

(212)

Anti-Obesity Effect of *Rhizophora Mucronata*-A True Mangrove

Dinesh P. and Ramanathan T.*

Centre of Advanced Study in Marine Biology, Annamalai University, India
**drtrcasmb@gmail.com*

Abstract

The present study aimed to investigate the effects of Methanolic extract of *Rhizophora mucronata* (MERM) on phytochemical studies and body weight, behaviour, organ weight, serum biochemical parameters in obese mice. The preliminary phytochemical analysis of MERM revealed the presence of protein, phenols, flavonoids, saponins, glycosides, terpenoids and tannins. Six groups of male Wistar albino mice were used. Group I was negative control and the other 4 groups were fed on progesterone for 6 weeks to induce obesity. Group II was kept obese (positive control) and the other 3 groups were orally given MERM at 100, 200 and 400 mg/kg/day, respectively, for 4 weeks. Group VI were orally given by standard drug Sibutramine 10 mg/kg. Blood samples were collected for biochemical analyses. Oral dosage of MERM to obese mice significantly reduced food intake, body weight, organ weight and decreased serum levels of aspartate amino transferase (AST), alanine amino transferase (ALT), gamma-glutamyl transpeptidase (GGT) enzymes, total cholesterol (TC), triglycerides (TG), and low density lipoproteins (LDL-c) and improved atherogenic index. Blood glucose, insulin and leptin hormone decreased by administration of MERM.

Keywords: *Rhizophora mucronata*, Obesity, Wistar albino mice, Phytochemical analysis, Biochemical analysis