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**Aqueous extract of *Argania spinosa* L. fruits improves diabetes in streptozotocin-induced diabetic rats**

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**Introduction:** The argan tree (*Argania spinosa* L.) is an endemic species from south-western Morocco. Argan-based preparations have been widely used in Moroccan traditional medicine for their biological properties including diabetes especially argan oil. However, beside the effect of the oil a precise analysis of the impact of the pulp of *A. spinosa* fruit on glucose and lipid control and metabolism has never been evaluated.

**Objective:** The purpose of this study was to investigate the effect of a single dose and daily oral administration for seven days of aqueous extract of pulp of *A. spinosa* fruit (A.E.P.F.A.S) in normal and streptozotocin (STZ)-induced diabetic rats on blood glucose levels and plasma lipid profile.

**Results:** Single oral administration of A.E.P.F.A.S reduced blood glucose levels 6 hours after administration in STZ diabetic rats. Furthermore, the glycemic control was sustained for seven days during a chronic daily treatment. The pretreatment with an A.E.P.F.A.S of diabetic rats significantly improves the glycemic control following an oral glucose challenge when compared to the saline treated diabetic rats. Eventually, plasma cholesterol was reduced by the treatment while antioxidant effects of A.E.P.F.A.S in severe diabetic state were observed.

**Conclusion:** This study demonstrates that a treatment with A.E.P.F.A.S significantly improves plasma glucose and cholesterol levels. In front of these promising results further investigations are needed to elucidate the mechanism(s) of action of A.E.P.F.A.S and the active constituent(s) of the extract.

**Keywords:** *Argania spinosa*; Antioxidant activity; Streptozotocin; Lipid profile; phytochemical screening.

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