tumoricidal activity against tumor cells than that of the untreated macrophages. In addition, the i.v. administration of GF100 significantly augmented NK cytotoxicity to Yac-1 cells. The depletion of NK cells by injection of rabbit anti-asialo GM1 serum completely abolished the inhibitory effect of GF100 on lung metastasis of colon26-M3.1 cells.

[PB4-3] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]