10th International Conference on
Future Pharma and Innovations
March 24-25, 2026 | Amsterdam, Netherlands
Volume : 13

Driven Separation of Verbascum Chinense and Ficus Semicordata Foliage for Antidiabetic Properties in Rats

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Objective & Aim: The present study aims to investigate and compare the antidiabetic potential of *Verbascum chinense* and *Ficus semicordata* foliage extracts in streptozotocin-induced diabetic rats by separating their bioactive fractions, analyzing their phytochemical composition, and evaluating their antihyperglycemic, antioxidant and lipid-regulating effects.

Methods: Leaves of both plants were subjected to gradient solvent extraction, and the fractions were analyzed for phytochemical constituents. Experimental diabetes was induced in Wistar rats using STZ, followed by oral administration of the extracts for 21 days. Antidiabetic activity was evaluated by assessing fasting blood glucose levels, lipid profile, antioxidant enzyme status, and histopathological changes in pancreatic tissue.

Results: Both extracts produced a significant reduction in fasting blood glucose and improved lipid and antioxidant profiles compared with diabetic controls. Among the tested fractions, the ethanolic extract of *Ficus semicordata* exhibited superior antihyperglycemic and antioxidant effects, along with noticeable protection of pancreatic β-cells.

Conclusion: The study demonstrates that foliage extracts of *Verbascum chinense* and *Ficus semicordata* possess promising antidiabetic activity, with *Ficus semicordata* showing greater therapeutic potential. These findings support their traditional use and warrant further studies for isolation and characterization of active phytoconstituents for antidiabetic drug development.

Keywords: *Verbascum chinense*, *Ficus semicordata*, streptozotocin, antidiabetic activity, solvent extraction, oxidative stress, phytochemical analysis, β-cell protection.

Biography 1: Ms. Ravada Jyothika is a postgraduate scholar in Pharmacology at Sri Venkateswara College of Pharmacy. Under the guidance of Ms. N. Rajeswari, M.Pharm (Pharmacology), she has been actively involved in experimental research focused on Driven Separation of Verbascum Chinense and Ficus Semicordata Foliage for Antidiabetic Properties in Rats. Her work reflects a keen interest in evidence-based approaches for managing metabolic disorders.

Biography 2: Ms. N. Rajeswari, M.Pharm (Pharmacology), is an Assistant Professor at Sri Venkateswara College of Pharmacy with over 6 years of academic and research experience. Her interests include experimental pharmacology, toxicology and herbal drug research, with a focus on integrating traditional medicine with modern therapeutics.

Abstract received : August 19, 2025 | Abstract accepted : September 10, 2025 | Abstract published : October 10, 2025