The Node of the lotus rhizome (Nelumbo nucifera, Nymphaeaceae) have been used as a traditional medicine for the remedy of hemorrage, blood stagnancy and thirstiness. To investigate anti-diabetic drug from traditional medicine, the constituents of Nelumbo nucifera (Nymphaeaceae) were studied phytochemically. One alkaloid and three phenolic compounds were isolated from the methanol extract of the rhizome from N. nucifera. The structures of these compounds were identified as 1H-Indole-3-propionamide, (+)-catechin, (-)-epicatechin and (+)-gallocatechin by the analysis of spectroscopic evidences and comparision with the data of authentic samples.

[PD2-18] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Anthocyanins from Black soybean, Glycine max L. cv. Geomjeongkong 1.

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Three anthocyanins were isolated from the acidified ethanol extracts of black soybeans (*Glycine max* L. cv. Geomjeongkong 1) using solid phase extraction and preparative high-performance liquid chromatography. The anthocyanins were characterized using chromatographic and spectroscopic methods as delphinidin 3-glucoside, cyanidin 3-glucoside, and petunidin 3-glucoside.

[PD2-19] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Phytochemical constituents from Dendropanax morbifera

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A number of members of the Araliaceae have been utilized in traditional medicine, especially in *Panax* and *Acanthopanax*. As part of our research efforts in Araliaceae family for biological activity and potential medicinal utility, we found that the crude extract of *Dendropanax morbifera* showed considerable antioxidant and cytotoxic activity. In order to find the active compounds from this plant, we undertook the phytochemical studies with the stem part fo *D. morbifera*. The MeOH extract of the stem part of*D. morbifera* was extracted with hexane, ethylacetate, buthanol and water successively. Two polyacetylene compounds (Comp.1. and Comp.2.) were isolated from ethylacetate fraction and one triterpenoid (Comp.3.) from hexane fraction. Additional four lignan compounds (Comp.4 ~ Comp.6) were isolated from ethylacetate and buthanol fraction by repeated silica gel column chromatography and preparative HPLC. Their structures were elucidated by the physicochemical and spectral data such as UV, IR, NMR and MS.

사진 출처:한국자연정보연구원

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

Coumarins Isolated from Angelica gigas Inhibit Acetylcholinesterase: Structure - Activity Relationships

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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°