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Research article

## Phytochemical and pharmacological evaluation of *Abelmoschus esculentus* (Lady's Finger) extracts for antidiabetic activity

Kalyani Kulkarni

C.U. Shah College of Pharmacy, S.N.D.T. Women's University, Sir Vithaldas Vidyavihar, Juhu Tara Road, Santacruz (W) Mumbai-400049, India.

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**Key words:** *Abelmoschus esculentus*, Streptozotocin, SGPT, SGOT.

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**\*Corresponding Author: Kalyani Kulkarni**, N-2, CIDCO, Mahajan Colony, Mukund Housing Society, Aurangabad. 431003.

### Abstract

The present investigation was aimed to study antidiabetic activity of *Abelmoschus esculentus* extracts in streptozotocin (STZ) induced rat model. Extracts of *Abelmoschus esculentus* were subjected to qualitative tests for presence of various phytochemical constituents. TLC and HPTLC studies of the extracts were carried out to identify various phytoconstituents present in the extracts. Further, acute toxicity study was carried out by administering the test solutions orally to rats, at the dose level of 2000 mg/kg for 14 days, to check whether the test solution had any toxic effects. Experimental diabetes mellitus was induced by injecting streptozotocin in normal adult male wistar rats. Intra-peritoneal injection of 60mg/kg dose of streptozotocin in adult wistar male rats, made pancreas swell and caused degeneration in islet of Langerhans and induced experimental diabetes mellitus in 2-4 days. Blood glucose levels and body weights were estimated on 0<sup>th</sup>, 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> day of the study whereas, various biochemical parameters like SGOT, SGPT, cholesterol, HDL cholesterol, LDL cholesterol, triglycerides, urea, creatinine and total protein were estimated on 0<sup>th</sup>, 14<sup>th</sup> and 28<sup>th</sup> day of the study. There was a significant decrease in the blood glucose levels and a significant increase in the body weights of rats when compared to diabetic rats group. Also, all the biochemical parameters showed a significant decrease in their levels at the end of the study.

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