The methanolic extract of the underground part of *Angelica gigas* Nakai (Umbelliferae) exhibited the significant inhibitory activity on the acetylcholinesterase (AChE). Bioactivity-guided fractionations of the methanolic extract using AChE inhibitory activity as the parameter screened led to the isolations and identifications of one new coumarin (12) and eleven known coumarins, decursinol (1), marmesin (2), xanthotoxin (3), isoimperatorin (4), xanthyletin (5) 7-methoxy-5-prenyloxycoumarin (6), decursin (7), 7-demethylsuberosin (8), umbelliferone (9), and 7-hydroxy-6-(2-(R)-hydroxy-3-methylbut-3-enyl) coumarin (10) and nodakenin (11). Among these coumarins, five (1-4, 11) were found to be active in the inhibition of AChE. Based on their inhibitory activities on AChE, the relationships between structures and activities were studied.

[PD2-21] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

A Saponin Codonoposide with a New Sapogenin from Codonopsis lanceolata

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Roots of Codonopsis lanceolata have been used as tonics in the Korean traditional medicine. In a course of isolating saponins from this crude drug, a new saponin named codonoposide (1) was isolated by phytochemical process. The structure of 1 was established as 3-O-[beta-D-xylopyranosyl (1-3)-beta-D-glucopyranosyl]-3beta,16alpha,24-trihydroxyolean-28-oic acid 28-O-[beta-D-xylopyranosyl(1-3)-alpha-L-rhamnopyranosyl(1-2)-alpha-L-galactopyranosyl] ester A sapogenin codonopogenin of 1 was found for the first time as a glycoside state from a natural source. The structure of 1 was determined based on 2D-NMR techniques and chemical methods.

[PD2-22] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Lignans from the roots of Acanthopanax chiisanensis

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The roots, stems and leaves of Acanthopanax chiisanensis have been used as an anti-rheumatic, an anti-inflammatory and a tonic in Chinese medicine. In a search for the chemical constituents from the roots of this plant, five lignans were isolated from the chloroform fraction by the repeated column chromatography eluting with hexane-ethylacetate gradient solvents and their chemical structures were elucidated as sesamin, helioxanthin, savinin, taiwanin C and cis-dibenzylbutyrolactone lignan on the basis of physico-chemical and spectral data. Among them, helioxanthin, taiwanin C and cis-dibenzylbutyrolactone lignan are first isolated from this plant.

[PD2-23] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

A New Inhibitor of Nitric Oxide Synthase Expression from Tussilgo farfara

YS Jeong, JH Ryu°