

20 µg/ml on MKN-45 and MKN-28 cells, respectively. The expression levels of p53 and p21 proteins were measured by Western blotting after treatment of urushiol for 48 hours. The level of p53 proteins was not regulated significantly by urushiol on both cell lines. However, the p21 protein was slightly upregulated compared with the control groups. A cyclin-dependent kinase inhibitor p21 (WAF1/CIP1) protein, a key regulatory protein of the cell cycle, may have contributed to cell cycle arrest in urushiol treated stomach cancer cells. Thus, it is probable that urushiol mediated cell cycle arrest in MKN-45 and MKN-28 cells. However, further studies about several apoptosis-related proteins and DNA ladder formation are needed to know the mechanism of urushiol-mediated cell death in human gastric cancer cells.

[PB2-4] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Inhibitory effect of Ban-Myo(*Mylabris phalerata*) on tumor metastasis

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We investigated the suppressive effect of solvent fractions from Ban-Myo(*Mylabris phalerata*) on tumor metastasis. Butanol(BuOH) fraction of Ban-Myo(BM) showed strong cytotoxic activity to B16-BL6 melanoma cell with IC50 value of 100µg/ml, while crude extract and ethylacetate(EtOAc) fraction of BM didn't even at concentration of 500µg/ml. Crude extract and butanol (BuOH) fraction induced apoptosis in B16-BL6 melanoma cells by FACS analysis. In experimental metastasis model developed by B16-BL6 melanoma cells, crude extract(500µg/mouse), ethylacetate(EtOAc) and butanol (BuOH) fractions significantly inhibited lung tumor colonization as compared with PBS-treated control group. Crude extract, EtOAc and BuOH fractions of BM also upregulated IL-1 β and TNF-alpha expression in murine peritoneal macrophages. Taken together these results, we suggest that crude extract, EtOAc and BuOH fractions of BM have apoptosis related cytotoxicity, anti-metastatic activity, activation of immune cells such as macrophages.

[PB2-5] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Study on Antitumor Effect of Kamicheungyeolhaedogtang(KCHT)

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To evaluate the antitumor activity and antimetastatic effects of Kamicheungyeolhaedogtang (KCHT), studies were done experimentally. KCHT is a oriental prescription for treatment of cancer. Its extract exhibited a significant cytotoxicity against A549, SK-MEL-2, SK-OV-3 and B16-BL6 cell lines and significantly inhibited DNA topoisomerase I. The T/C% was 145.8% in KCHT treated group in S-180 bearing ICR mice. It suppressed lung metastasis by B16BL/6 pathohistologically and CAM angiogenesis by 42% of control. These results suggest that KCHT extracts has antitumor and anti-metastatic effects.

[PB2-6] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Effects of aging and dietary restriction on the extracellular matrix proteins of rat tissues

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The protein levels of collagen type I, collagen type IV and fibronectin were examined in 6-, 12-, 18-, and 24-month old Fischer 344 rats which were fed ad libitum and diet-restricted. The protein level of type I collagen increased in the kidney and testis by aging and it was modulated by dietary restriction. The m-RNA level of type I collagen in the testis was changed as a similar pattern. Type I collagen in the liver and lung had no change by aging and dietary restriction. The protein level of type IV collagen decreased by aging in the testis and kidney and dietary restriction saved their decrease. However, the m-RNA level of type IV collagen in the testis was not changed by aging and dietary restriction. The protein level of type IV collagen in the liver increased by aging and dietary restriction modulated the increase. However, type IV collagen was not detected in the lung. The protein level of fibronectin increased several times by aging in the testis, kidney and liver and dietary restriction modulated their increase. Even though fibronectin protein level decreased in the lung by aging, dietary restriction had no effects on it. Therefore, the detailed molecular and biochemical studies are further needed to clarify the effects of aging and dietary restriction on the levels of extracellular matrix proteins.

[PB3-1] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Nicotine alters the characteristics of cAMP-exposed cerebellar glial cells

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Cerebellar glial cells prepared from 8-day rat pups were used to investigate the effects of subacute nicotine exposure on the glutamate uptake. These cells were exposed to cAMP and nicotine for 2 to 10 days in situ. cAMP and nicotine exposure did not result in any change in cerebellar glial cell viability at concentrations up to 500 μ M. Glutamate uptake in the dibutyl cAMP-treated glial cells was significantly increased (30.7%) by 100 μ M of nicotine. After subacute exposure with nicotine, the basal glutamate uptake was significantly decreased (11.4%). Furthermore, the IC50 of L-pyrrolidine-2,4-dicarboxylic acid, glutamate uptake inhibitor, on the glutamate uptake was 6.7 times decreased compared to the control (184.1 vs 27.4 μ M) and the sensitivity of glial cells to PDC was increased. In addition, the activity of glutamine synthetase in subacute nicotine exposed glial cells was 2 times increased compared to the control. After nicotine exposure, the changes in the characteristics of glutamate uptake in cAMP-exposed glial cell were opposite to those in cultured glial cell without cAMP. These results indicate that subacute nicotine exposure modulates the characteristics of the glutamate uptake and the GS activities of glial cells. Also the result suggest that the different states of glial cells during age and in regions might be differently affected by the exposure of subacute nicotine.

[PB3-2] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Effects of dehydroevodiamine on the release and uptake of glutamate in cultured cerebellar cells.

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