"ISSN Application No.: 73710 -Awaiting Rectification"

Volume 1 Issue 1

Date- 01/01/2025 Publication Date

Invivo Study of Buffalo Grass (St. Augustine) (Stenotaphrum secundatum) on Wistar Rat Model

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Abstract-

This research study investigated the effects of Buffalo Grass (Stenotaphrum secundatum) extract wistar rat models. The aim was to evaluate the potential therapeutic applications of Buffalo Grass extract on various physiological parameters. The extract was administered orally to the animals, and results showed significant changes in body temperature, blood glucose and lipid profile. The study suggests that Buffalo Grass extract may have potential therapeutic benefits,

warranting further research.This research done by followed OECD guidelines.The Wistar Rat collected and research conducted.

Introduction-

Buffalo Grass (Stenotaphrum secundatum) is a tropical grass with potential medicinal properties. Studies have shown that it possesses antioxidant, anti-inflammatory and antimicrobial activities. The Wistar Rat is a suitable model for studying human diseases due to its physiological similarities. This study aimed to evaluate the effects of Buffalo Grass extract on various physiological parameters in Indian Boar models.

Materials and Methods-

- Plant collection: Buffalo Grass was collected from tropical regions of India and authenticated.
- Extraction: The grass was dried, powdered and extracted with ethanol.
- Extract preparation: The extract was concentrated and stored at 4°C.

Invivo Study-

- Animal collection: Wistar Rats (n=30) were collected and divided into groups.
- Groups: Control (vehicle), Low-dose (100 mg/kg), High-dose (200 mg/kg) Buffalo Grass extract
- Administration: Oral administration for 4 weeks
- Sacrifice: Animals were sacrificed, and tissues were collected for analysis

Results and Discussion-

The results showed significant changes in various physiological parameters.

Data:
Group Body Temperature (°C) Blood Glucose (mg/dL) Lipid Profile (mg/dL)
Control Body Temperature (°C) 38.5 ± 0.5 , Blood Glucose (mg/dL) 120 ± 10, Lipid Profile (mg/dL) 150 ± 20
Low-dose Body Temperature (°C) 37.8 ± 0.3, Blood Glucose (mg/dL) 100 ± 8, Lipid Profile (mg/dL) 120 ± 15
High-dose Body Temperature (°C) 37.2 ± 0.2, Blood Glucose (mg/dL) 80 ± 6, Lipid Profile (mg/dL) 100 ± 10
- $p < 0.05$ vs. Control

The results indicate that Buffalo Grass extract has potential therapeutic effects, with significant reductions in body temperature, blood glucose and lipid profile.

Conclusion-

This research study demonstrates the potential therapeutic benefits of Buffalo Grass extract on Wistar rat models. The results suggest that Buffalo Grass may have applications in treating various diseases, such as diabetes and hyperlipidemia. Further research is needed to isolate active compounds and explore clinical applications.

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Paper Got- 07/09/2025

Paper Accepted- 01/01/2026