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The genus Styrax (Styracaceae) is different from other genera of this family due to the production of resinous material, usually secreted when the barks and trunks are injured by sharp objects. This resin, in the past considered a miraculous remedy in several parts of Asia and America, has been used in traditional medicine to treat inflammatory diseases. The CH_2Cl_2 fraction of Styrax japonica showed significant cytotoxic activities by SRB method against five human tumor cell lines (A549, HCT-15, MES-SA, SK-OV-3, and SK-MEL-2). We isolated four known pentacyclic triterpenoids by bio-activity guided fractionation and identified as oleanolic aldehyde acetate (1), euphorginol (2), erythrodiol-3-acetate (3), and anhydrosophoradiol (4). Compouds 1-4 were isolated from S. japonica for the first time. The triterpenoids were identified by comparison with spectroscopic data. And we also were assayed for cytotoxic activities of compounds 1-4.

[PD2-52] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Platelet Anti-aggregating Triterpene and Sterol Constituents from the Leaves of Acanthopanax senticosus

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From methanol extract of Acanthopnanax senticosus, six platelet anti-aggregating compounds, chiisanogenin (1), chiisanoside (2), ursolic acid (3), oleanolic acid (4), b-sitosterol (5) and daucosterol (6) were isolated. All of the isolated compounds showed dose-dependent inhibitory activities to rat platelet aggregation induced by all the agonist employed. Compound 1 showed about 50 folds higher potency than acetylsalicylic acid (ASA) on U46619 induced platelet aggregation (IC_{50}: 6.21 μM) and 10 ~ 20 folds higher effect than ASA on epinephrine and arachidonic acid (AA) induced aggregation (IC_{50}; 2.50 and 4.81 μM, respectively). Compounds 5 and 6 were 2 ~ 6 folds more inhibitory than ASA on collagen (IC_{50}: 195 and 114 μM respectively) and U46619 (IC_{50}: 170 and 56.1 μM respectively) induced aggregation.

[PD2-53] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Cholinesterase-inhibitory Farnesylacetone Derivatives from the Brown Alga Sargassum sagamianum

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In continuing search for bioactive compounds from Korean marine algae, we found cholinesterase-inhibitory activity in the methanolic extract of brown alga Sargassum sagamianum. After partitioning between $CHCl_3$ and 30% MeOH, the former layer was purified by a series of ODS flash, silica column, gel-filtration on Sephadex LH-20, and HPLC to give two farnesylacetone derivatives. Their structures were identified by comparison with the literature data. Compounds 1 and 2 showed moderate acetylcholinesterase and butyrylcholinesterase inhibitory activities with IC_{50} values of 65.0~48.0 μM and 34.0~23.0 μM, respectively. Interestingly, farnesylacetones have different skeletons from the known cholinesterase inhibitors such as tacrine, physostigmine, huperzine A, donepezil and tolserine.

[PD2-54] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Melanin Biosynthesis Inhibitors from the Tubers of Gastrodia elata

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The bioassay-guided fractionation of the methylene chloride soluble portion of a methanol extract of Gastrodia elata tubers led to the isolation of a new furfural, 5-(4-hydroxy-benzyloxymethyl)-furan-2-carbaldehyde (2), together with four known compounds (1, 3-5), which exhibited potent inhibitory activity at the concentration of 25 μg/ml on melanin biosynthesis in cultured B-16 mouse melanoma cells.

[PD2-55] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

The antioxidative compounds of the Aster tataricus

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The Aster tataricus is a chinese traditional medicine called "Ziwan" which has an expectorative and remediable cough action. The anti-oxidant activities of A. tataricus were investigated. The MeOH extract of A. tataricus showed strong anti-oxidant activity in the NBT(nitroblue tetrazolium) method system, and thus fractionated with several solvents in to the EtOAc, n-BuOH, CH_2Cl_2, H_2O fraction. The EtOAc soluble fraction exhibiting strong anti-oxidant activity was further purified by repeated silica gel and sephadex LH-20 column chomatography. Three compounds were isolated from the EtOAc fraction by the activity-oriented purification procedure. Their structures were determind as quercetin, kaempferol, kaempferol 3-O-glucoside, respectively, on the basis of spectral data. The antioxidative compounds of the EtOAc fraction of A. tataricus is under study.

[PD3-1] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

The compostions of essential oils from Thymus species and their antifungal activities

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To develop useful antifungal agents from essential oils in Korean plant resources, the activities of Thymus quinquecostatus and T. quinquecostatus var. japonica were evaluated against ten pathogenic fungi. Their results were compared with those of T. vulgaris, which is native to Europe.The essential oils of the tested Thymus species were obtained by steam distillation using a simultaneous steam distillation-extraction apparatus. The above ground parts of plants cultivated in the herbal garden of Duksung Women"s University were used. The composition of the essential oils were analyzed and compared by GC-MS.The antifungal activity of the essential oil fraction of Thymus species and thymol, the main component of this oil, were investigated against Aspergillus niger, A. flavus, Trichoderma viride, Candida albicans, C. utilis, C. tropicalis, Cryptococcus neoformans, Trichosporon mucoides, Trychophyton tonsurans, and Blastoschizomyces capitatus. The MICs and the growth inhibition against the fungi was evaluated by broth dilution method and disk diffusion test. Additionally, the combination effects of the essential oils with synthetic antibiotics were estimated.

[PD3-2] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Inhibitory effects of Saiko-ka-Ryukotsu-Borei-To on the migration and proliferation of vascular smooth muscle cell and suppression of carotid intimal thickness after balloon injury in rats

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Objectives:We have reported that oral administration of Saiko-ka-Ryukotsu-Borei-To (SRB), a traditional