

## **Antihyperglycemic, hypolipidemic and antioxidant enzymes effect of *Strobilanthes crispus* juice in normal and streptozotocin-induced diabetic male and female rats**

### **ABSTRACT**

The aim of the present study was to investigate the effect of *Strobilanthes crispus* juice on glucose, lipid profile, glutathione peroxidase and superoxide dismutase in normal and streptozotocin-induced diabetic male and female albino Sprague-Dawley rats. This study was conducted on normal and streptozotocin-induced diabetic male and female Sprague-Dawley rats fed with basal diet and *S. crispus* juice with different doses 1.0, 1.5 and 2.0 mL k<sup>-1</sup> b.wt. for 30 days. The results showed that significant ( $p < 0.05$ ) decrease in serum glucose levels in male and female diabetic and normal rats with treated *S. crispus* juice (1.0, 1.5 and 2.0 mL k<sup>-1</sup> b.wt.). Cholesterol and triglyceride level significantly ( $p < 0.05$ ) decreased in diabetic rats treated with 1.0, 1.5 and 2.0 mL k<sup>-1</sup> b.wt. of *S. crispus* juice. Cholesterol, triglyceride and LDL-cholesterol level showed reduction in treated male and female normal rats. HDL-cholesterol showed the increasing but not significant ( $p < 0.05$ ) difference in treated diabetic and normal male and female rats. Glutathione peroxidase and superoxide dismutase activities significantly ( $p < 0.05$ ) increased in treated diabetic and normal male and female rats. In conclusion, *S. crispus* juice possesses antihyperglycemic, hypolipidemic and antioxidant effect in streptozotocin-induced diabetic rats. Thus, *S. crispus* juice could be the alternative treatment for lowering glucose, cholesterol and triglyceride for diabetic patients in the future.

**Keyword:** *Strobilanthes crispus* juice; Glucose; Lipid profile; Antioxidant