2-HG - 2-Hydroxyglutarate
2-HPAA - 2-Hydroxyphenylacetic Acid
3-MG - 3-Methylglutaric Acid
3-MGA - 3-Methylglutaconic Acid
3-PHP - 3-Phosphopyruvate Hydroxypyruvate
3-Pser - 3-Phosphoserine
4AB - 4-Aminobutyrylaldehyde
4ABT - 4-Aminobutyrate Transaminase
4Fe-4S - Tetrakis(X-ion(1+) ion) Tetrasulfane Tetrasulfanide
4-HB - 4-Hydroxybenzoic Acid
4-HBA - 4-Hydroxybenzaldehyde
4-HBS - 4-Hydroxybenzoate Synthase
4-HCA - 4-Hydroxycinnamic Acid
4-MeI - 4-Methylimidazole
4-MeIA - Methylimidazole Acetate
4-MeIAase - Methylimidazole Acetate Hydrolase
5-HIA - 5-Hydroxyindoleacetaldehyde
5-HIAA - 5-Hydroxyindoleacetic Acid
5-MTHF - 5-Methyltetrahydrofolate
5,10-MTHF - 5,10-MethyleneTetrahydroFolate
6PGL - 6-Phosphoglucono-δ-Lactone
6PG - 6-Phosphogluconate
6PGD - 6-Phosphogluconate Dehydrogenase
AA - Amino Acids
AAA - Acetoacetic Acid
AAC - Acetoacetyl-CoA
AADC - Aromatic L-Amino Acid Decarboxylase
AAO - L-Amino-Acid Oxidase
ABCD4 - ATP-Binding Cassette 4
AC - Aconitase
ACAD9 - Isobutyryl-CoA Dehydrogenase
ACADL - Long-Chain Specific Acyl-CoA Dehydrogenase
ACADM - Medium-Chain Specific Acyl-CoA Dehydrogenase
ACADS - Short-Chain Specific Acyl-CoA Dehydrogenase
ACADSB - Short/Branched Chain Acyl-CoA Dehydrogenase
ACADV - Very Long-Chain Specific Acyl-CoA Dehydrogenase
ACMS - 2-Amino-3-Carboxymuconic-6-Semialdehyde Acid
ACSM1/2B - Mitochondrial Medium-chain Acyl-CoA Synthetases
A-CoA - Acetyl-CoA
AChE - Acetylcholinesterase
ACO - cis-Aconitate Decarboxylase
ACOT - Acyl-CoA Thioesterase
ACOX - Peroxisomal Acyl-Coenzyme A Oxidase
ACSL - Acyl-CoA Synthetase (Long-Chain)
ACSM - Acyl-CoA Synthetase (Medium-Chain)
ACSS - Acyl-CoA Synthetase (Short-Chain)
ACSVL - Acyl-CoA Synthetase (Very Long-Chain)
ACTH - Adrenocorticotropic Hormone
ADC - Arginine Decarboxylase
ADK - Adenylate Kinase (Myokinase)
ADH - Alcohol Dehydrogenase
ADHFE - Hydroxyacid-Oxoacid Transhydrogenase
ADO - 2-Aminoethanethiodioxygenase
AdoCbl(III) - Adenosylcobalamin
ADP - Adenosine Diphosphate
ADS - Adenylsuccinate
ADSL - Adenylsuccinate Lyase
ADSS - Adenylosuccinate Synthetase
AFMID - Kynurenine Formamidase
AGAT - Arginine:Glycine Amidinotransferase
AGB - Agmatinase
AGXT - Alanine-Glyoxylate Aminotransferase
AHCY - S-Adenosylhomocysteine Hydrolase
AICAR - 5-Aminoimidazole-4-Carboxamide Ribonucleotide
AIR - 5-Aminoimidazole Ribonucleotide
AIRS - AIR Synthetase
α-KB - α-Ketobutyrate
α-KG - α-Ketoglutarate
α-KGDH - alpha-Ketoglutarate Dehydrogenase (Complex)
Al - Aluminium
Ala - Alanine
ALD - Aldolase
ALDH - Aldehyde Dehydrogenase
ALP - Alkaline Phosphatase
ALT - Alanine Aminotransferase
AMP - Adenosine Monophosphate
AMPD - AMP Deaminase
AMPK - AMP-activated Protein Kinase
Arg - Arginine
ARG1 - Arginase
AR - Aldose Reductase
AO - Aldehyde Oxidase
APS - Adenosine-5′-Phosphosulfate
APSK - APS Kinase
AQP9 - Aquaporin-9
ASA - Argininosuccinate
ASDC - Aspartate Decarboxylase
ASL - Arginino Succinase
Asp - Aspartate
ASPT - Aspartate Transcarbamoylase
ASS - Argininosuccinate Synthetase
AST - Aspartate Aminotransferase
ASMT - Acetylserotonin O-Methyltransferase
ATP - Adenosine Triphosphate
AUH - Methylglutaconyl-CoA Hydratase
BCKDH - Branched-Chain Alpha-Keto Acid Dehydrogenase (Complex)
BCAT - Branched-Chain-Amino-Acid Aminotransferase
