

Hypoglycemic activity of *Morinda citrifolia* extract in normal and streptozotocin-induced diabetic rats

ABSTRACT

The hypoglycemic activity of *Morinda citrifolia* extract was tested through an acute and subchronic study. In the acute study, a single dose of *M. citrifolia* extract (0.25 g/kg) was orally administered to normal and diabetic rats for an oral glucose tolerance test. In the subchronic study, an aqueous extract of *M. citrifolia* in concentrations of 0.25 g/kg (low dose), 0.50 g/kg (medium dose) and 1.0 g/kg (high dose) of body weight were orally administered to normal and diabetic rats for 6 weeks. Glibenclamide, a reference drug was also orally administered to the diabetic rats at a dosage of 5 mg/kg for both studies. In the acute hypoglycemic study, the blood glucose level in normal and diabetic rats did not change significantly as compared to their relative controls. A similar result was also observed in the glibenclamide-treated rats. In the subchronic study, blood glucose levels were reduced significantly ($p < 0.05$) in normal and diabetic rats at medium (0.5 g/kg) and high (1.0 g/kg) dose of *M. citrifolia* extracts as compared to the controls. Supplementation of glibenclamide also reduced the glucose level significantly ($p < 0.05$) in diabetic rats.

Keyword: *Morinda citrifolia*; Hypoglycemic; Normal rats; Streptozotocin-induced diabetic rats