collagen- and AA-stimulated platelet aggregation in a dose-dependent manner, but did not affect U46619-, or thrombin-stimulated platelet aggregation. Carvacrol did not suppress collagen-induced arachidonic acid liberation from [^{3}H]AA-labeled platelets, indicating that it has no effect on phospholipase A_2 (FLA_2) activation in response to collagen. Furthermore, carvacrol significantly suppressed the TXB_2 generation induced by addition of [^{3}H]AA, but had no influence on PGD_2 and 12-HETE generation.
These results suggest that carvacrol inhibits collagen- and AA-stimulated platelet aggregation probably through suppression of TXB_2 generation.

[PC1-11] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Cell cycle arrest effect of manassatin B on human leukemia cell line HL-60

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Manassatin B, isolated from Saururus chinensis, showed significant dose-and time-dependent antiproliferative activity against HL-60 cell by BrdU incorporation assay. At 5 ug/ml manassatin B treated cells, G1 phase cell cycle was mainly arrested via p21Waf1 induction, not p27Kip1. Futhermore, we investigate the downstream signal transduction following such accumulation. The protein level of cdk6, cyclin D1 was markedly reduced, but there is no change in CDK 2/4 and cyclin D/E protein expression level. Cdk 2 activity was significantly inhibited in manassatin-treated cell, these effect was closely associated with the upregulation of p21. Immunoprecipitation experiments verified that p21 was indeed complexed with cdk 2.
These results suggest that decreased cdk 6, cyclin D1 protein level and increased p21WAF1 associated with CDK2 induce pRb dephosphorylation. In turn, hypophosphorylated pRb are mainly complexed with E2F and then G1 to S phase transition is inhibited. So, Manassatin has a strong cell cycle arrest effect in G1 phase on human leukemic HL-60 cell.

[PC1-12] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

The inhibitory effects of six natural products on tyrosinase activity

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To identify inhibitors of melanogenesis, we compared the effects of 6 natural products on mushroom tyrosinase, human melanocytic tyrosinase activity. The cytotoxicity of the products were also tested on cultured B16F10 mouse melanoma cells.
Each extract significantly inhibited tyrosinase activity in vitro and B16F10 melanoma cell line. In B16F10 cell lines, extracts of watermelon's inner shell(1mg/ml), morning glory's seed(0.25mg/ml), licorice root (0.25mg/ml) inhibited tyrosinase activity as strong as kojic acid(1mg/ml).
They were strong inhibitors of tyrosinase activity in B16 mouse melanoma cell lines at less than 1mg/ml concentration.
These results show that extract of watermelon's inner shells, morning glory's seeds, licorice roots, ginkoes, lettuces could be developed as skin whitening component of cosmetics.

[PC1-13] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Effects of chitosan on renal dipeptidase release from renal proximal tubules

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