

Acknowledgement

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Abbreviations

AASLD	American Association for the Study of Liver Diseases
AGO	Argonaute
ALAN	Artificial Light at Night
ALT	Alanine aminotransferase
AST	Aspartate transferase
ATP	Adenosine Triphosphate
BA	Bile Acids
bHLH	Basic-helix-loop-helix
BMAL1	Brain and Muscle Arnt-like 1
BMI	Body Mass Index
cAMP	Cyclic adenosine monophosphate
CCR2/4/5	C-C chemokine receptor type 2/4/5
CD	Chronodisruption
CD8 ⁺	Cluster of differentiation 8 ⁺
<i>CK1δ/ε</i>	Casein kinase 1 isoform delta/epsilon
CLOCK	Circadian Locomotor Output Cycles Kaput
CREB	cAMP AMP Response Element
CRY1/2	Cryptochrome 1/2
<i>Cu</i>	Curled
CVDs	Cardiovascular diseases
DAMPs	Danger Associated Molecular Patterns
DBP	DNA-Binding Protein
DEGs	Differential Expressed Genes
DGCR8	DiGeorge syndrome critical region 8
DGEA	Differential Gene Expression Analysis
DILI	Drug induced liver injury
DNL	<i>de novo</i> lipogenesis
EEP	Exonuclease Endonuclease Phosphatase

ELOVL3/6	Elongation of very long chain fatty acids-like 3/6
ER	Endoplasmic reticulum
<i>Fabp2</i>	Fatty acid binding protein 2
FAs	Fatty acids
FAS	Fatty acid synthase
FDA	Food and Drug Administration
FFA	Free fatty acids
FGF15	Fibroblast growth factor 15
FOXO3	Forkhead box O3
FXR	Farnesoid X receptor
<i>GCKR</i>	Glucokinase regulatory protein
GEO	Gene expression omnibus
GLP-1	Glucagon-like peptide-1
GO	Gene ontology
GPCRs	G-protein coupled receptors
GSH: GSSG	Glutathione: glutathione disulfide
HCV	Hepatitis-C virus
HDAC3	Histone deacetylase 3
HDL	High-density lipoprotein
HFD	High fat diet
H	High-fat-high-fructose
HO-1	Heme oxygenase-1
hsa	homo sapiens
IEG	Immediate early gene
IL-6	Interleukin-6
kDa	Kilo Dalton
KLF10/15	Kruppel-like factor 10/15
KO	Knockout
LD	Light-dark
LDL	Low-density lipoprotein
LPS	Lipopolysaccharide

LSDs	Lifestyle disorders
LXR	Liver X receptor
MAMPs	Molecule associated molecular patterns
MASH	Metabolic dysfunction-associated steatohepatitis
MASLD	Metabolic dysfunction-associated steatotic liver disease
MCD	Methionine and choline deficient diet
MCP-1	Monocyte chemoattractant protein-1
MDA	Malondialdehyde
MTS	Mitochondrial transfer sequence
Mmu	Mus musculus
NAD	Nicotinamide adenine dinucleotide
NADP	Nicotinamide adenine dinucleotide phosphate
NADPH	Nicotinamide dinucleotide phosphate hydrogen
NAFLD	Non-alcoholic fatty liver disease
NASH	Non-alcoholic steatohepatitis
NF- κ B	Nuclear factor kappa B
NHANES	National Health and Nutrition Examination Survey
NLRP3	Nucleotide-binding domain (NOD)-like receptor pyrin domain containing 3
NOCT	Nocturnin
NOS	Nitric oxide synthase
NR1D1/2	Nuclear factor subfamily 1, group D, member 1
Nrf2	Nuclear factor erythroid-related factor 2
NR4A1	Nuclear receptor subfamily 4 group A member 1
OA	Oleic acid
OCA	Obeticholic acid
ORO	Oil Red O
PA	Palmitic acid
pCREB	phosphorylated cAMP AMP Response Element
PER1/2/3	Period 1/2/3
PNPLA3	Patatin-like phospholipase domain-containing 3

PPAR α/γ	Peroxisome-proliferator-activated receptor α/γ
PPI	Protein-protein interactions
Pre-miRNA	precursor- microRNA
Pri-miRNA	Primary- microRNA
qPCR	Quantitative polymerase chain reaction
RHT	Retinohypothalamic tract
RMSD	Root mean square deviation
ROREs	ROR response elements
RORG/ α	Retinoic acid receptor-related orphan receptor-G/ α
ROS	Reactive oxygen species
SCC	Squamous cell carcinoma
SCD-1	Steroyl-CoA desaturase
SHP	Small heterodimer partner
shRNA	short-hairpin RNA
SIRT1/6	Sirtuin 1/6
SREBP1c	Sterol regulatory element-binding protein-1c
TG	Triglycerides
T2DM	Type-2 diabetes mellitus
TLR4	Toll-like receptor 4
TNF- α	Tumor necrosis factor- α
UC	Ulcerative colitis
UTR	Untranslated region
VAT	Visceral adipose tissue
VLDL	Very low-density lipoprotein
WAT	White adipose tissue
WHO	World Health Organization
WT	Wildtype
XPO5	Exportin 5
ZT	Zeitgeber