

Hypoglycemic and Hypolipidemic Activities of Flower Extract from *Sphagneticola trilobata* (L.) Pruski.Kanogwan Klangkarn¹, Wilawan Promprom², Chusri Talubmook²¹ M.Sc. Student, ² Assistant Professor, Faculty of Science, Mahasarakham University, 44150, Thailand. E-mail: klangkarn@gmail.com

This research was aimed to study hypoglycemic and hypolipidemic activities of flower extract from *Sphagneticolatrilobata* (L.) Pruski. The studies were conducted in diabetic rats. Diabetes was induced by a single intra peritonea injection of 65 mg/kg streptozotocin to the male Wistar rats. The rats with fasting blood glucose level at or above 126mg/dl were used as diabetic rats. The extract at a dose of 250 mg/kg was given orally and daily to the normal and diabetic rats for 4 weeks. The blood glucose level of the rats was determined weekly while hematological values and blood chemistry were investigated at the end of the experiments. The results showed that the extract significantly ($p<0.05$) reduced the blood glucose levels in the diabetic rats but this did not in the normal rats. The extract significantly ($p<0.05$) increased the body weight in the diabetic rats but significantly ($p<0.05$) decreased the body weight in the normal rats. In addition, the extract reduced total cholesterol and low density lipoprotein in the diabetic rats but this did not in the normal rats. However, the extract had no effect on relative organ weight, blood chemistry including blood urea nitrogen, creatinine, total protein, albumin, alkaline phosphatase, high density lipoprotein and triglyceride. The antioxidant activity capacity employing the 1,1-diphenyl-2-picryl-hydrazyl (DPPH) free radical scavenging assay revealed that the extract had antioxidant activity with IC₅₀ of 18.14 mg/ml. However, its activity was less than the vitamin C (IC₅₀ = 7.51 mg/ml). These results indicated that the flower extract from *Sphagneticola trilobata* (L.) Pruski. possesses hypoglycemic and hypolipidemic activities.

Keywords: diabetic rats, antioxidant activity, hypoglycemic activity, hypolipidemic activity, *Sphagneticola trilobata* (L.) Pruski.

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