report herein the isolation and structure elucidation of two new diarylhptanoids and the anti-HIV-1 integrase activity of the C. cordata isolates.

[PD2-26] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

New polyacetylenes from Gymnaster Koraiensis

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Gymnaster Koraiensis (Nakai) Kitamura (Compositae) is an endemic species in Korea. The root was extracted with 80% ethanol, then the ethanolic extract was fractionated with dichloromethane and n-butanol. Two new polyacetylenes were isolated from the butanolic fraction with the repeated chromatography on silica gel and preparative HPLC. On the basis of ^{1}H-NMR, ^{13}C-NMR, ^{1}H-^{1}H COSY, HMQC, HMBC and high resolution FAB-MS spectral data, their structures were established as 2(E)-decene-4,6-diyne-8,10-diol-10-β-D-glucopyranoside, 2(E)-decene-4,6-diyne-8,10-diol-10-β-D-apinofuranosyl-(1"-6')-β-D-glucopyranoside.

[PD2-27] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Isolation of Phytolipids from the Stem Bark of Magnolia sieboldii

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We have reported bioactive costunolide with both differentiation- and apoptosis-inducing activity and nitric oxide synthase inhibitory activity, and isolated a new and six known compounds from the stem bark of Magnolia sieboldii (Magnoliaceae). In a course of obtaining more amount of costunolide, a new monoterpene (1) named deoxygeraniol (1,3-dimethyl-2,6-octadiene) was isolated along with beta-sitosterol 3-O-linoleate (2), 1,2,3-tri-O-linoleoylglycerol (3) and high amount of costunolide (4) in the pure state, respectively. The structure of 1 was determined on the basis of 1H-, 13C-NMR and mass spectra. We are under investigation to reveal whether 1 is an artifact- or a natural form.

[PD2-28] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Effects of jasmonates on production of volatile components in cultured cells of Isodon japonicus.

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The composition of essential oils produced in cultured cells in Isodon japonicus which is one of the important Korean aromatic plant sources, were changed by treatment of methyl jasmonate and jasmonic acid.

To develop systems for economic production of useful essential oil compounds, callus was induced form the seedlings of this plant and cultured on MS medium. Methyl jasmonate(10-100

uM) and jasmonic acid were added to the culturing cell suspension, separately. The volatile oil fraction was extracted from the callus and investigated by mean of GC-MS. The composition of the oil was compared with that of the mother plant.

As the result, sixty five compounds including feruginol were identified in the callus oil. The main component of the oil from leaves of Isodon japonicus was methyl chavichol. The oils from cultured cells treated with jasmonates showed considerably different patterns.

[PD2-29][10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Inhibition of phospholipase Cγ1 by lignans from <I>Machilus thunbergii</I>

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Eleven lignans and two flavans were isolated from the CH_2Cl_2 fraction of *Machilus thunbergii*. These isolated compounds were identified by spectroscopic analysis. Of them, compounds 5,7-di-*O*-methyl-3',4'-methylenated (-)-epicatechin (**12**) and 5,7,3'-tri-*O*-methyl (-)-epicatechin (**13**) have not reported in this plant. In addition, seven compounds, machilin A (**1**), (-)-sesamin (**3**), machilin G (**5**), and (+)-galbacin (**9**), licarin A (**10**), (-)-acuminatin (**11**), 5,7-di-*O*-methyl-3',4'-methylenated (-)-epicatechin (**12**), and 5,7,3'-tri-*O*-methyl (-)-epicatechin (**13**) showed dose-dependent potent inhibitory activities against phospholipase Cγ1 *in vitro* with IC_{50}values from 8.8 to 25.9 μM. These lignans, neolignans and flavans were presented as new classes of PLC γ1 inhibitors. The structure activity relationship including their related lignans revealed that benzen ring having methylene dioxy group is suggested as a new active site of inhibitor for expression of inhibitory activities on PLCγ1 and distance between these groups is also important for this action. Plus, antiproliferative effects of these compounds against human cancer cell are very closed to those against PLCγ1. Therefore, these inhibitors may be beneficial as candidates of chemotherapeutic and chemopreventive anticancer agents.

[PD2-30] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Isolation of an inhibitor of PGE2 production in murine peritoneal macrophages from the leaves of Acanthopanax chiisanensis

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Acanthopanax sp. have been reputed for their various biological activities including anti-inflammatory activity. As an attempt to evaluate anti-inflammatory principles from the leaves of A. chiisanensis, various fractions obtained from this plant parts were tested for their effect on PGE_2 production in rat peritoneal macrophages. Rat peritoneal macrophages(0.75×10^6 cells) were incubated at 37℃ for 4hr in 0.5 ml of medium in the presence of 12-O-tetradecanoylphorbol 13-acetate(TPA). Among fractions tested chloroform and ethylacetate fractions were found to exhibit significant inhibition of PGE_2 production. Further fractionation of these active fractions led to isolation of hyperin as an active principle. Hyperin showed almost complete inhibition of TPA-induced PGE_2 production at 100μg/ml. Its IC_{50} values were calculated to be 7.6 μg/ml(16.4μM). These results suggested that hyperin might be responsible for one of anti-inflammatory principles of this plant part.