In this report, water-, treated water- and ethanol-extracts of Pini resina, and water-extracts of branches of Mori albae were prepared and growth-inhibitory effects of these extracts, mixtures of extracts and sodium chloride against some representative oral bacteria were estimated by using agar diffusion methods and standard disk sus ceptibility testing procedures. In addition, dentifrice preparations containing these samples were also tested. the tested bacteria included ,Streptococcus mutams, stre [tpcpddus samguis, Actinomyces viscosus and Lactobacillus acidophilus for the agar diffusion methods and only S. mutans was used for the disk susceptibility tests.
MIC(Minimal Inhibitory Concentration) data of the tested samples were ambiguous to interpret due to the low solubility of these samples except the case of sodium chloride. Qualitative data from disk susceptibility test with ethanol-extracts of Pini resina suggested some potential applicability of this sample to the prevention of the periodontal diseases.
From this study, the following conclusions were made: In salt containing dentifrice, MIC is 5%(w/v%). 50% ethanol extracts are most inhibiting extracts on S. mutans, it was proved by performance standards for antimicrobial disk susceptibility tests. In Pini resina and treated Pini resina solution, its inhibition diameter is significantly equal to inhibition diameter of 1% chlorhexidine gluconate in 6.25, 12.5, 25㎍ inoculation.
Pini resina and treaed Pini resina extracts, Pini resina and treaed Pini resina extracts containing dentifrice might be useful for elimination of periodontal disease.

[PC1-16] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Mechanism of Manassantin A and B induced-differentiation in human leukemia HL-60 cell

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We already reported the differentiation inducing effect of Manassatin A and B, isolated from Saururus chinensi, in HL-60 human leukemia cells. These differeniation effect was further confirmed by esterase, phagocytosis and morphology change. The mechanism of differentiation was performed both western blot and RT-PCR techniques. Both Manassatin A and B exhibited a strong induction of mRNA and protein level of p21, CDK inhibitor at a concentration of 5 ㎍/㎖. The mRNA and protein level of c-myc was markedly suppressed in dose and time dependent manner. These results suggest that Manassatin A and B induced differentiation of HL-60 through up-regulation of p21 and down-regulation of c-myc mRNA and protein expression.

[PC1-17] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Suppression of RelA Transactivation Activity by Lignoids isolated from Saururus chinensis.

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In search for NF-kB inhibitors from natural resources, a novel dineolignan as well as four known dineolignans namned manasantin A (MNSA), manasantin B (MNSB), saucernetin, and sacerneol methylether were isolated from the MeOH extract of Saururus chinensis by activity-guided fractionation. The structure of a new compound was elucidated as saucerneol B on the basis of spectroscopic evidences. All of these compounds inhibited induced NF-kB activation by LPS or TNF-α in a dose-dependent manner. The relative potency of these compounds in NF-kB reporter assay was: MNSA = MNSB > saucerneol B > saucerneol methylether > saucernetin. However, these compounds did not

prevent the DNA-binding activity of NF-kB assessed by electrophoretic mobility shift assay as well as the induced-degradation of IkB-α protein by LPS or TNF-α. Further analysis revealed that these compounds dose-dependently suppressed the transactivation activity of RelA. Consistently, MNSA and MNSB inhibited the induced expression of NF-kB target genes such as iNOS and Bfl-1/A1. Taken together, our results suggest that lignoids from Saururus chinensis suppress NF-kB activation by inhibiting transactivation activity of RelA subunit.

[PC1-18] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

A New Class of Secretory Phospholipase A2-IIA Inhibitor, Papyriflavonol A from Broussonetia papyrifera inhibit PCA reaction

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Papyriflavonol A, a new prenylated flavonol isolated from *Broussonetia papyrifera*, strongly inhibited secretory human recombinant phospholipase A_2. Papyriflavonol A inhibited secretory human recombinant phospholpiase A_2- II A, V (IC_{50}, about 3.96 and 4.45 μM) as dose dependent manner. In addtion, the inhibitory activity of papyriflavonol A is rather specific secretory human phospholipase A_2- II A, V than phospholipase A_2 IB (IC_{50}, about 100 μM), X (IC_{50}, about 100 μM). Addition of excess Ca^{2+} concentration up to 8 mM did not antagonize the inhibitory activity of papyriflavonol A .Reversibility was studied directly by dialysis method, the inhibition was irreversible against secretory phospholipase A_2- II A. Moreover, papyriflavonol A (25 and 50 mg/kg) significantly inhibited IgE induced passive cutaneous anphylaxis (PCA) in rats. These results indicate that a new secretory phospholipase A_2- II A, V inhibitor, papyriflavonol A can use as an anti-allergic agents.

[PC1-19] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Inhibitory effects of alpha-viniferin on iNOS, TNF and COX-2

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Alpha-viniferin is an oligomeric stilbene purified from the root of Carex humilis Leyss (Cyperaceae) as COX inhibitor. Inhibitory effects on iNOS, TNF and COX-2 have been evaluated in this study. Alpha-viniferin inhibited the TNF production with an IC50 value of 9.8 uM and the NO production with an IC50 value of 5.8 uM. The compound seems to inhibit the transcription of iNOS, which was identified by RT-PCR. Alpha-viniferin inhibited the COX-2 activity with an IC50 value of 3.2 uM, but did not inhibit the transcription of COX-2. The compound did not inhibit the IL-1 and TNF bioactivities. Alpha-viniferin showed anti-inflammatory activity on carrageenin-induced paw edema in mice and on adjuvant-induced rheumatoid arthritis in rats.

[PC1-20] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]