

Prunella vulgaris Linne var. *ilacina* Nakai (Labiatae) is a perennial herb widely-distributed in the temperate regions of Korea, Japan and China. The spikes of this plant, *Prunellae Herba*, is red-violet and lips shape, and blossom between May and July. To obtain the cytotoxic constituents from this plant, the spikes were extracted with MeOH and MeOH Ext. was subsequently fractionated into four parts, methylene chloride, n-butanol-1, n-butanol-2 and water fractions. Chromatographic separation of the n-butanol-1 fraction has yielded four triterpenoids. Their structures were elucidated by chemical and spectral evidences. All of the compounds are α -amyrin type.

Compound 1 is 3 β -hydroxyurs-12-ene-28-oic acid (ursolic acid) and compound 2 is 2 α , 3 α -dihydroxyurs-12-ene-28-oic acid. Compound 3 is 2 α , 3 α , 19 α -trihydroxyurs-12-ene-28-oic acid (euscaphic acid) and compound 4 is the triterpenoid which has seven hydroxyl groups, two carboxyl groups and two double bonds. Compound 1 was previously isolated from this plant and reported, so this compound is already well known. On the other hand, Compounds 2 and 3 were known, but were first isolated from this plant.

Compounds 1 and 4 showed approximately 80% cytotoxicity for HepG2 cell in low concentration of 5 μ g/ml and compounds 1 and 2 exhibited above 95% topoisomerase I inhibition ability in concentration of 50 μ g/ml. In here, it is the remarkable fact that compounds 1 and 2 have both cytotoxicity and topoisomerase I inhibition ability.

[PD2-2] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Composition of the Essential Oil of *Chrysanthemum sibiricum*, and Biological Properties

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GC-MS data on the volatile oil of *Chrysanthemum sibiricum* herbs led to the identification of 2-methoxythioanisol (1), (+)-camphor (2), geraniol (3), citral (4), thymol (5), eugenol (6), beta-caryophyllene oxide (7), beta-caryophyllene (8), beta-eudesmol (10), juniper camphor (11) together with an unknown substance (9) based on the mass spectral library and literature data. The components were confirmed by the comparisons with authentic specimens. the oil of *C. sibiricum* (CS-oil) exhibited significant cytotoxicities on HL-60 (IC₅₀ 12.5 microg/ml) cell and mild on HepG-2 cell (IC₅₀ 102.4 microg/ml), though the free-radical scavenging activity was found not to be potent (IC₅₀ 97.2 microg/ml). Treatment of CS-oil with 10 mg/kg dose (i.p.) decreased the content of malondialdehyde induced by bromobenzene by 35%, which activity was comparable to that of 20 mg/kg kaikasaponin III but weaker than 10 mg/kg tectorigenin. It was suggested that the unique composition of CS-oil might contribute to the chemopreventive effect for cancer.

[PD2-3] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Chemical Components from the Stem Bark of *Kalopanax septemlobus*

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The stem bark of *Kalopanax septemlobus* (Thunberg) Koidz. (Araliaceae) commonly distributed throughout Korea has been used as traditional medicine for effective on antiinflammatory, expectorant, tranquilizer and antirheumatic. The preview authors reported various saponins and lignans from *Kalopanax* species. The present paper describes isolation and structural characterization of two compounds which were isolated for the first time from *Kalopanax* species. Their structures were 3,3'-bis