OBJECTIVES

General Objectives:
The aim of the present study is to carry out animal studies and study of preadipocyte cells to test the hypothesis that MC not only acts as a hypoglycemic agent but also has effects on adipogenesis through adipogenic genes and alters lipid metabolism favorably.

Specific objectives:
A) Biochemical Studies
   a. To determine the antioxidant and anti-inflammatory activity in different percentage of ethanolic extract of *Momordica charantia* (EEMC).

B) Cell Line Studies
   a. To study and compare the effect of varying concentrations of *Momordica Charantia* on lipid accumulation
   b. To study the effect of different concentrations of *Momordica charantia* on PPARγ and SREBP activity using 3T3-L1 pre-adipocyte cell lines
   c. To study the effect of different concentrations of *Momordica charantia* on gene expression of PPARγ and SREBP in 3T3-L1 pre-adipocyte cell lines

C) Animal Studies
   a. To study the hypoglycaemic and lipid lowering effect of *Momordica charantia* on normal and streptozotocin induced diabetic rats.
   b. To compare the anti-diabetic and hypolipidemic effect of *Momordia charantia* with oral hypoglycaemic drug pioglitazone in diabetic rats.
   c. To study the effect of *Momordica charantia* supplementation on PPAR-γ and SREBP activity in adipose tissue of normal and diabetic rats.