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Effect of dietary *Platycodon grandiflorum* on the improvement of insulin resistance in obese Zucker ratsKyoung-Sook Kim¹, Young-Choon Lee¹, Tae-Kyun Lee² and Cheorl-Ho Kim²

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The effect of dietary *Platycodon grandiflorum* on the improvement of insulin resistance and lipid profile was investigated in lean (Fa/-) and obese (fa/fa) Zucker rats, a model for non-insulin dependent diabetes mellitus. Dietary *Platycodon grandiflorum* feeding for 4 weeks resulted in a significant decrease in the concentration of plasma triglyceride in both lean and obese Zucker rats. Furthermore, dietary *Platycodon grandiflorum* markedly decreased both plasma cholesterol and fasting plasma insulin levels, and significantly decreased the postprandial glucose level at 30 min during oral glucose tolerance test in obese Zucker rats. Although there was no statistical significance, the crude glucose transporter 4 protein level of *Platycodon grandiflorum* dieted obese rats tended to increase when compared to that of obese control rats. Therefore, the present results suggested that dietary *Platycodon grandiflorum* may be useful in prevention and improvement of metabolic disorders characterized by hyperinsulinemia states such as non-insulin dependent diabetes mellitus, syndrome X and coronary artery disease.