Han SH, Sung KH, Yim DS, Lee SY, Ha NJ, Kim KJ

Department of Pharmacy, Sahmyook University, kimkj@syu.ac.kr, Seoul 139-742

Monocytes and tissue macrophages produce at least two groups of protein mediators of inflammation, interleukin 1(IL-1) and tumor necrosis factor(TNF). Recent studies have emphasized that TNF and IL-1 modulate the inflammatory function of endothelial cells, leukocytes, and fibroblasts. The effects of linarin, the main compound from Chrysanthemum zawadskii, on the mouse macrophage cell line, RAW 264.7 cells, were therefore investigated. It was found that linarin could stimulate macrophage activation by the production of cytokines. The production of TNF-α by macrophage treated with linarin was examined in dose dependent manner. The production of IL-1 , however, was not the case by this natural product. The herb of Chrysanthemum zawadskii, which is called Gu-Jul-Cho, has been used in traditional medicine for pneumonia, bronchitis, cough, common cold, pharyngitis, bladder-related disorders, women's diseases, gastroenteric disorders, and hypertension. These results suggest that linarin may function through macrophage activation.

[PB4-7] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

IL-12 expression effects of macrophage by the lectin-conjugated praecoxin A

Han GS, Joo SS, Kim MS°, Kim HJ, Lee DI

Department of Immunology, College of Pharmacy, Chung-Ang University

It has been understood that in cytokines there is a IL-12, which acts as T-cell growth and differentiation factor, secreted from macrophage, which is a natural immune-response cell and where it attacks and destroy the target cells in response directly to an antigen. This research was designed to see the broad immune activity reaction such as in anti-virus and anti-HIV other than the direct anti-cancer activity by combining the praecoxin A having a specific anti-cancer activity of Ellagitamins, a hydrolytic tannin with many immune activities, with the wheat germ agglutinin(WGA) specifically binding to melanoma. For the analysis of IL-12 mRNA expression in vitro and in vivo, we added lectin 10㎍/㎖, praecoxin A 10㎍/㎖, lectin-conjugated praecoxin A 1, 10, 100㎍/㎖ to macrophage and analyzed total RNA at 4, 8, 12, 24 hour after the incubation. It is expected to obtain the increase outcomes of IL-12 mRNA expression in lectin, praecoxin A and lectin-conjugated praeocoxin A in accordance with the dose and the time but is not expected that the lectin-conjugated praecoxin would show much stronger increase outcomes than lectin or praecoxin A does.

[PB4-8] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Immune activity effects by the Lectin-conjugated praecoxin A

Han GS, Joo SS°, Kim MS, Kim HJ, Lee DI

Department of immunology, College of Pharmacy, Chung-Ang University

Lectin-conjugated praeocoxin A is a compound that is combined the praecoxin A having a specific anti-cancer activity of Ellagitamins, a hydrolytic tannin with many immune activities, with the wheat germ agglutinin(WGA) specifically binding to melanoma. In order to see an immune activity other than anti-cancer activity of this compound, we have studied the IL-6 mRNA expression in cytokine (especially in proinflammatory), which is secreted by macrophage in vivo and in vitro. The analysis was done by using RT-PCR for IL-6 mRNA expression in the total RNA extracted from macrophage after the incubation for 4, 8, 12, 24 hours after adding the lectin-conjugated praecoxin A of 1, 10, 100