

group, but the production of interleukin-2 and interleukin-4 was increased. The production of tumor necrosis factor- α , nitric oxide and phagocytic activity in peritoneal macrophage were increased as compared with normal group. At the late stage of pregnant mice administered with SMT, the production of interleukin-2 in thymocytes was decreased as compared with pregnant group, but the proliferation of thymocytes, the production of gamma-interferon and interleukin-4 were increased. The production of tumor necrosis factor- α and nitric oxide in peritoneal macrophages were decreased as compared with pregnant group, but phagocytic activity was increased. These results suggest that SMT has the regulative action of immune function of thymocytes and peritoneal macrophages at the late stage of pregnant mice.

[PA1-25] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Hypoglycemic activity of the fruiting bodies of *Paecilomyces japonica*, a new type *Cordyceps* sp.

Lim SS, Shim JY, Lee,YS^o, Kim, SY, Kim,JY, Shin, KH, Lee, EB

Natural Products Research Institute, Seoul National University

Cordyceps is reputed for its broad biological activities and a tonic for replenishing vital function in Chinese traditional medicines.

As continuing attempts to evaluate pharmacological effects of the fruiting bodies of cultivated fungus of *Paecilomyces japonica*, a new type *Cordyceps* sp., its effects on hyperglycemia induced by streptozotocin(STZ) and by epinephrine in rats and in mice were investigated.

The 70% methanol extract, when administered orally at 100 and 300 mg/kg in STZ-induced hyperglycemic rats, caused a significant decrease in blood glucose level 18 and 2 hr after sample treatment. The methanol extract, when administered p.o. at the same dose levels in epinephrine-induced hyperglycemic mice, also caused a significant decrease in serum glucose levels as well as a significant reversal of the liver glycogen contents suggesting its inhibitory activity of glycogen breakdown in the liver.

Treatment of normoglycaemic mice with the methanol extract of the fungus exhibited a significant glucose tolerance up to 3 hr after oral glucose load(2.0 g/kg).

[PA1-26] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Antihyperglycemic activities of Supoongsunghwan and its simplified prescriptions in mice

Bae MR, Song SY, Kim YL , Han KS and Chung SH

Department of pharmacology, Kyunghee University Graduate School of Pharmacy, Seoul 130-701,Korea

Supoongsunghwan, which is on record in Chinese ancient writings (Entrance to Medical Science), has been known as being improved the functions of gastrointestinal tract and kidney.

Antihyperglycemic activities and mechanisms of Supoongsunghwan (S) and its simplified prescriptions (A:Daehwang B:Jisil, Bangpoong, Dokhwal C:Chajunja, Ukiin, Binlang, Majain, Tosaja,Usil, Sanyak, Sansuyu) were examined in C57BL/6J mice fed with high-fat diet.

The 10-fold dose of each prescription was administered for 5 weeks. Body weight and food intake were measured daily and fasting blood glucose (FBG) weekly for 5 weeks. At fifth week, total cholesterol, HDL, LDL, TG and Insulin in blood were examined.

Quantification of muscular glucose transporter (GLUT-4), the rate limiting enzyme for gluconeogenesis, in liver phosphoenolpyruvate carboxykinase (PEPCK) and Peroxisome Proliferator Activated Receptor- γ (PPAR- γ) mRNA were performed by RT-PCR.

FBG was decreased in all prescriptions-treated groups except group B when compared to high-fat diet control group (H). Body weight was increased in all prescriptions when compared to normal group fed with normal diet.

We may suggest that all prescriptions showed significant antidiabetic activities due to reducing insulin resistance through affecting gene expressions of hepatic PEPCCK, muscular GLUT-4, fat PPAR- γ .

[PA1-27] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Cnidicin, a coumarin with anti-allergic and anti-inflammatory activity from the root of *Angelica koreana*

Yun EJ^o, Choi HS, Ryu SY(1), Kim KM

Pharmacology Laboratory, College of Pharmacy, Chonnam National University (1) Korea Research Institute of Chemical Technology

Cnidicin and five related coumarins were isolated from the root extract of *Angelica koreana* (Umbelliferae) as active principles responsible for the inhibitory effect on the degranulation process of cultured mast cells. Cnidicin demonstrated a significant inhibition upon the release of b-hexosaminidase from the cultured RBL-2H3 cells in a dose dependent manner (IC50 value, 25 μ M) and also exhibited a potent inhibition upon the nitric oxide production from the activated RAW264.7 cells (IC50 value, 7.5 μ M). In agreement with this, cnidicin strongly inhibited the nitric oxide synthase in RAW264.7 cells at the concentration of 10 μ M.

[PA1-28] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Anti-angiogenic Activity of Korean Propolis

Kim MH^o, Kahng JH, Song YS, Lee HE, Park EH

College of Pharmacy, Sookmyung Women's University, seoul 140-742, Korea

Propolis has been used widely as a folk medicine for centuries and shown to have beneficial effects in many pathological processes. It was previously shown in this laboratory that propolis contained potent anti-inflammatory activity. In the present study, the anti-angiogenic activity of propolis extract was examined using mouse granuloma pouch model and chick embryo chorioallantoic membrane(CAM) assay. In the mouse granuloma pouch model, the ethanolic extract of propolis showed 48.2%, 38.7%, and 48.3% inhibitions in pouch fluid weight, granuloma weight, and carmine content, respectively. In the CAM assay, the extract showed the significant inhibition in a dose-dependent manner. These results indicate that Korean propolis has significant anti-angiogenic activity.

[PA1-29] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Tanshinones from *Salvia miltiorrhiza* inhibits mast cell degranulation by blocking the tyrosine phosphorylation of MAPK

Choi HS^o, Ryu H, Ryu SY(1), Kim KM

Pharmacology Laboratory, College of Pharmacy, Chonnam National University (1) Korea Research Institute of Chemical Technology,

Recently we reported that four active compounds were isolated from the Tanshen (the root of *Salvia miltiorrhiza* B., Labiatae), tanshinone-I, 15,16-dihydrotanshinone-I, tanshinone-IIA and cryptotanshinone, and two of these compounds, 15,16-dihydrotanshinone-I and cryptotanshinone exhibited significant inhibitions upon the degranulation of RBL-2H3 cells in a dose dependent