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 1mg/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.

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 Dungueibogam 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 loureilii (CL), Citrus aurantium (CA), Anomorm villusum (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-ligation, 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-ligation 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.

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 Albizia 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.
Purification and Characterization of fibrinolytic enzymes from Vegetable warms

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A thrombus is a mass formed from the constituents of the blood within the vessels or the heart during life. The process of formation is known as thrombosis. A vegetable warms producing fibrinolytic enzyme was isolated from chines traditional medicinal mushrooms. Cordyceps militaris and Paecilomyces tenuipes. The fibrinolytic enzyme of Cordyceps militaris and Paecilomyces tenuipes was purified from fruiting body by –70 prechilled ethanol precipitation. ion–exchange chromatography, gel filtration. The purified fibrinolytic enzyme isolated, showed a molecular mass of 52 kDa and 46 kDa on SDS–PAGE and fibrin zymography. Analysis of fibrinolysis and fibrinogenolysis by SDS–PAGE have high substrate specificity. The hydrolysis rate of fibrinogen subunit was A.B and chain in order.
The optimum pH and temperature for the enzyme activity were pH 8.0 and 42, respectively. The enzyme activity was highly inhibited by Cu2+, Co2+ and PMSF, indicating that the enzyme is a serine protease. The purified fibrinolytic enzyme activity is about 1.5 folds higher than that 1.0 unit of plasmin. These might be developed as a therapeutic agent for the treatment of thrombic disease.

Poster Presentations – Field D4. Analytical Chemistry

[PD4–1] [ 10/18/2002 (Fri) 13:30 – 16:30 / Hall C ]

Quantitative determination of pseudoephedrine in human plasma by reversed–phase liquid chromatography–electrospray ionization mass spectrometry


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A sensitive and selective reversed–phase LC–ESI–MS method to quantitate pseudoephedrine in human plasma was developed and validated. Phenacetin was used as an internal standard. Samples were prepared simply by acetonitrile precipitation without an evaporation step. Chromatographic separation was achieved on a XTerra MS C18 column (150 x 2.1 mm i.d., 3.5 µm particles), using gradient elution with 0.5% (v/v) trifluoroacetic acid (TFA) in water and 0.5% (v/v) TFA in methanol at a flow–rate of 0.1 ml/min. The detection utilized selected ion monitoring in the positive–mode at m/z 166.3 and 180.2 for the protonated molecular ions of pseudoephedrine and internal standard, respectively. The lower limit of quantitation of pseudoephedrine in human plasma was 10 ng/ml and good linearity was observed in the concentration range of 10–500 ng/ml. The reversed–phase LC–ESI–MS method was successfully applied for the quantitation of pseudoephedrine in human plasma from healthy volunteers dosed with pseudoephedrine hydrochloride tablets.

[PD4–2] [ 10/18/2002 (Fri) 13:30 – 16:30 / Hall C ]

Concentrations of Dextromethorphan in Urine and Blood of Two Crime Suspects

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Dextromethorphan (Romilar, DEX) is a synthetic analogue of codeine, is not classified as a narcotic and is used only for its antitussive effects in Korea. The daily intake by adults range up to 120mg. Usually in the case of