showed significant inhibition of the activation of NF-κB after LPS stimuli in transfectant human SCC-13. The inhibitory effects ranged from 30 to 50% compared to the control group.

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

The effects of rutin, alginate and allicin on NO production and adhesion molecule expression by radiation in human endothelial cells

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Inflammation is one of the major consequences of radiation injury. This process is influenced by a number of factors, such as adhesion molecules expressed either on leukocytes or on endothelial cells (ECs), shear forces and molecules produced by ECs, and circulating blood cells. Since previous studies have shown that the production of NO and the ICAM-1 expression were increased in γ-ray exposed human umbilical vein endothelial cells (HUVEC), we investigated the effect of the various compounds (rutin, alginate and allicin) on the production of NO and cell-surface expression of adhesion molecules (ICAM-1, VCAM-1, E-selectin) in radiation-induced inflammatory state of HUVEC. After irradiated HUVEC were treated with various compounds for 4 days, NO production and the expression of adhesion molecules by HUVEC were assessed by colormetric assay and ELISA, respectively. Our results demonstrated that rutin, alginate and allicin reduced radiation-induced ICAM-1 expression and E-selectin. In addition, NO production was reduced by rutin, allicin and alginate treatment on HUVEC. These data suggest that rutin, alginate, and allicin may be anti-inflammatory agents for the therapeutic potential in radiation-induced inflammatory response.

[PB4-5] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Activation of Immune response by production of cytokines , Interleukin 1(IL-1) and tumor necrosis factor(TNF-α), in LPS- stimultated RAW 264.7 treated with aqueous extract of Korean Propolis

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An aqueous extract of Korean Propolis was assayed for immune responses.
Propolis has been used for thousands of years in folk medicine for lots of purposes including immunostimulating and antibacterial properties made by honeybees from the buds and bark of certain trees and plants. 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. Propolis synergistically augmented the production of TNF-α, IL-1 in the presence of LPS in murine macrophage cell line RAW264.7. The production of the cytokines IL-1 and TNF-α by macrophage treated with propolis(5%~20% of soup)was examined in dose dependent manner, but production of IL-1 decreased at high concentration(>25% of soup). These results suggest that propolis may function through macrophage activation.

[PB4-6] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Effect of Linarin ,The main compound of Chrysanthemum zawadskiion, LPS-induced TNF-α production in murine macrophage cell line RAW 264.7 cells.