

dose-dependent manner.

[PD2-35] [04/20/2001 (Fri) 13:30 – 14:30 / Hall 4]

Virus-cell fusion inhibitory activity for the polysaccharides from various Korean edible clams

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In order to find potent virus-cell fusion inhibitory components from Korean edible clams, thirteen prepared polysaccharides were introduced to syncytia formation inhibition assay, which is based on the interaction between the HIV-1 envelope protein gp120/41 and the cellular membrane protein CD4 of T lymphocytes. Among them, Meretrix petechialis showed a potent virus-cell fusion inhibitory activity. Fusion index (FI) and percent (%) fusion inhibition of the polysaccharide of this clam were 0.21 ± 0.02 , and 67.52 ± 4.09 at 100 $\mu\text{g}/\text{mL}$, respectively. It exhibited almost equivalent virus-cell fusion inhibitory activity to that of dextran sulfate which was used as a standard control.

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Antioxidative compounds from Clerodendrii folium

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Clerodendron trichotomum(Verbenaceae) has been used for arthritis, rheumatism, and hypertension as a folk medicine.

In order to evaluate anti-oxidative activity, its fractions(H₂O, 30%, 60%, 100Fr.) were measured with DPPH method. It was revealed that 30% and 60% MeOH fractions have significant antioxidative activity.

From 30% MeOH, five phenolic compounds were isolated by column chromatography and elucidated two flavonoid glycosides and three phenyl propanoids compounds.

[PD2-37] [04/20/2001 (Fri) 13:30 – 14:30 / Hall 4]

Anti-oxidative activity of Ban-Lan-Gen

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Ban-Lan-Gen is the dried root of *Isatis indigotica* Fort.(Cruciferae) and one of the most commonly-used traditional chinese medicines for antipyretic, antiviral, and detoxifying purpose in china.

In order to evaluate anti-oxidative activity, Ban-Lan-Gen was fractionated and

then its fractions was measured radical scavenging activity and anti-lipid peroxidative efficacy on human low density lipoprotein(LDL) with DPPH method and TBARS assay.

The results showed that ethylacetate, butanol fraction of the methanol extracts had anti-oxidative activity and precipitate of butanol (ppt II) were potent particularly.

[PD2-38] [04/20/2001 (Fri) 13:30 - 14:30 / Hall 4]

Inhibition of Nitric Oxide Synthesis in LPS-activated Macrophages by Korean Woody Plants

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Nitric oxide (NO) produced in large amounts by inducible nitric oxide synthase (iNOS) is known to be responsible for the vasodilation and hypotension observed in septic shock and inflammation. Inhibitors of iNOS, thus, may be useful candidate for the treatment of inflammatory diseases accompanied by the overproduction of NO. We prepared alcoholic extracts of woody plants and screened the inhibitory activity of NO production in lipopolysaccharide (LPS)-activated macrophages after the treatment of these extracts. Among 83 kinds of plant extracts, 23 kinds of extracts showed potent inhibitory activity of NO production above 60% at the concentration of 80 µg/ml. Some of potent extracts showed dose dependent inhibition of NO production of LPS-activated macrophages at the concentration of 80, 40, 20 µg/ml. Especially, *Artemisia iwayomogi*, *Populus davidiana* and *Populus maximowiczii* showed the most potent inhibition above 70% at the concentration of 40 µg/ml. Inhibitory activity of NO production was concentrated to nonpolar solvent fractions (ethyl ether and/or ethyl acetate soluble fractions) of *Artemisia iwayomogi*, *Machilus thunbergii* and *Morus bombycis*. These plants are promising candidates for the study of the activity-guided purification of active compounds and would be useful for the treatment of inflammatory diseases and endotoxemia accompanying overproduction of NO.

[PD2-39] [04/20/2001 (Fri) 13:30 - 14:30 / Hall 4]

Free Radical Scavenging Constituents of the Roots of *Polygonum multiflorum*

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In the course of screening for free radical scavenger from Korean medicinal plants, the ethanol extract of *P. multiflorum* showed the promising activity on DPPH test. Activity-guided fractionation of an ethanol extract of this plant furnished two free radical scavengers, *E*-2,3,5,4'-tetrahydroxystilbene 2-*O*-β-D-glucopyranoside (1) and catechin (2) together with an inactive β-sitosterol. Compounds 1 and 2 showed the IC₅₀ values with 22.2 and 10.3 µM, respectively. L-Ascorbic acid as a positive control exhibited an IC₅₀ value with 480 µM.

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Anticarcinogenic Properties of Kalopanaxsaponin A Isolated from the Stem Bark of *Kalopanax pictus*