Study of the anti-diabetic agents in Parijat herbal leaves (*Nyctanthes arbor-tristis)*

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Abstract

This study investigated the potential antidiabetic properties of Parijat (Nyctanthes arbor-tristis) plant leaves, a medicinal plant commonly used in traditional medicine. Given the rise in diabetes cases globally, there is a pressing need for alternative forms of therapy. Parijat, commonly known for its reported medicinal properties, holds promise in this regard. The rationale behind this study lies in exploring natural remedies that could offer safer and more accessible treatments for diabetes. The objectives were to assess its hypoglycemic activity and identify the bioactive compounds responsible for its antidiabetic effects. Through rigorous methodology involving extraction and fractionation using SFE (Supercritical Fluid Extraction) and HPLC (High-Performance Liquid Chromatography) as well as bioassays, this study aimed to elucidate the mechanisms underlying its potential therapeutic benefits. The results indicated significant hypoglycemic activity in experimental models, suggesting a potential role in managing diabetes. Additionally, the identification of bioactive compounds further supports its therapeutic potential. In conclusion, Parijat exhibits promising antidiabetic properties, offering a natural alternative for the management of diabetes. Further research is necessary to fully understand its mechanisms of action as well as develop safe and effective herbal remedies for diabetes.

Keywords: *Nyctanthes arbor-tristis, Medicinal plant, Hyperglycemia, Bioassay, Extraction, Fractionation, SFE, HPLC*