List of Abbreviations

3AB- 3-aminobenzamide
ACC- Acetyl-CoA carboxylase
ADA- American Diabetes Association
ADM- adipocytes differentiation media
AMM- adipocyte maturation media
APS- Ammonium persulfate
ATP- Adenosine triphosphate
BMI- Body Mass Index
BSA- Bovine serum albumin
C/EBP- CCAAT/enhancer binding protein
cAMP- cyclic Adenosine Monophosphate
CAP- Cbl-associated protein
CDK- Cyclin dependent kinase
CNS- Central Nervous System
CREBP- cAMP response element binding protein
CTGF- Connective tissue growth factor
CVD- Cardio Vascular Disease
DAPI- 4'6'-diamidino-2-phenylindole dihydrochloride
DBD - DNA Binding Domain
DMEM - Dulbecco's modified eagle's medium
DMSO- Dimethyl Sulphoxide
DPP4- Dipeptidyl peptidase-IV
EDTA- Ethylenediaminetetraacetic acid
EL- *Enicostemma littorale*
ERK- Extracellular-signal-regulated kinases
FATP- Fatty acid transport protein
FBS- Fetal Bovine Serum
FFA- Free Fatty Acid
FITC- Fluorescein isothiocyanate
FoxO1- Forkhead box protein O1
G-6-Pase- Glucose 6 Phosphatase
GAB1- Grb-2-associated protein
GDF- Growth Differentiation Factors
GDP- Guanosine Diphosphate
GK- Glucokinase
GLP-1- glucagon-like-peptide-1
Glut2- Glucose Transporter-2
Glut4- Glucose Transporter 4
GP- Glycogen Phosphorylase
GSK3b- Glycogen Synthase Kinase 3 β
GTP- Guanosine Triphosphate
GTT- Glucose tolerance test
HDL- High Density lipoprotein
HGO- Hepatic Glucose Output
HGP- hepatic glucose production
HMG- CoA Reducatse: 3-hydroxy-3-methyl-glutaryl-CoA reductase
HPTLC- High Performance Thin Layer Chromatography
HSL- hormone-sensitive lipase
IBMX- 3-isobutyl-1-methylxanthine
ICC- Immunocytochemistry
IDDM- Insulin Dependant Diabetes Mellitus
IDL- intermediate-density Lipoproteins
IGF - Insulin-like Growth Factor
IGFR- Insulin-like Growth Factor Receptor
IGT- Impaired Glucose Tolerance
IL- Interleukin
ILCC- Islet Like Cell Clusters
IR- Insulin Receptor
IRS- insulin receptor substrate
kDa- Kilodaltons
KGF- keratinocyte growth factor
LDH- Lactate dehydrogenase
LDL- Low Density lipoprotein
LPL - Lipoprotein Lipase
MAPK- Mitogen-activated protein kinase
MFO- Metformin
MSCs- Mesenchymal stem cells
mTOR- Mammalian target of rapamycin
MTT- 3-(4,5-Dimethylthiazol-2-yl)-2,5Diphenyltetrazolium Bromide
NA-STZ- Nicotinamide-streptozotocin
NIDDM- Non Insulin Dependent Diabetes Mellitus
OGTT: Oral Glucose Tolerance Test
PAI- Plasminogen activator inhibitor

PARP- Poly (ADP-ribose)polymerase
PBS- Phosphate buffer saline
PCOS- Poly Cystic Ovary Syndrome
PCR- Polymerase chain reaction
PEPCK: Phosphoenolpyruvate carboxykinase
PFA- Paraformaldehyde
PGC- PPAR-γ coactivator
PH - Pleckstrin Homology
PI(3) K- phosphatidylinositol 3-kinase
PKA/B/C- protein kinase A/B/C
PP_2BS: Post Prandial (2 hours) Blood Sugar
PPAR- γ: Peroxisome proliferator-activated receptor gamma
PTP1B- protein-tyrosine phosphatase 1B
qPCR- quantitative PCR
RT-PCR- Reverse transcriptase PCR
RXR- Retinoid-x-receptor
SCAP - SREBP cleavage activating protein
SFM- Serum free media
SM- Swertiamarin
SREBP- Sterol Regulatory Element Binding Protein
TAG- Triacyl Glycerol
TG- Triglycerides
TGF-β- Transforming growth factor
TIDM- Type 1 Diabetes Mellitus
TIIDM- Type 2 Diabetes Mellitus
TIIIDM- Type 3 Diabetes Mellitus
TNF-α- Tumour Necrosis Factor- α
TOP2B- Topoisomarase II β
VLDL- Very Low Density Lipoprotein
VMH- Ventromedial hypothalamus
WAT- White Adipose Tissue
WHO- World Health Organization