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## ORIGINAL ARTICLE

### IN VIVO ANTIOXIDANT ACTIVITY OF ORTHOSIPHON STAMINEUS IN STREPTOZOTOCIN INDUCED IN STREPTOZOTOCIN INDUCED TYPE 2 DIABETIC RATS

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## Abstract

**Objective of the study:** The present study aims to investigate in vivo antioxidant activity of *Orthosiphon stamineus*. Plant extracts were prepared using successive solvent extraction process using petroleum ether, chloroform and ethanol. **Methods:** Type 2 diabetic rats were treated with extracts at the doses of 250 mg/kg, 500 mg/kg and 1000 mg/kg for 21 days and tested for changes in thiobarbituric acid reactive substances (TBARS), conjugated dienes, catalase and peroxidase levels. **Results:** Significant increase in TBARS and conjugated dienes and reduction in catalase and peroxidase were observed. All the extracts could significantly decrease TBARS and conjugated dienes; significantly increase catalase and peroxidase levels. Dose dependent and potent antioxidant effect was observed with ethanolic and petroleum ether extracts. The results of this study highlighted the antioxidant potential of *O. stamineus* and can be useful for protecting oxidative damage of pancreatic cells. **Conclusion:** The study highlighted that the mechanisms can prevent damage of other organs and is beneficial for prevention of diabetic associated complications.

**Key words:** *Orthosiphon stamineus*, Type 2 diabetes, in vivo antioxidant activity, TBARS, Conjugated dienes, Catalase, Peroxidase.