

$\mu\text{g}/\text{mL}$, lectin $10\mu\text{g}/\text{mL}$, praecoxin A $10\mu\text{g}/\text{mL}$ to normal murine macrophage. Both in vitro and in vivo, lectin-conjugated praecoxin A did not show stronger effects than lectin and praecoxin A even though lectin-conjugated praecoxin A showed an increase in IL-6 mRNA expression in accordance with the dose & the time, and showed the similar increase with lectin or praecoxin in IL-6 mRNA expression

[PB4-9] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Effects of Lectin-conjugated Ellagitannin on the IL-1 β gene expression of macrophage

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Lectin-conjugated praecoxin A, which is conjugated the praecoxin A, a kind of tannins extracted from plants, with the wheat germ agglutinin(WGA) that specifically binds to melanoma, of carbohydrate-binding proteins(lectin), is a compound aiming the development of the missile antitumor drug selectively being activated in cancer cells. Besides the direct antitumor effect of this compound, we have tried to prove an immune activity as a tannin through the macrophage activation by Lectin-conjugated praecoxin A. This has been done by conducting the IL-1 gene expression in vivo and in vitro. We analyzed the total RNA by using RT-PCR at 4. 8. 12. 24 hours after the incubation after adding the lectin-conjugated praecoxin A of 1, 10, $100\mu\text{g}/\text{mL}$, lectin $10\mu\text{g}/\text{mL}$, praecoxin A $10\mu\text{g}/\text{mL}$ to normal murine macrophage. As a result, the lectin-conjugated praecoxin A increased the IL-1 β mRNA expression according to the time and the dose. However, no outstanding increase effect (great superiority) comparing to lectin and praecoxin A has been seen through out the study.

[PB4-10] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Hydroquinone enhances the levels of interleukin-4 production and IgE in antigen-primed BALB/c mice

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Hydroquinone (HQ), a major metabolite of benzene, is present in large quantities in cigarette tar and represents the predominant form of human exposure to benzene. In this study we investigated the ability of HQ to enhance the production of IL-4 in antigen(alum)-primed BALB/c mice. HQ was found to enhance IL-4 production by keyhole limpet hemocyanin (KLH)-primed lymph node cells in a dose-dependent manner. The enhancing effect of HQ on IL-4 production was approximately maximal at a concentration of $50\mu\text{M}$ with 10-fold increased levels of IL-4 production. HQ enhanced KLH-induced IL-4 mRNA expression, suggesting that the enhancing effect of HQ on IL-4 production may occur at the transcriptional level. To determine whether HQ could up-regulate IL-4 production in vivo, HQ was given i.p (10 mg/kg for 14 days every other day during KLH immunization) in BALB/c mice. HQ treatment resulted in significant increase of IL-4 and IgE levels in KLH-primed mice. These findings provide an evidence that HQ enhances allergic immune responses in cigarette smokers.

[PB4-11] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Inhibition of interleukin-12 p40 production in lipopolysaccharide-stimulated mouse macrophages by costunolide, a sesquiterpene lactone