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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.