



Hypoglycemic, hypolipidemic and antioxidant activities of *Allium porrum* leaves extract in streptozotocin-induced diabetic rats

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Abstract: This study aims to investigate the antidiabetic, antihyperlipidemia and antioxidant activities of methanolic extract of *Allium porrum* leaves in streptozotocin-induced diabetic rats.

Methods: methanolic extract at 200 and 400 mg/kg bw and glibenclamide (5 mg/kg) were evaluated in diabetic rats based on the analysis of biochemical parameters, such as glucose, cholesterol, triglycerides, HDL, LDL, AST, ALT, LDH, Urea, and creatinine levels. Enzymatic and non enzymatic antioxidant of MDA, GSH, CAT and SOD were also assessed.

Results: Oral administration of methanolic extract to diabetic rats caused significant decrease in the levels of serum glucose, ALT, AST, LDH. Moreover, the extract decreased MDA content and increased the levels of SOD, GSH and CAT compared with diabetic rats. Also, creatinine and urea were improved as a result of the treatment of the extract. The extract exhibited antidiabetic, antihyperlipidemia and antioxidant activities and consequently may alleviate liver and renal damage caused by STZ-induced diabetes this might be attributed to the presence of flavonoides, phenolics and sulphur compounds which may be acting as free radical scavenging effect, inhibiting lipid peroxidation and increasing antioxidant activities. *Allium porrum* has a potential and helpful to the prevention of diabetic and its complications.

Key words: *Allium porrum*, complications, antidiabetic, antihyperlipidemic, antioxidant.