

inhibitory activity was examined in vivo, GRR, GRA, GRP inhibited the increase of blood glucose level in an oral administration of glucose in KKAY mice. In the mechanism study, GRR and GRP upregulated PPAR $\gamma$  protein expression, GRR and GRA upregulated GLUT4 protein expression when compared to the control group. sGLT1 mRNA levels were not different among the study groups. In conclusion, Ginseng Radices can ameliorate the hyperglycemia in KKAY mice possibly through up-regulations of PPAR  $\gamma$  protein in epididymal fat and glucose transporter protein in quadriceps muscle.

[PA1-34] [ 04/20/2001 (Fri) 10:30 – 11:30 / Hall 4 ]

### Antiangiogenic Effect of Gardenia Fruits

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Angiogenesis is known to be a complex process involving endothelial cell migration, proliferation, invasion and tube formation. Inhibition of these processes may have implications in various angiogenesis-mediated disorders. It is very desirable to find natural products containing anti-angiogenic activity. To investigate the effect of gardenia fruits, their ethanolic extract was prepared and dried in vacuo. It was used to test its effect in the chick chorioallantoic membrane(CAM) assay. The extract was found to contain the significant anti-angiogenic activity. Its anti-angiogenic activity appeared to be dependent on concentration. These findings suggest another usefulness of gardenia fruits.

[PA1-35] [ 04/20/2001 (Fri) 10:30 – 11:30 / Hall 4 ]

### Antidiabetic effect and mechanisms of DKY in KKAY mice

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Dongryongkangdangyoungjung (DKY), composed of 36 herbs including *Cordyceps Sinensis*, has been used as an antidiabetic prescription in China. We have studied the antidiabetic effect and mechanism of DKY in male hyperglycemic and hyperinsulinemic KKAY mice. Oral administration of DKY at 500, 1000 mg/kg/day lowered plasma glucose from a week after treatment and the hypoglycemic activity was retained for 4 weeks, also Insulin and HbA1c level were markedly reduced dose dependently. But there was no significant difference at 2000 mg/kg/day level as compared to the control. In the mechanism study, PPAR $\gamma$  mRNA and protein in epididymal fat were increased in DKY-treated group, which is similar to those of the group treated with rosiglitazone, agonist for PPAR $\gamma$ . We have tried to investigate GLUT4 mRNA and protein expressions in quadriceps muscle, PEPCK activity and mRNA expression in liver. We found no correlation between mRNA and protein expression. These results suggest that DKY-induced activation of PPAR $\gamma$  directly correlate with antidiabetic action.

[PA1-36] [ 04/20/2001 (Fri) 10:30 – 11:30 / Hall 4 ]

### Antihypertensive and antihyperglycemic effects of Ginseng Radix Palva and Ginseng Radix Alba in SHR with diabetes

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