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.