



**SYMPOSIUM
on
“Evidence Based Siddha:
A Renaissance of Tradition through
Modern Research”**

19th DECEMBER 2025

PROCEEDINGS



Organised by

Department of Pharmacognosy

In collaboration with

**Association of Pharmaceutical Teachers of India
Tamil Nadu Branch**

**Periyar College of Pharmaceutical Sciences
Tiruchirappalli - 620 021**

Approved by Govt. of Tamil Nadu and Pharmacy Council of India
Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai



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Title: Symposium on Evidence Based Siddha - A Renaissance of Tradition through Modern Research

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Lipid Risk Modulation by *Desmostachya bipinnata* Root Extract: A Preclinical Study on Atherogenic and Coronary Risk Indices in Diet-Induced Obesity Rats

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ABSTRACT

Context: Obesity is a major global health concern and major risk factor for a variety chronic diseases, including type 2 diabetes, cardiovascular diseases (CVD) stroke and hyperlipidemia. In the context of modern medicine, traditional herbal remedies are increasingly being explored for their potential to address metabolic disorders in a holistic manner. *Desmostachya bipinnata* (*D. bipinnata*) is a valuable medicinal plant long used in traditional Chinese medicine (TCM) has demonstrated promising therapeutic potential. Traditionally recognized for its effectiveness in treating digestive disorders, urinary tract infections, inflammations and even certain type of cancer, *D. bipinnata* is now being investigated for its potential anti-obesity and lipid-lowering properties. **Objective:** This study aims to evaluate anti-obesity potential of the ethanolic extract of *D. bipinnata* roots (EEDB) in albino Wistar rats with high fat diet (HFD) induced obesity. **Methods:** EEDB root was subjected to phytochemical screening and high-performance thin layer chromatography (HPTLC) analysis to identify major bioactive compounds. *In vitro* antioxidant and α -glucosidase inhibition assay were performed to evaluate the exact metabolic potential. The anti-obesity activity of EEPD was assessed in albino Wistar rats fed a HFD with doses of 100, 200 and 400mg/kg administered orally for 40 days. Orlistat was used as a standard reference drug for comparison. **Results:** Preliminary phytoconstituents analysis confirmed the presence of flavonoids, terpenoids, saponins, phenolic compounds and tannins in the extract. The rats treated with EEDB at all three doses showed a significant reduction ($p < 0.001$ & $p < 0.01$) in food intake, body weight, Lee index, serum total cholesterol, atherogenic index, coronary risk index, insulin tolerance and inversely HDL and glucose tolerance compared to the induced group. The extract also demonstrated potent antioxidant effect by increasing enzymes such as superoxide dismutase (SOD), catalase (CAT) and glutathione (GSH) while reducing lipid peroxidation level. **Conclusion:** The findings suggest that *D. bipinnata* root extract possessed significant antiobesity efficacy, likely due to its hypophagic, hypolipidemic and antioxidant properties. *D. bipinnata* bioactive compounds may offer integrative benefits when used alongside conventional approaches, making it a candidate for development within

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