**Abstract:**

The aqueous extract of roots of Annona squamosa L. at a dose of 250 mg/kg and 500 mg/kg body weight respectively was tested for antidiabetic activity in Streptozotocin (STZ) - induced hyperglycaemic rats. The blood glucose levels were measured at 0, 2h, 4h and 6h after the treatment. The aqueous extract reduced the blood glucose in STZ- induced diabetic rats from 285.52 to 208.81 mg/dl, 6h after oral administration of extract (P<0.01). The antidiabetic activity of aq. Extract of Annona squamosa was compared with glibenclamide, an oral hypoglycaemic agent (3mg/kg).