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

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

Lee JeongHo You IlSoo Oh HyunJu, Baek SeungHwa°

Department of Herbal Resources, Products and Professional Graduate School of Oriental Medicine, Wonkwang University, Iksan 570-749, Korea. *Department of Industrial Chemistry, Iksan College, Iksan 570-110, Korea.

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

Jeon Hoon°, Lee TaekYul, Kim DaeKeun, Oh ChanHo, Eun JaeSoon

College of Pharmacy, College of Natural Science and Technology, Woosuk University

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

Chun HyunJa° , Jeong Seungil , Kim ChunKwan , Baek SeungHwa , Kim IlKwang , Jeon BungHun

원광대학교 한의학전문대학원,*원광대학교 화학과,**원광대학교 한의학대학

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