

【P-86】

Cardiovascular Protective Role of *Isaria sinclairii* Treatment in Obese Zucker Rats

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Obesity is the most prevalent and serious nutritional disease among western countries and is rapidly replacing undernutrition as the most common form of malnutrition in the world. Genetically obese (fa/fa) Zucker rats were used as experimental models; two groups were given 5, 10% *I. sinclairii* powder and 10% dry mulberry leaf powder mixed with the standard diet and another group was given standard diet for a period of 17 weeks. Mild decreases in body weight gain were observed dose-dependently in *I. sinclairii* treated groups in dose response manner after 2 weeks. There were not significantly different from the control group in urinalysis, ocular examination, and histopathological examination. In the serum biochemical value, total cholesterol (-58mg/dL, $p < 0.01$), triglyceride (-156.7 mg/dL, $p < 0.01$), bilirubin (-0.55 mg/dL, $p < 0.01$) and LDL (-24.7 mg/dL, $p < 0.05$) were significantly lower after 17 week *I. sinclairii* (10 %) treatment. Mulberry leaf diet (10%) decreased significantly bilirubin (-0.37 mg/dL, $p < 0.01$). We conclude that *I. sinclairii* has potential efficacy in obese Zucker rats with obesity and comorbid conditions.

Keyword: *Isaria sinclairii*, total cholesterol, triglyceride