

List of Abbreviations

ACC1	Acetyl-CoA carboxylase 1
ACE	Angiotensin Convertase Enzyme
HbA1c	Glycated haemoglobin
ACAP1	Adenylyl cyclase-associated protein 1
AIF	Apoptosis-inducing factor
ARMS-PCR	Amplification Refractory Mutation System-Polymerase Chain Reaction
ARX	Aristaless related homeodomain
AT	Adipose tissue
AS160	AKT substrate of 160kDa
ATGL	Adipose triglyceride lipase
bp	base pair (s)
BMI	Body Mass Index
BrdU	Bromodeoxyuridine
BW	Body Weight
CAD	Coronary Artery Disease
CETP	Cholesteryl ester transfer protein
CR	Calorie Restriction
CREB	cAMP response element-binding protein
DM	Diabetes Mellitus
EtBr	Ethidium bromide
EDTA	Ethylenediaminetetraacetic acid
ER	Endoplasmic Reticulum
ETC	Electron Transport Chain
FBG	Fasting Blood Glucose
FOXO	Forkhead box O
FFA	Free Fatty Acids
GABA	γ -Aminobutyric Acid
GABA _A R	GABA A receptor
GCK	Glucokinase
GDM	Gestational diabetes mellitus
G6P	Glucose-6-phosphate
G6Pase	Glucose-6-phosphatase
GWAS	Genome Wide Association Study
GSK3	Glycogen synthase kinase 3
GK	Glucokinase
GP	Glycogen phosphorylase
GLUT2	Glucose transporter 2
HDL	High-Density Lipoprotein
HWE	Hardy-Weinberg Equation
HFD	High-Fat Diet

IDDM	Insulin-Dependent Diabetes Mellitus
IL	Interleukin
IFG	Impaired Fasting Glucose
IR	Insulin receptor
IRS	Insulin Receptor Substrate
IMCL	Intramyocellular lipids
IPGTT	Intraperitoneal Glucose Tolerance Test
IPIST	Intraperitoneal Insulin Sensitivity Test
IGF-1	Insulin-like growth factor-1
JNK	c-Jun N-terminal kinase
LD	Linkage disequilibrium
LDL	Low-Density Lipoprotein
mRNA	Messenger RNA
MAP	Ras-mitogen-activated protein
MHC	Major Histocompatibility Complex
NADP	Nicotinamide adenine dinucleotide phosphate
NAFLD	Non-alcoholic Fatty Liver Disease
NCD	Normal Chow Diet
NIDDM	Non-insulin-dependent diabetes mellitus
NGN3	Neurogenin3
NFκB	Nuclear Factor kappa-light-chain-enhancer of activated B cells
NPY	Neuro Peptide Y
NFW	Nuclease Free-Water
NOD	Non-obese diabetic
OR	Odds Ratio
OCR	Oxygen Consumption Rate
PAGE	Polyacrylamide gel electrophoresis
PAX4	Paired Box 4
PBMC	Peripheral Blood Mononuclear Cell
PCOS	Polycystic ovary syndrome
PKA	protein kinase A
PKC	Protein kinase C
PH Domain	Pleckstrin homology domain
PCR-RFLP	Polymerase Chain Reaction-Restriction Fragment Length Polymorphism
PEPCK	Phosphoenolpyruvate carboxykinase
PGC-1α	Peroxisome proliferator-activated receptor-γ coactivator-1α
PI3K	Phosphoinositide 3-kinases
PTB	Phosphotyrosine binding
Ptf1a	Pancreas specific transcription factor 1a
PIP3	Phosphatidylinositol-3,4,5-triphosphate
PDK	Phosphoinositide-dependent protein kinase

PDX1	Pancreatic and duodenal homeobox 1
ROS	Reactive Oxygen Species
RE	Restriction Enzymes
SNPs	Single Nucleotide Polymorphisms
SIRT	Sirtuin
SOCS	Suppressor of cytokine signaling
SH2	Src-homology 2
STZ	Streptozotocin
SK	Skeletal Muscle
TBA	Tris-acetate-EDTA
TNF- α	Tumor necrosis factor
Tfam	transcription factor A, mitochondrial
TC	Total Cholesterol
TG	Triglycerides
T1D	Type 1 Diabetes
T2D	Type 2 Diabetes
3' UTR	3'-untranslated region
VAT	Visceral Adipose Tissue
VLDL	Very-low-density lipoprotein

Note: The full forms of several rarely used abbreviations have been described within the text.