

[ P2 - 4 ]

**Improvement of insulin resistance by *Chongkukjang* in patients with type 2 diabetes mellitus**

Min-Jung Kang<sup>1</sup>, Hee-Jeong Joo<sup>1</sup>, Tae-Jin Seo<sup>1</sup>, Sung-Ja Yoo<sup>1</sup>, Jung-In Kim<sup>1</sup>, Sung-Gu Kim<sup>2</sup>  
<sup>1</sup>Biohealth Product Research Center, School of Food and Life Science, Institute for Food Sciences,  
Institute of Basic Sciences, Inje University, Gimhae, Korea  
<sup>2</sup>N.C. Korea Co., Ltd, Busan, Korea

Type 2 diabetes mellitus, which constitutes 85 - 95% of diabetes, results from defects in insulin action. We studied the effects of *Chongkukjang*, a fermented soybean product on insulin resistance in patients with type 2 diabetes. Eighteen patients with uncomplicated type 2 diabetes (13 men and 5 women, age 63.8±3.9 yr., plasma glucose 156.4±8.3 mg/dL, HbA<sub>1c</sub> 8.5±1.4%) participated in a randomized, cross-over study. Each patient consumed *Chongkukjang* (100g/day) or soybean containing the same amount of protein for 13 weeks with washout period of 4 weeks. Fasting blood glycated hemoglobin, plasma glucose, insulin and fructosamine were measured, Homeostatic model assessment insulin resistance index (HOMA-IR) was calculated to assess insulin resistance. *Chongkukjang* significantly decreased HbA<sub>1c</sub>, plasma glucose, fructosamine, HOMA-IR (p<0.01) and plasma insulin (p<0.05). Therefore, *Chongkukjang* could be beneficial for improving insulin resistance in patients with type 2 diabetes mellitus.