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Hypoglycemic activity and regeneration of pancreatic beta-cells produced by *Allium cepa* in alloxan-induced diabetic rats

Imad M Taj Eldin
University of Gezira, Sudan

Background: Diabetes mellitus is a chronic disease caused by inherited and/or acquired deficiency in production of insulin by the pancreas, or by ineffectiveness of the produced insulin.

Objectives: The present study was carried out to investigate the effects of *Allium cepa* in diabetic rats.

Methods: Alloxan-induced diabetic rats' model was conducted to demonstrate the effects of the oral administration of *Allium cepa* ethanolic extract.

Results: *Allium cepa* showed a moderate time dependent reductions in blood glucose, with a significant decline after 20 days. Furthermore, it's clinical improvement and/or increased survival rates in alloxan-induced diabetic rats were evident and it was found superior to glibenclamide. Comparative histopathological studies of the pancreas of these animals revealed a remarkable regeneration of beta-cells caused by *Allium cepa*.

Conclusions: *Allium cepa* extract produced hypoglycemic effects and restorative activity of the pancreas, thus it could be used as a dietary supplement in management of diabetes.

omdataj64@gmail.com