tyrosinase activity were increased in low concentration, whereas they decreased in high concentration. In conclusion, it was observed that ethyl acetate extact of C. sappan regulates melanization of cells dependent on its concentrations.

[PD3-10] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## Inhibitory effects of the medicinal plant extract on tyrosinase and elastase, and free radical scavenging effects

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One of the important functions of skin is protection from harmful environments. There has been many studies for keeping skin healthy from wrinkling and pigmenting. Skin wrinkle and pigmentation could be caused by the disruption of connective tissue, free radicals and ultraviolet irradiation.
In this study, the extracts obtained from 25 kinds of medicinal plants were screened. All the extracts examined were obtained by using 70% (v/v) ethanol at 60°C. It has been found that there were two medicinal plants which have positive effects matching with the purpose of this study.
The extract of *Ephedra sinica stapf* has an inhibitory effect on tyrosinase ($IC_{50}$=83.7μg/ml), an inhibitory effect on elastase ($IC_{50}$=690μg/ml), and free radical scavenging effect ($IC_{50}$=29.6μg/ml). The extract of *Betula platyphylla Var.* has an inhibitory effect on elastase ($IC_{50}$=498.1μg/ml), and free radical scavenging effect($IC_{50}$=9 μg/ml).
The extracts were dried by using an evaporator at 65°C and dispersed into water, and then fractionated with chloroform, ethylacetate, and n-butanol subsequently. The fractions extracted by ethylacetate separately from above two plants were showed positive effects. The ethylacetate fractions were separated further to trace the effective compounds by using a silica column and TLC.
The aim of this study is that the single compounds having an inhibitory effect on tyrosinase, elastase, and free radical scavenging effect are identified among the compounds in the extracts, and that the examination of the compounds are studied the most similar conditions like the skin of human.

[PD3-11] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## Cytotoxic and antimicrobial deterpene from Anisotome lyallii

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Cytotoxic activity against the P388 cell line was seen in a crude extract of Anisotome lyallii. A bioactivity guided isolation led to the isolation of a deterpene, which displayed strong cytotoxic activity against the P388 cell line (IC50 2.3 μg/ml), as well as antimicrobial activity against Bacillus subtilis. The structure of deterpene 1 was elucidated by spectroscopic methods.

[PD3-12] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## The effects of natural medicinal herb extracts on a lipoprotein lipase activity

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