

tyrosinase activity were increased in low concentration, whereas they decreased in high concentration. In conclusion, it was observed that ethyl acetate extract 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 pigmentation. 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<sub>50</sub>=83.7µg/ml), an inhibitory effect on elastase (IC<sub>50</sub>=690µg/ml), and free radical scavenging effect (IC<sub>50</sub>=29.6µg/ml). The extract of *Betula platyphylla* Var. has an inhibitory effect on elastase (IC<sub>50</sub>=498.1µg/ml), and free radical scavenging effect (IC<sub>50</sub>=9µg/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 diterpene 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 diterpene, which displayed strong cytotoxic activity against the P388 cell line (IC<sub>50</sub> 2.3 µg/ml), as well as antimicrobial activity against *Bacillus subtilis*. The structure of diterpene 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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The increase of triglyceride in blood can be a signal of an increasing danger of arterial diseases when insulin resistance, diabetes, HDL-cholesterol decrease is accompanied. It is adjusted to triglyceride level in blood by a balance, which seems to be absorbed from VLDL metabolism in liver and by lipoprotein lipase activity. The hyper-triglyceride disease treatment proposal role should match with suppression does into liver or elimination of a triglyceride. In this study, 3T3-L1 adipocyte was incubated with 1 mg/ml of natural medicinal herb extracts for 30 minutes to 24 hours time. Lipoprotein lipase activity was determined from the culture medium. The lipase activity was gradually increased by incubation time dependent manner. From the result of this investigation, it was confirmed that lipoprotein lipase was strongly increased in cells by natural medicinal herb extracts treatment by showing a possibility of hyper-triglyceride disease cure.

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

#### Effect of P-020701 on gastric lesion and ulcer in rats

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Present study was performed for development of a new supplementary product with gastroprotective effect. Natural Products mentioned that have GI protective property on Donggeuibogam were evaluated anti-bacterial activity against *Helicobacter pylori*, then five herbs were selected. The material used for the test were water extract of *Alpinia oxyphylla* (AO), *Astragalus membranaceus* (AM), *Cinnamomum loureirii* (CL), *Citrus aurantium* (CA), *Amomum villosum* (AV). They were tested individually on HCl-ethanol-induced gastric lesion in rats, AV, CL, AO showed the most significant effectiveness, respectively. Then, two mixture different in their content ratio (P020701-1, -2) were made with the five water extract, and tested on HCl-ethanol model. P020701-1, -2 significantly inhibited HCl-ethanol-induced gastric lesion at 200, 500mg/kg, but at doses of 800, 1000mg/kg, P020701-2 showed stronger effectiveness. Tentative product (TP: aloe gel, water, pear juice etc. added to the mixture P020701-2) was made and tested on indomethacin-induced gastric lesion, aspirin-ligature, Shay ulcer and gastric secretion test with P020701-1 and -2. In indomethacin-induced gastric lesion, P020701-2 and TP were significantly inhibited the lesion and in aspirin-ligature ulcer, P020701-1 and TP showed significant effect on the ulceration. In Shay ulcer, only TP showed significant effect but any sample did not affect gastric secretion. In histological examination, P020701-1, 2 and TP showed reduced injury on mucosal tissue.

[PD3-14] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

#### Anxiolytic effect of Albizzia julibrissin using elevated plus-maze in rats

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Benzodiazepine is a widely used anxiolytic agent. However it has been reported that most anxiolytics have side effects such as hypotension, depression of respiration, dizziness, headaches, chronic sleep disorders, drug poisonings, and withdrawal symptoms. In this report, we want to evaluate the anxiolytic effect of Albizzia julibrissin (AJ). There are various reports that AJ has several biological activities such as sedative action, insomnia, irritability, anorexia, and diuretic action. The water extract of AJ was orally administered to adult male SD rats, 60min before the behavioral evaluation in the elevated plus maze (EPM) at 10, 50, 100, and 200 mg/kg, respectively. Control rats were treated with equal volume of saline and different group of rats was administered buspirone (1 mg/kg) as positive control. The water extract of AJ at the dosage 100 and 200 mg/kg significantly increased time-spent and arm entries into the open arms of the EPM and decreased time-spent and arm entries in the closed arms of the EPM by compared with the control group (P<0.001). Buspirone-treated group also showed significant increase in time-spent and arm entries into the open arms of the EPM (P<0.05). However there were no changes on the locomotor activities in any groups compared with control group. These results suggest that AJ may become a good anxiolytic agent with no adverse effects.

[PD3-15] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]