pathway, from [^{3}H]arachidonic acid were evaluated by radiochromatographic analysis with rabbit platelet rich plasma *in vitro*. Collagen- or arachidinic acid-stimulated platelet aggregation was inhibited dose-dependent by piperine. However, U46619-, TxA_2 mimetics, or thrombin-stimulated platelet aggregation was almost no effect. Futhermore, piperine suppressed arachidonic acid liberation by [^{3}H] arachidonic acid-labled platelets exposed to collagen, indicating that it might affect phospholipase A_2 (PLA_2) activation on collagen-induced arachidonic acid liberation from membrane phospholipids. The compound also suppressed TxB_2 generation by collagen-induced platelet to which [^{3}H]arachidonic acid was added, whereas 12-HETE generation was enhanced. And the compound was almost no effect on PGD_2 generation. Therefore, we suggest that piperine may affect PLA_2 activation and cause suppression of cyclooxygenase which can stimulate 12-HETE production from arachidonic acid via lipoxygenase, thus eliciting an inhibition of platelet aggregation.

[PA1-42] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Antimicrobial and Cytotoxic activities of Lavandulyl Flavanone of Sophora flavesce

Park NangKyu 1 Lee HyunOk 2 Jeong Seungll 1 Kim WonShin 1 Kim YounChul4

Department of Herbal Resources, Professional Graduate School of Oriental Medicine, 1Devision of Natural Sciences & Technology, College of Natural Sciences, and 4Department of Pharmacy, College of Pharmacy, Wonkwnag University, Iksan 570-749, Kor

The antimicrobial activity and cytotoxicity of ethyl acetate extract, and two isolated constituents of the dried roots of Sophora flavescens were investigated using broth dilution method. The maximum activity was exhibited by kurarinone against Streptococcus mutans, Staphylococcus epidermidis, Staphylococcus aureus, and Pseudomonas putida. Kurarinone was examined for cytotoxicity against several human tumor cell lines in vitro. This compound was found to show a cytotoxicity (IC50, of 36-42 ㎍/㎖) with exception of Gingival fibroblast with IC50 value of 106 ㎍/㎖.

[PA1-43] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Induction of the apoptosis of HL-60 promyelocytic leukemia cells by extract of *Eurya emarginata*

Park SooYoung, Yang HongChul, Lee NamHo, Kim SeJae, Yoo EunSook, Kim SangChul, Lee HyeJa, Kang HeeKyoung°

Department of Pharmacology, Cheju National University Medical School, Jeju 690-756, Korea

The purpose of the present study is to examine the inhibitory effect of extracts of *Eurya emarginata* on the growth of HL-60 cells and to develop an anti-cancer agent using components of its leaves. To examine the inhibitory effect on the growth, metabolic activity was measured. In results, ethylacetate extract of its leaves markedly inhibited the growth of these cells. Also, its extract reduced c-myc mRNA levels. At the same time, DNA fragmentation was observed and the portion of apoptotic cells were increased in its extract-treated HL-60 cells. Therefore, inhibitory effect of *E. emarginata* on the growth of HL-60 seem to arise from the induction of apoptosis. In order to understand the mechanism of apoptosis by extract of *E. emarginata*, We have observed the level of expression of bcl-2 and bax. In results, the level of bcl-2 mRNA levels decreased in a time-dependent manner whereas the bax mRNA level exhibited no changes. The results indicate that extracts of *E. emarginata* induce apoptosis of HL-60 cells via down-modulation of bcl-2 mRNA as well as its gene product expression with no change in bax mRNA expression. [Supported by grant No. 2000-1-20800-002-3 from KOSEF]