

In order to search for antioxidants from the plants, eighty-two kinds of herbal medicines were investigated. The MeOH extracts of Euryales Semen, Alpiniae Officinari Rhizoma, Drynariae Rhizoma, Sophorae Flos, Trachelospermi Caulis, Crassirhizomae Rhizoma, Euphorbiae (athyridis Semen, Lini Semen, Myristicae Semen, Epimedii Herba, Santali Lignum rubrum, Perillae Herba, Amomi Tsao-Ko Fructus and Garanii Herba showed potent antioxidative activities using the 1,1-diphenyl-2-picrylhydrazyl free radical generating system. Also, in the screening of tyrosinase inhibition activity, Alpiniae Officinari Rhizoma and Sophorae Radix exhibited inhibitory activity against the mushroom tyrosinase, which is the key enzyme for the melanin biosynthesis.

[PD2-24] [ 04/18/2003 (Fri) 13:30 ~ 16:30 / Hall P ]

### Virus-cell fusion inhibitory compounds from *Ailanthus altissima* Swingle

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In order to search for the anti-HIV agents from natural products, Eighty MeOH extracts of medicinal plants were applied to a syncytia formation inhibition assay which is based on the interaction between the HIV-1 envelope glycoprotein gp120/gp41 and the cellular membrane protein CD4 of T lymphocytes. Among them, *Ailanthus altissima* showed a potent virus-cell fusion inhibitory activity. Repeated column chromatography of the methylene chloride fraction of *A. altissima* afforded compounds 1 ( $\beta$ -sitosterol-3-O- $\beta$ -D-glucoside), 2 (tetramethoxy-coumarin), and 3 (ocotillone). Virus-cell fusion inhibitory activity of compound 3 (ocotillone) was  $70.76 \pm 4.09$  % at the concentration of 100  $\mu\text{g}/\text{mL}$ .

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### Anti-inflammatory Activities of Diarylheptanoid from the Bark of *Alnus japonica* Steudel

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The bark of *Alnus japonica* has been used of fever, hemorrhage and diarrhea in oriental traditional medicine. This research was focused on the anti-inflammatory activities of diarylheptanoid from the bark of *A. japonica* on RAW 264.7 cell line. Phytochemical examination of the bark of *Alnus japonica* Steudel had led to the isolation of ten diarylheptanoids. To investigate the anti-inflammatory activities of these compounds, nitric oxide and PGE2 production inhibitory in IFN- $\gamma$ , LPS stimulated RAW 264.7 cell were examined. NO level and iNOS activity were reduced by the addition of compound 6 and 7 to incubation medium or the IFN- $\gamma$ , LPS stimulated RAW 264.7 cell. And PGE2 level and COX-2 activity were reduced by the addition of compound 6, 7, 8 and 10 to incubation medium of the IFN- $\gamma$ , LPS stimulated RAW 264.7 cell. These NO and PGE2 production inhibitory effects were significantly different compared with control. These results suggest that diarylheptanoid from the bark of *Alnus japonica* Steudel might be a developed as a potent anti-inflammatory agent.