quinolone alkaloid, 4-carbomethoxy-6-hydroxy-2-quinolone(1), showing a moderate antioxidative activity in a 1,1-diphenyl-2-picrylhydrazyl free-radical scavenging assay, was isolated from 0.5% HCl in ethylalcohol soluble fraction(IC_{50} = 28.9㎍/ml) by activity-guided fractionation method. The structure was determined on the basis of physical and spectroscopic evidences.

[PD2-45] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Isolation of Lignans from the Roots of Acanthopanax chiisanensis having Inhibitory Activity on Prostaglandin E2 Production

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The chloroform fraction from the roots of *Acanthopanax chiisanensis* exhibited a significant inhibition of TPA-induced PGE_2 production in rat peritoneal macrophages. Five lignans were isolated from the chloroform fraction and their structures were elucidated as l-sesamin, helioxanthin, savinin, taiwanin C and cis-dibenzylbutyrolactone. Among the lignans tested, taiwanin C showed the most potent inhibitory activity on PGE_2 production with a relative order of potency, taiwanin C ≫ cis-dibenzylbutyrolactone > savinin = helioxanthin. l-sesamin showed no inhibitory activity at 30 μM.

[PD2-46] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Monoamine Oxidase Inhibitory Component from the Fruits of Evodia officinalis

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MAO plays an important role in the metabolism of monoamines in the central nervous system and its inhibitors are expected to be useful in the therapy of psychosis, depression, schizophrenia, and so on. Up to now, many inhibitory compounds toward it have been isolated from natural substances or synthesized for development of medicine. To investigate the potential antidepressant activity, we had screened medicinal plants to search for MAO inhibitory compounds. By the screening results, we discovered that the MeOH extract of *Evodia officinalis* showed high inhibition against the MAO. According to the activity-guided fractionation, a MAO inhibitory compound was isolated from CH_2Cl_2 fraction by Silica gel column chromatography and Sepadex LH-20 chromatography. The compound was identified as 1-methyl-2-undecyl-4(1H)-quinolone. The compound showed selective inhibition of MAO-B with IC_{50} value of 15.27 μM. It represented competitive mode at 0.02 ㎍/㎖ and 0.1 ㎍/㎖.

[PD2-47] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Inhibitors of 5α-Reductase from the Roots of Angelica koreana

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A prenylated coumarin, osthenol and a sesquiterpene, bisabolangelone have been isolated as active principles with 5α-reductase inhibitory effect from the roots of *Angelica koreana* Max. by bioassay-guided chromatographic fractionation. Osthenol showed a strong inhibitory effect on 5α-reductase type I (IC_{50} = 14.6 μg/ml), and especially exhibited a highly potent inhibitory activity on 5α-reductase type II with an IC_{50} value of 0.1 μg/ml, which is about 200 times more potent than the positive control, finasteride (IC_{50} = 19.8 μg/ml). Bisabolangelone also inhibited the activity of 5α-reductase type II (IC_{50} = 11.6 μg/ml), indicating that these compounds are possible candidates for development of new drugs to treat prostate disease and other androgen-sensitive conditions. In addition, four compounds including isooxypeucedanin, oxypeucedanin hydrate, oxypeucedanin and isoimperatorin were also isolated and found to be inactive in the 5α-reductase assay systems used in the present study.

[PD2-48] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Antibiotics Resistance Inhibition of Staphylococcus aureus SA2 by Some Natural Products

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Numerous antimicrobial agents or antibiotics were developed and introduced but they loose its activity soon owing to the development of resistance to antibiotics by microorganism. In order to maintain the effectiveness of antibiotics, the reduction of resistance also is thought to be valuable as well as developing newer and stronger antibiotics.
Some essential oil components of plants showed potent inhibitory activities against multi-drug resistant microorganisms such as Staphylococcus aureus SA2, which has resistances to 10 usual antibiotics including chloramphenicol(Cm). Acorenone showed the strongest resistant inhibitory activity at the level of 5 g/ml when combined with 50 g/ml of Cm. Carvone and dillapiol showed resistant inhibition at the level of 50~100 g/ml when combined with 100 or 50 g/ml of ampicillin or Cm, respectively.

[PD2-49] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Binding affinity of some herbal extracts on the muscarinic acetylcholine receptor subtype 1 (mAChR-M1)

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The water extracts of 82 kind of Korean medicinal herbs were examined for the binding affinity on the recombinant human muscarinic acetylcholine receptor subtype 1 (mAChR-M1) produced from the CHO (Chinese Hamster Ovary) cell line. Among the tested, the extract of Coptidis Rhizoma, Phellodendri Cortex, Hedyotis Herba and of Terminariae Fructus were found to exhibit a significant competition with [3H] N-methyl-scopolamine for the specific binding to mAChR-M1 in a dose dependent manner, respectively.