antidipsotropic activity and antialcohol intoxication. We found out resveratrol, daidzein, genistein, rhaponticin, rutin and quercetin as alcohol dehydrogenase inhibitors. The assay was carried out at room temperature, using 5mM ethanol and 1mM NAD+ as a substrate and coenzyme, respectively.

[PC2-2] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Antiplatelet and antithrombotic activities of Yangkyuksanwha-tang

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As part of our continuing search for biological active anti-stroke agents from the herbal medicinal resources. We examined the possibility of Yangkyuksanwha-tang and its ingradients as a novel antithrombotic agents *in vitro* and *ex vivo*, and its antithrombotic effect *in vivo*.
Gardeniae Fructus, Ledebouriellae Radix and Nepetae Spica potently inhibited ADP-and collagen-induced rat platelet aggregation in a dose-dependent manner *in vitro*. Yangkyuksanwha-tang and most of its ingradients did not affect coagulation parameters as APTT, PT and TT in human plasma. However, Menthae Herba and Nepetae Spica potently protected plasma clotting. Yangkyuksanwha-tang, Lonicerae Folium, Forsythiae Fructus and Menthae Herba significantly inhibited *ex vivo* rat platelet aggregation. Yangkyuksanwha-tang, Lonicerae Folium, Forsythiae Fructus and Gardeniae Fructus showed significantly protection from death due to pulmonary thrombosis in mice.

[PC2-3] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Purification and Characterization of the chitosanase from Aspergillus fumigatus KB-1

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The chitosanases produced from Aspergillus fumigatus KB-1 were purified by ion exchange and gel permeation column chromatographies. Molecular weight of the enzyme is 23.38 KDa. The N-terminal amino acid sequence was YNLPNNLKQIYDKHKGKXSXVLAXX(X is not determined). The purified chitosanase seemed to have an unique N-terminal amino sequence because chitosanases with the same N-terminal amino acid sequence were not found on NCBI's BLAST search. TLC analysis of the enzymatic reaction products showed that the chitosanase mainly produced diglucosamine, not glucosamine. Optimum pH and temperature were 5.5 and 70℃, respectively. The activities of the chitosanase were strongly inhibited by metal ions such as Cu2+ and Hg2+.

[PC2-4] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Induction of glycosaminoglycan(GAG) degrading enzymes in Bacteroides stercoris HJ-15 by GAG as carbon sources

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Bacteroides stercoris HJ-15, which is a human colon gram-negative rod cell, has been known to degrade heparin, acharan sulfate and chondroitin sulfate. The many of GAG degrading enzymes were purified and characterized from several sources. GAGs play biologically important roles in the extracellular matrix(ECM). Recently it has been reported that ulcerative colitis was affected by degradation of GAG in human colon. To understand induction of GAGs degrading enzymes in *B. stercoris* HJ-15, it was cultured in 10L of tryptic soy broth containing GAG as sole carbon source and compared with total activity of GAGs degrading enzymes. When GAGs were used as carbon sources instead of glucose, the productivity of the GAG degrading enzymes increased two to five times.

[PC2-5] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Antifungal activity of chitinase from Streptomyces sp. Mong-20.

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Identification of soil microorganism strain Mong-20, a producer of chitinase and antifungal substance, based on its morphological, biochemical and chemotaxonomical characteristics was performed. The strain Mong-20 was identified as *Streptomyces*. The chitinase was produced by this strain in medium containing 0.1% soluble chitin as sole carbon and nitrogen source and antifungal substance against *Botrytis cinerea* was produced in medium containing glucose and sodium glutamate. Mong-20 incubated at 28℃for 9 days. The antifungal activity was stable from pH3 to pH9 and not reduced > 50% after heating at 100℃ for 10 min. Growth of the strain growth was resistant to ampicillin at 1mg/ml and tetracycline at 30ug/ml. The antifungal substance was extracted with BuOH and EA. The synergistic effect of chitinase and antifungal substance was determined.

[PC2-6] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]

Regulation of extracellular N-acetyl-D-glucosaminidase production in the Streptomyces sp. 200803

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Streptomyces sp. 200803 produces extracellulae N-acetyl-D-glucosaminidase(NAGase) in liquid medium containing colloidal chitin as the sole source of carbon and nitrogen. To study the regulation of NAGase, N-acetyl-D-glucosamine(GlcNAc),glucose,NH_4NO_3,NH_4Cl, $(NH_4)_2SO_4$, yeast extract or amino acids were added to the colloidal chitin medium and NAGase activity was measured. NAGase synthesis was induced with 0.3 % chitin and repressed to the levels that were 62 < % of the control levels when 0.3 % yeast extract was provided to the colloidal chitin medium. NAGase activity levels were 1800 > % of the control when 0.3 % chitin and 0.3% glucose were tested It appears that synthesis of NAGase is sensitive to cell energy and the carbon and nitrogen requirements. The optima culture conditions for the production of NAGase was pH 6.0 and 30°C. But the optimal conditions for NAGase assay was pH 6.0 and 55 °C. The synthesis of NAGase synthesis was blocked by both 8-hydroxyquinoline and cycloheximide, inhibitor of RNA and protein synthesis

[PC2-7] [04/19/2001 (Thr) 15:30 - 16:30 / Hall 4]