Short Communication

iMedPub Journals
http://www.imedpub.com

Reports in Endocrine Disorders

2022
Vol 6. No. 3

A study of the anti-diabetic properties of isolated fractions of Samanea saman leaf extract using high-fat diet and streptozotocin-induced diabetic rats

Vinodhini Shanmugam
VIT, India

Abstract

The purpose of this study was the therapeutic effect of Samanea saman leaf extract, and the isolated fraction was studied in and in vivo model of streptozotocin, high-fat diet induced by Type 2 diabetic rats, resulting in a decrease in fasting blood sugar and an increase in insulin levels, as well as biochemical parameters close to normal levels in rats. Histopathology results of liver, pancreas, kidney and adipose tissue were confirmed. The analysis of gene expression in adipose tissues was evaluated and showed a weakening of insulin resistance and an increase in insulin-dependent glucose uptake due to the translocation and activation of GLUT4 in insulin-resistant adipose tissue. It improves hyperlipidemia and maintains the density of beta cells by reduction of free radicals. Biologically active compounds from Samanea saman have been systematically tested and documented in in vitro and in vivo models. Compounds isolated from extracts exhibit better activity than raw extracts. Isolated α-tocopherol indicates insulin secretion in GLUT4. Therefore, this Samanae saman is promising for the treatment of type 2 diabetes associated with obesity and secondary complications. In addition, studies to evaluate clinical trials for the development of antidiabetic drugs as an alternative source of synthetic drugs.

Received: June 08, 2022; **Accepted:** June 16, 2022; **Published:** June 22, 2022

Biography

Vinodhini Shanmugam is currently working at the Department of Biomedical Sciences at VIT, India. She has done many researches in the field of diabetes and endocrinology.

