LIST OF ABBREVIATIONS

PDK1	:	3-Phosphoinositide-dependent protein kinase 1
AMPK	:	5'-AMP-activated protein kinase
AICAR	:	5-aminoimidazole-4-carboxamide-1-beta-D-ribofrano-side
ADP	:	Adenosine diphosphate
KATP	:	Adenosine triphosphate-sensitive K+ channel
AC	:	Adenylate cyclase
Akt/PKB	:	Akt/protein kinase B
Alpha-KG	:	Alpha-ketoglutarate
ADA	:	American diabetes association
AIF	:	Apoptosis-inducing factor
APAF1	:	Apoptotic protease activating factor 1
ATPase	:	ATP synthase
aPKCs	:	Atypical protein kinases C
BMI	:	Body mass index
BMCP1	:	Brain mitochondrial carrier protein BMCP1
BAT	:	Brown adipose tissue
cDNA	:	Complementary DNA
cAMP	:	Cyclic adenosine monophosphate
Cyt b	:	Cytochrome b
Cyt *c*	:	Cytochrome *c*
COX	:	Cytochrome c oxidase
DNA	:	Deoxyribonucleic acid
DCCT	:	Diabetes control and complication trial
DKA	:	Diabetic ketoacidosis
ETC	:	Electron transport chain
FPG	:	Fasting plasma glucose
FAS	:	Fatty acid synthase
FOXA 1	:	Forkhead box proteins A 1
GDM	:	Gestational diabetes mellitus
GLP-1	:	Glucagon-like polypeptide-1
G-6-Pase	:	Glucose- 6- phosphatase

GLUT-2	:	Glucose transporter-2
GLUT-4	:	Glucose transporter -4
GIP	:	Glucose-dependent insulinotropic peptide
GSIS	:	Glucose-stimulated insulin secretion
GPx	:	Glutathione peroxidase
GAPDH	:	Glyceraldehyde-3-phosphate dehydrogenase
GSK3	:	Glycogen synthase kinase-3
HbA1c	:	Glycohemoglobin
HMG	:	High-mobility group (HMG) protein
HMGA	:	HMG-AT-hook family
HMGB	:	HMG-box family
HMGN	:	HMG–nucleosome-binding family
HOMA	:	Homeostatic model assessment
H_2O_2	:	Hydrogen peroxide
IFG	:	Impaired fasting glucose
IGT	:	Impaired Glucose tolerance
IAPs	:	Inhibitors of apoptosis proteins
IRS	:	Insulin receptor substrate
Kir6.2	:	K+ channel 6.2 subunits
HDL	:	Low high-density lipoprotein
LVDCC	:	L-type voltage-dependent calcium channel
MODY	:	Maturity-onset diabetes of young
mRNA	:	Messenger RNA
mtDNA	:	Mitochondrial DNA
MAPK	:	Mitogen activated protein kinase
NGSP	:	National glycohemoglobin standardization program
NAD	:	Nicotinamide adenine dinucleotide
NADPH	:	Nicotinamide adenine dinucleotide phosphate, reduced form
NEFA	:	Non - esterified fatty acid
NAFLD	:	Non-acoholic fatty liver disease
NRF	:	Nuclear respiratory factor
OGTT	:	Oral glucose tolerance test
PARs	:	Peroxisomal proliferators-activated receptors
PPAR	:	Peroxisomal proliferators-activated receptors

PI3	:	Phosphatidyl inositol 3
PI3K	:	Phosphatidylinositol 3-kinase
PIP_3	:	Phosphatidylinositol-3',4',5'-trisphosphate
PDE3B	:	Phosphodiesterase 3B
PEPCK	:	Phosphoenolpyruvate carboxykinase
PLC	:	Phospholipase C
PACAP	:	Pituitary adenylate cyclase activating peptide
PKC	:	Protein kinase C
PC	:	Pyruvate carboxylase
PDH	:	Pyruvate dehydrogenase
ROS	:	Reactive oxygen species
$FADH_2$	:	Reduced flavin- adenine dinucleotide
NADH	:	Reduced nicotinamide-adenine dinucleotide
RNA	:	Ribonucleic acid
rRNA	:	Ribosomal RNA
SREBP-1	:	Sterol regulatory element-binding protein-1
SREs	:	Sterol regulatory elements
SUR1	:	Sulfonylurea receptor 1
SOD	:	Superoxide dismutase
TRs	:	Thyroid hormone receptors
TFB1 M	:	Transcription factor b1 mitochondrial
TFB2 M	:	Transcription factor b2 mitochondrial
tRNA	:	Transfer RNA
TCA	:	Tricarboxylic acid
TGs	:	Triglycerides
T2DM	:	Type 2 diabetes mellitus
UCP	:	Uncoupling proteins
UCP	:	Uncoupling proteins
uORF	:	Upstream open reading frame
VLDL	:	Very low density lipoprotein
VDAC	:	Voltage-dependent anion-selective channel