PRINT: ISSN 0973-5070 ONLINE: ISSN 2456-6772
STUDIES ON
ETHNO-MEDICINE

Full text open access online (Since 2007)

PRINT: ISSN 0973-5070 ONLINE: ISSN 2456-6772
Ethno Med, 17(3-4): 133-139 (2023)
DOI: 10.31901/24566772.2023/17.3-4.675

Anti-diabetic Potential of *Macrotyloma uniflorum* Leaves in an *in Vitro* and *in Vivo* Model

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KEYWORDS Anti-diabetic Activity. Carbohydrate Metabolizing Enzymes. *In Silico* Analysis. *Macrotyloma uniflorum*. Phytochemical Analysis

ABSTRACT To identify the anti-diabetic potential of *Macrotyloma uniflorum* (*M. uniflorum*) leaves. The *M. uniflorum* leaves were subjected to extract preparation by using the solvents,such as hexane, ethanol, and water. Then, phytochemical and *in vitro* and in vivo studies were carried out. The rats were divided into five groups. The streptozotocin was used to induce diabetes and the glibenclamide is used as a standard drug. The plant extract is treated to the toxin induced rats. The changes were noted. The secondary metabolites present in the leaves of all three extracts. The ethanolic extract is more potent than the aqueous extract when compared to the two extracts. *In vivo* studies the levels returned to normal after the treatment. The pancreatic cells are regenerated in the *M. uniflorum* leaves treated groups. The results proved that the leaves extract of *M. uniflorum* has an anti-diabetic efficacy in an animal model.