[PA1-44] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Antitoxic Effects of Binding of Quercitrin and Cadmium on NIH 3T3 fibroblasts

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This study was carried out to develop the antitoxic compound about cytotoxicity of cadmium on NIH 3T3 fibroblasts. These cells divided into 3 groups: control groups (cadmium only) or MTT50 group (NIH 3T3 fibroblasts, 53.4 μM cadmium) and experimental group (53.4 μM quercitrin). MTT assay was performed to evaluate the cytotoxicity of cell organelles. The light microscopic study was carried out to morphological changes of caltured NIH 3T3 fibroblasts. The results indicated that guercitrin showed detoxification effect on cytotoxicity of cadmium in 53.4 μM. According to the spectroscopic of 1 : 1 complex of cadmium and guercitrin, it showed that this formation of complex eliminated cadmium from NIH 3T3 fibroblasts.

[PA1-45] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Regulation of Immune Response by Genistein in BALB/c mice

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High soy consumption leading to high exposures of soy flavones has been associated with a reduced risk of cancers at many sites. As part of a study focusing on the chemopreventive mechanisms, we previously demonstrated that genistein was an effective immune stimulator in an in vivo murine system. In this study we examined the effects of genistein on mitogen-stimulated activation of murine thymocytes and on the phagocytosis of peritoneal macrophages in vitro. Genistein significantly decreased the proliferation of murine thymocytes activated with concanavalin A in a dose-dependent manner. Also, genistein induced DNA fragmentation of murine thymocytes. Furthermore, we found that genistein suppressed the production of nitric oxide and the phagocytic activity in murine peritoneal macrophages in a dose-dependent manner.
In summary, the present study is to provide direct in vitro evidence that demonstrates the ability of genistein at high concentrations to decrease thymocytes and macrophages activation.

[PA1-46] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Solvent Extracts from Ulmus davidiana var. japonica Regulates Melanogenesis

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Melanogenesis is a physiological process resulted in the synthesis of melanin pigments, which have a role in protecting skin from the damaging effect of ultra-violet(UV) radiation. The main aim of the present study was to examine the effect of Ulmus davidiana var. japonica on melanogenesis . Cells were cultured in the presence of various solvent extracts from Ulmus davidiana var. japonica for 48 h, and there were estimated activity of tyrosinase, a key enzyme, in melanogenesis. Among the four solvent extracts tested, EtOAc extract mostly increased tyrosinase activity. EtOAc extract increased the melanin contents and tyrosinase activity in a dose-dependent manner. Especially, It was observed that 100μg/ml

EtOAc extract stimulates melanin secretion in B16/F10 melanoma cells by 140 % at 48 h treatment and activity of tyrosinase increased by 180% in the presence of same concentration.

[PA1-47] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

The inhibitory effect of Quercetin-3-O-β-D-glucuronopyranoside on esophagitis and gastritis of rats

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This study was designed to determine anti-inflammatory effects of quercetin-3-O-β-D-glucuronopyranoside (QGC), which were isolated from *Rumex Aquaticus* leaves. We were investigated inhibitory action of QGC on reflux esophagitis and gastritis in rats. Esophagitis was induced by surgical procedure, and gastritis was produced by administration of indomethacin (50mg/kg). QGC administered intraduodenally protected dose-dependently the development of reflux esophagitis. QGC inhibited dose-dependently the gastric secretion. Thiobarbituric acid reactive substances in the gastric mucosa were increased, and this increase was inhibited by the administration of QGC. Exposure of the gastric mucosa to indomethacin induced a significant increase in size of gastric lesions, and this increase was reduced by administration of QGC. GSH-Px activity decreased in the gastric mucosa after administration of QGC. These results suggest that QGC has the inhibitory action of gastritis and esophagitis model in rats.

[PA1-48] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

The inhibitory effect of Apigenin-O-7-β-D-glucuronopyranoside on esophagitis and gastritis in rats

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Apigenin-O-7-β-D-glucuronopyranoside (AGC) were isolated from *Clerodendron trichotomum* leaves. We investigates whether AGC inhibits reflux esophagitis induced by surgically as well as gastritis induced by exposure of indomethacin (50mg/kg) in rats. AGC administered intraduodenally, dose-dependently protected the development of reflux esophagitis. AGC inhibited dose-dependently the gastric secretion. AGC also inhibit gastritis index. Malonyldialdehyde content, the end product of lipid peroxidation, increased significantly after the induction of reflux esophagitis. These results suggest that can inhibit the development of esophagitis and gastritis in rats.

[PA1-49] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Antidiabetic Effect and Mechanisms of KHU-1 in ZDF rat

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KHU-1 is an oriental prescription, composed of 12 herbs, which has been used to treat a stroke. In recent years KHU-1 is also used for treating glycosuria by herbalists. We have studied the antidiabetic effect and mechanism of KHU-1 in male Zucker diabetic fatty(ZDF/GmiTMfa/fa) rats. Rats were grouped