Fine Structure of the Gill Filament in the Clam, *Ruditapes phillppinarum* (Mollusca: Bivalvia)

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The fine structural characteristics of the gill filaments in *Ruditapes philippinarum* were examined by light and electron microscopes. The branchial lamellae of the gill filament were characterized by their abundant mitochondria, by an extensive system of regularly branch. Gill lamellae were thicked structure to ensure increasing blood/gas diffusion distance, and nodules maintain wide spacing between lamellae. The coelomic epithelium was composed of myoepithelial cells and ciliated cells. The ciliated cells were arranged in lines along the branches. Small surface microvilli were seen between the cilia providing a useful size comparison. Examination of histological and TEM preparation has revealed that a very similar structure with mainly two cell types both in the epidermis (supporting and ciliated cells) and in the coelomic epithelium (myoepithelial and ciliated cells).

C116

Fine Structural Analysis of the Silk Producing Apparatus in Funnel-web Spiderer, *Agelena limbata*

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Silk producing apparatus of the funnel-web spider, *Agelena limbata* was located at the ventral end of the abdominal part, and was composed of internal silk glands and external spinnerets. Among the three pairs of spinnerets, the posterior pairs were highly elongated along the body axis. By the light and electron microscopic inspections, it was found that four types of silk glands were connected through the typical spinning tubes of each spinnerets. Anterior spinnerets comprise 2 pairs of the ampullate and 125 to 150 pairs of pyriform glands. Another 2 pairs of ampullate glands, 5 to 7 pairs of tubuliform glands, and 18 to 26 pairs of aciniform glands were connected on the median spinnerets. And 8 to 10 pairs of tubuliform and 37 to 54 pairs of aciniform glands were on the posterior spinnerets respectively. Among the 4 types of silk glands, the ampullate and tubuliform glands were connected with large spinning tubes (spigots), and the tubuliform glands were only observed in female spiders.

C117

The Protective Effect of MHJ Extract on Acute Gastropathy by NSAID

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This study was performed to investigate the protective effect of Mockdanpigamihyungbangjihoangtang (MHJ) on acute gastropathy by non-steroid anti-inflammation drug (NSAID). After MHJ intragastric injection (3.3 ㎖/kg/day) for 3 days, the acute gastropathy on male Balb/c mice were induced by subcutaneous injection of indomethacine (25 ㎎/kg). The degree of lipid peroxidation in MHJ group conspicuously was decreased. The erosion of gastric mocosa in MHJ group was soften and appeared normal configuration of surface and neck mucous cell in gastric pit. The

peanut agglutinin (PNA) positive reaction in MHJ group were shown in microvilli of surface mucous cell and apical surface of chief cell as normal morphology. The ICAM-1 (CD54) positive reaction in MHJ group were diminished in basal region of gastric mucosa and arteioles of submucosa. The distribution of apoptotic cell in erosion evoked regions were decrease in MHJ group. As results indicated that the MHJ was effective in protection for Gastropathy by NSAID.

C118

Effect of Chitosan on Cadmium-induced Cytotoxity in C6-glioal Cell

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Casapse-3 protease was known as a key role of apoptotic enzyme, caspase-3 activity was a central event that occurs upstream of DNA fragmentation during apoptosis.Protective effect of PKC affecting This study was investigated that chitosan pretreatment inhibited the apoptosis process by controlling the activity of death enzymes. We analyzed the effect of chitosan on two key apoptotic factor, caspase-3 protease and DNA fragmentation. Cadmuim (50 mg/ml)-induced DNA fragmentation and we observed nuclear fragment by hoechst stain. Caspase-3 activeties were increased for 3hours compared with control. Pretreatment of chitosan (150 mg/ml) inhibited cadmium cytoxicity. When chitosan was pretreated for 30min, cadmium cytoxicity was suppressed in a dose-dependent manner. And the cell of chitosan pretreatment protected DNA fragmentation by cadmium. To establish the extent of chitosan effects on the apoptotic mechanism, we assessed the effects of chitosan on caspase activity by examining of activation of caspase-3 protease, which was inhibited by chitosan. From these above results, it is suggest that the protective effect of chitosan prereatment against cadmium-induced cytotoxicity was shown by inhibiting caspase-3 activation. And also DNA fragmentation was protected by inhibiting caspase-3 protease activation.

C119

The Cure Effect of Coptitis rhizoma on Allergic Contact Dermatitis 2 -based on apoptosis of skin and suppression of lymphnode

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This study was performed to investigate the cure effect of Coptitis rhizoma extract(CRE) on allergic contact dermatitis. The sensitization were caused by one application of 25ul of 5% 2,4-dinitrochlorobenzene(DNCB) onto an abdominal skin of BALB/C mice. 2 weeks later, the allergic contact dermatitis were elicitated with 4ul of 2.5% DNCB and then mice were administered with CRE, a dose of 0.33ml/kg/day, for 48 hours. In CRE treated group, the distribution of apoptotic cell and Fas positive reacted cell of epidermis were conspicuously decreased. On the other hand, the distribution of apoptotic cell and Bax positive reacted cell of dermis were remarkably increased. The number of CD4(L3T4), CD8(Ly-2), IL-1b, CD25R(IL-2R), CD11b(Mac-1), CD54(ICAM), CD 106(VCAM) and CD56(NK-1.1) positive reacted cells were decreased and degree of these reaction were weaked in lymph node of