

immature DCs as determined by increased allogenic mixed lymphocyte reaction (MLR) and IL-12 production. Phenotypic analysis for the expression of class II MHC molecules and major co-stimulatory molecules such as B7-1, B7-2 and CD40 also confirmed that acharan sulfate could induce maturation of immature DCs. These results suggest that the antitumor activity of acharan sulfate is at least in part due to activation and induction of differentiation of professional antigen presenting cells.

[PB4-7] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Proliferation of Hematopoietic Cells by Phellinus linteus polysaccharide

Joo SeongSoo, Kang Hee Chul, Lee Dok^o

Division of Immunology, College of Pharmacy, Chung Ang University, Seoul, Korea

In drugs for neutropenia, which suppress bone marrow and which are needed to control their dosage and the therapy periods, there has been lots of emphasis on drug development to increase blood cells. In order to see the effects of an impact to hematopoietic cells, the hematopoietic effect of Phellinus linteus polysaccharide by segregating the study levels in matured cells both in bone marrow cell and splenocyte were examined. As a result, these compounds increased the number of hematopoietic cells in both case to treated group with cyclophosphamide (CTX) and non-treated group. In addition, these compounds were maintained in a bit more by rapidly proliferating cells in advance of the log phase in normal cells with a decrease after 48 hours. In conclusion, Phellinus linteus polysaccharide may reduce the CTX-mediated bone marrow suppression and are found to promote or modulate the growth and proliferation of splenocytes and bone marrow cell. These results suggest that Phellinus linteus polysaccharide would be valuable in use as an adjuvant therapy in combination with radio and chemotherapy.

[PB4-8] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Activation of mouse macrophage cell line by aloe gel components : The carbohydrate fraction from Aloe vera gel.

Han ShinHa^o Kim YoungSoo No YoungIl Chung GiHawn Pyo ChungHawn Choi UnChung Yim DongSool Lee SookYeon Ha NamJoo Kim KyungJae

Department of Pharmacy, Sahmyook University, Seoul

Tissue macrophages produce at least two groups of protein mediators of inflammation, interleukin 1(IL-1) and tumor necrosis factor (TNF) when they were activated. Recent studies have emphasized that TNF and IL-1 modulate the inflammatory function of endothelial cells, leukocytes, and fibroblasts. Aloe vera has been claimed to have several important therapeutic properties including acceleration of wound healing, immune stimulation, anti-cancer and anti-viral effects. However, the biological mechanisms of these activities are unclear. Therefore we studied on what simple component from aloe vera was able to improve immune system. We used five different fractions (F1, F2, F3, F4, F5), which are different molecular weight fractions separated from aloe vera. The effects of aloe fractions on the mouse macrophages cell line, RAW 264.7, were investigated. It was found that F5 could stimulate macrophage cytokine production, TNF- α and F3 could also stimulate macrophage cytokine (IL-1) production. F1, 2 could induce nitric oxide release. F 3, 4, 5 were found to show inhibitory activity against nitric oxide (NO) production in macrophages. These results suggest that aloe fraction may function, at least in part, through macrophage activation.

[PB4-9] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Proliferation of Splenocytes and Bone-marrow Cells by Rg3, A Compound of Ginsenoside

Joo SeongSoo, Park Jeong Hwan, Lee Dok^o

Division of Immunology, College of Pharmacy, Chung Ang University, Seoul, Korea