

[PD2-33] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Antitumor flavonoids from *Cephalotaxus koreana* Nakai

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Cephalotaxus koreana Nakai is an endemic species in Korea. The EtOH extract of leaf and branch from the plant showed potent antitumor activity in Teruhiro's method. The tumor volume inhibition ratio value is 25.2% with 20mg/kg in the BDF1 mouse injected LLC cell. We isolated one flavone, sciadopitysin (1), two flavone O-glycosides, quercetin 3-O- β -D-glucuronide 6"-ethyl ester (2), apigenin 7-neohesperidoside (3) in comparison with literatures data. Compounds 1-3 showed stronger antitumor activity than Taxol used as positive control. The inhibition ratio values of compounds 1-3 is 34.9, 31.6, 34.0%, respectively, and Taxol is 27.0 % compared with control group.

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Phytochemical Constituents from the Stems of *Acanthopanax senticosus*

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Six compounds were isolated from the stems of *Acanthopanax senticosus* (Araliaceae). Their structures were elucidated as iso-fraxidin, (-)-sesamin, 5-hydroxymethylfurfural, eleutheroside B, eleutheroside E and an unknown compound by spectral analysis. Of them, 5-hydroxymethylfurfural was isolated for the first time from *A. senticosus*.

[PD2-35] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Antioxidant and Hyaluronidase Inhibition Activities of *Prunus persica* Batsch var. *dauidiana* Maximowicz

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Reactive oxygen species(ROS) are produced at a high rate continuously as a by-product of aerobic metabolism. Several lines of evidence provided that ROS appears to cause to develop aging and various diseases. High level of hyaluronic acid with decreased molecular weight has been detected in patients with inflammatory diseases including rheumatoid arthritis. Hyaluronidase is an endohexosaminidase that initiates the degradation of hyaluronic acid with high molecular weight. *Prunus persica* Batsch var. *dauidiana* Maximowicz has been known as a Korean folk medicine for treatment of neuritis and rheumatism. In this study, we have investigated the antioxidant and hyaluronidase inhibition activities of *Prunus persica* Batsch var. *dauidiana* Maximowicz in order to screen the bioactive substances which can be developed as possible antiinflammatory agents. As a result, EtOAc extract of *Prunus persica* Batsch var. *dauidiana* Maximowicz exhibited the strongest effect on antioxidant and hyaluronidase inhibition experiment.

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Phytochemical Constituents from the Whole Plants of *Diodia teres*

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Ten compounds were isolated from the methanolic extract of the whole plants of *Diodia teres* through repeated silica gel and Sephadex LH-20 column chromatography. Their chemical structures were elucidated as three iridoid glycosides, a coumarin glycoside, and six flavonoids by spectroscopic analysis. These compounds were isolated for the first time from *D. teres*.

[PD2-37] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

ACAT inhibitory effect of Guineensine isolated from *Piper longum* L.

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Study of Acyl-CoA:cholesterol acyltransferase (ACAT) inhibitors from medicinal plants, we found strong inhibitory activity of ACAT enzyme from rat liver microsome by the CHCl₃ extract of *Piper longum*. Bioactivity-guided fractionation led to the isolation of Guineensine (1), its structure was elucidated by spectroscopic (IR, UV, MS and NMR) means. It inhibited ACAT activity in a dose-dependent manner with IC₅₀ values of 1.2 µg/ml on in vitro assay using rat liver microsome.

[PD2-38] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

A novel lanostane-type triterpene from *Abies koreana*

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A novel lanostane-type triterpene, (24E)-3,4-seco-9βH-lanosta-4(28),7,24-triene-3,26-dioic acid was isolated from *Abies koreana* (Pinaceae) which is a tall evergreen tree grown indigenously in southern Korea. The structure of this compound was characterized by spectroscopic methods. Cytotoxicity of the compound was evaluated in vitro using the SRB method, and it showed marginal activity against human cancer cell lines.

[PD2-39] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Cytoprotective Effect on Oxidative Stress and Inhibitory Effect on Cellular Aging of *Terminalia chebula* and *Uncaria sinensis*

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The ethanol extract from the fruit of *Terminalia chebula* (Combretaceae) and the hook of *Uncaria sinensis* (Rubiaceae) exhibited significant inhibitory activity on oxidative stress and the age-dependent shortening of the telomeric DNA length. In the peroxidation model using t-BuOOH, human epidermal keratinocytes-neonatal foreskin (HEK-N/F) cells were treated with the *T. chebula* and *U. sinensis* extracts. The results showed a notable enhancing effect on the cell viability of 60.5 ± 3.8 and 65.0 ± 3.0%, respectively, by 50 µg/ml of the extracts. In addition, both the extracts exhibited a significant cytoprotective effect against UVB-induced oxidative damage. The life-span of the HEK-N/F cells were elongated by 40 and 205%, respectively, as a result of the continuous administration of 3 µg/ml of the *T. chebula* and *U. sinensis* extracts compared to that of the control. These observations were attributed to the inhibitory effect of both the extracts on the age-dependent shortening of the telomere, length as shown by the Southern blots of the terminal restriction fragments (TRFs) of DNA extracted from subculture passages.