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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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