IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 6, Issue 10, March 2026
Impact Factor: 8.2

A Review on the Biochemical and Medicinal Significance of Costus Igneus

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Abstract:,*The Insulin Plant Costus igneus is a highly valued medicinal herb recognized for its potent anti-diabetic properties. Commonly referred to as "Natural Insulin," the plant has gained significance due to its ability to help regulate blood glucose levels. Its leaves contain bioactive compounds such as corosolic acid, diterpenoids, flavonoids, and antioxidants, which contribute to improved glucose metabolism and enhanced insulin sensitivity. Traditionally used in Ayurveda and herbal medicine, Costus igneus has been employed as a natural remedy for managing Type 2 diabetes, reducing hyperglycemia, and supporting overall metabolic health. Regular consumption of its leaves is believed to lower blood sugar levels, reduce oxidative stress, and improve pancreatic function.The present study explores the phytochemical composition, medicinal applications, and therapeutic potential of the Insulin Plant, with a focus on its role in diabetes management. By analyzing available scientific literature, the project aims to highlight the plant's effectiveness as a natural, accessible alternative for metabolic disorders. This research contributes to understanding the importance of traditional medicinal plants in modern healthcare and encourages further scientific validation for clinical use.*

Keywords:*The Insulin Plant Costus igneus is a highly valued medicinal herb recognized for its potent anti-diabetic*

I. INTRODUCTION

Costus igeus, commonly known as insulin plant in India, belongs to family Costaceae. It is believed that consumption of the leaves helps lower the blood glucose levels, and diabetics who consumed the leaves of this plant report a fall in their blood glucose levels.

Material and Methods:

The leaves were collected from the plants grown in AIJ college campus India, leaves were verified as belonging to the insulin plant (Costus igeus) . The leaves were shade-dried, finely powdered, weighed, ground in water using motor and pestle and used for the study

Fig: Costus igenus

DOI: 10.48175/IJARSCT-35021

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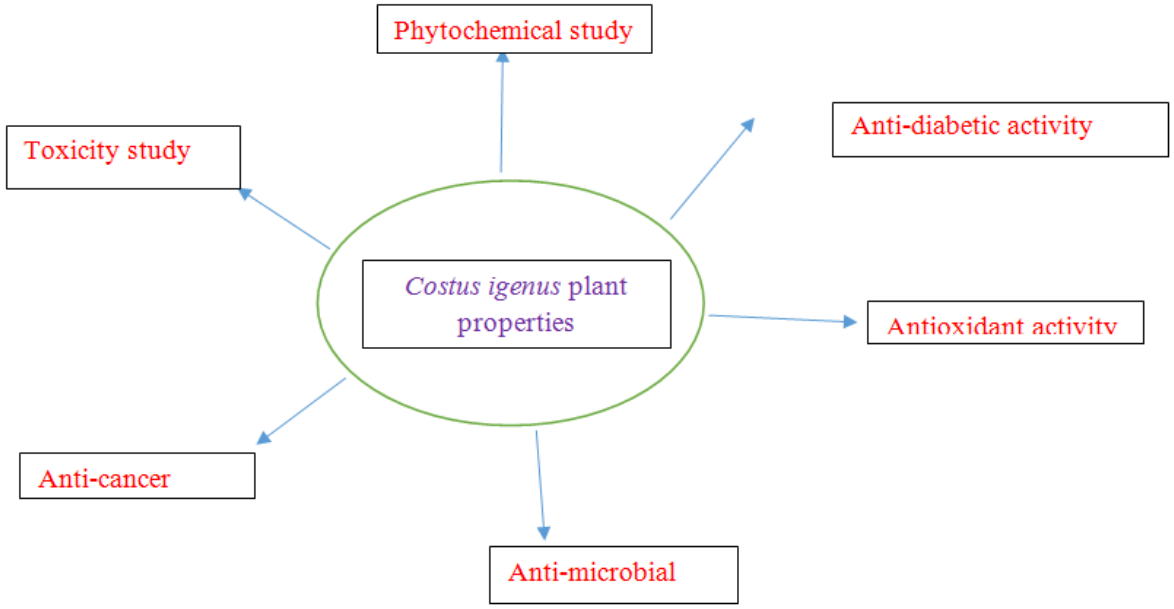
II. RESULTS AND DISCUSSION



Phytochemical study:

Devi VD (2011) noticed that Sequential screening for phytochemicals of C. igneus leaves revealed that it is rich in protein, iron, and antioxidant components such as ascorbic acid, α-tocopherol, β-carotene, terpinoids, steroids, and flavonoids.

Anti-diabetic activity:

Devi VD, Urooj (2008) Suggested that Lot of research work has been conducted to evaluate the anti-diabetic effect of insulin plant.

Antioxidant activity:

Dhanabal SP (2007) reported that An in vitro study of alcoholic extract of leaves of C. mexicanus showed moderate antioxidant activity.

Anti-microbial activity

According to Gothandam KM (2010)Methanolic extract of C. igneus showed maximum anti-bacterial activity against gram-positive Bacillus cerus, Bacillus megaterium, Micrococcus leuteus, Staphylococcusn aureus, Streptococcus lactis, and gram-negative strains Pseudomonas aeruginosa, Escherichia coli, Enterobacter aerogenes, Klebsiella pneumoniae, and Salmonella typhimurium.

Anti-cancer effect

Nadumane VK, (2011) noticed that the ethanolic extract of leaves of C. pictus was found to have anti-proliferative and anti-cancer potential in in-vitro mammalian fibrosarcoma (HT-1080) cells.

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