



ABSTRACT:

Diabetes mellitus is a global health concern characterized by impaired glucose regulation. Ficus Carica extract was prepared using a standardized method and tested for its antidiabetic activity using in vivo models and administered to alloxan induced animal models, monitoring blood glucose levels, and assessing biochemical markers of diabetes. The results revealed that fig fruit extract exhibited significant antidiabetic activity as well as it reduced blood glucose levels in diabetic animals. Toxicity assessment of fig fruit extract was conducted using acute toxicity studies in animal models. Characterization techniques such as UV, FTIR are used for fig fruit extract. Phytochemical analysis shows the presence of components responsible for causing antidiabetic activity. Histopathological diagrams of pancreas, liver, and kidneys, which are affected by diabetes reveals antidiabetic potential of Ficus Carica. In conclusion, fig fruit extract possesses promising antidiabetic activity and is well-tolerated in experimental animal model. These findings suggest its potential as a natural remedy for managing diabetes.