BH_2 - Dihydrobiopterin
BH_4 - Tetrahydrobiopterin
BHB - β-Hydroxybutyric Acid
BHMT - Betaine-Homocysteine S-methyltransferase
BPG - Biphosphoglycerate
BPGM - BPG Mutase
BPGP - 2,3 BPG Phosphatase
Br - Bromine
Ca - Calcium
CAIR - 5-Aminoimidazole-4-Carboxylate Ribonucleotide
cAMP - Cyclic Adenosine Monophosphate
Car - Carnosine
Car-ACyl-IA - Carnosine-Acetaldehyde-Imidazolidinone Adduct
CAT - Catalase
CBS - Cystathionine B-Synthase
CBAD - Cysteine Sulfinic Acid Decarboxylase
CDO - Cysteine Dioxygenase
CDP - Cytidine 5′-Diphosphate
CK - Creatine Kinase
Cl - Chlorine
CMP - Cytidine Monophosphate
CMPK - UMP-CMP Kinase
CNMT - Carnosine N-Methyl Transferase
CNDP - Cytosolic Non-specific Dipeptidase
CO - Carbon Monoxide
CO_2 - Carbon Dioxide
Co - Cobalt
CoA - Coenzyme A
CN - Hydrogen Cyanide
CNCbl(III) - Cyanocobalamin
Cob(III)alamin [any] - AdoCbl(III), MeCbl(III), OH-Cob(III)alamin
COMT - Catechol O-methyltransferase
CP - Carbamoyl Phosphate
CPS1 - Carbamoyl Phosphate Synthase1
CR - Carbonyl Reductase
Cr - Chromium
Cre - Creatine
CRH - Corticotrophin-Releasing Hormone
CRNS - Carnosine Synthase
CPT - Carnitine O-Palmitoyltransferase
CS - Citrate Synthase
CTP - Cytidine Triphosphate
Cu - Copper
CYP - Cytochrome P450 monooxygenase
Cys - Cysteine
DAG - Diacylglycerol
DAT - Dopamine Transporter
DAO - Diamine Oxidase
DBH - Dopamine Beta Hydroxylase
DHBA - 3,4-Dihydroxybenzeneacetic Acid
DHF - Dihydrofolate
DHFR - Dihydrofolate Reductase
DHAP - Dihydroxyacetone Phosphate
DHI - 5,6-Dihydroxyindole
DHICA - 5,6-Dihydroxyindole-2-Carboxylic Acid
DHMA - 3,4-Dihydroxymandelaldehyde
DHMC - 3,4-Dihydroxymandelic Acid
DMG - Dimethylglycine
DMGDH - DMG Dehydrogenase
DHO - Dihydroorotate
DHOase - Dihydroorotase
DHODH - Dihydroorotate Dehydrogenase
DOPAC - 3,4-Dihydroxyphenylacetic Acid
DOPAL - 3,4-Dihydroxyphenylacetaldehyde
DPCK - DephosphoCoA Kinase
DT - L-Dopachrome Tautomerase
dTMP - Thymidine Monophosphate
dUMP - Deoxyuridine Monophosphate
E4P - Erythrose-4-Phosphate
ECHS1 - Enoyl-CoA Hydratase
ENO - Enolase
ENPP - Ectonucleotide Pyrophosphatase/Phosphodiesterase
ETC - Electron Transport Chain
ETHE1 - Sulfur Dioxygenase
F1,6BP - Fructose 1,6-Bisphosphate
F2,6BP - Fructose 2,6-Bisphosphate
F6P - Fructose-6-Phosphate
FAA - 4-Fumarylacetoacetic Acid
FAAS - Fumarylacetoacetase
FAD - Adeflavin
FADS - FAD Synthetase
FAICAR - 5-Formamidoimidazole-4-Carboxamide Ribonucleotide
FBPase - Fructose 1,6-Bisphosphatase
FBPase2 - Fructose 2,6-Bisphosphatase
Fe - Ferritin
FGAM - Formylglycinamidine Ribonucleotide
FGAR - Formylglycinamide Ribonucleotide
FIGLU - Formimidoylglutamic Acid
FIGLU-THF - Formiminoglutamate-THF
FMN - Flavin Mononucleotide
FMO - Flavin Monooxygenase
FOLH - Folate Hydrolase
FR - Flavin Reductase (uncharacterised, possibly MMACHC)
FS - Fumarase
FT - Formiminotransferase
FTase - AICAR Transformylase
FTCD - Formiminotransferase Cyclodeaminase
G3P - Glycerol-3-Phosphate
G3PP - Glycerol-3-Phosphate Phosphatase
G6Pase - Glucose 6-Phosphotase
G6PD - Glucose-6-Phosphate Dehydrogenase
GABA - Gamma-Aminobutyric Acid
GAD - Glutamate Decarboxylase
GAG - Glycosaminoglycan
GAMT - S-Adenosylmethionine:Guanidinoacetate Methyltransferase
GAP - Glyceraldehyde-3-Phosphate
GAPDH - Glyceraldehyde 3-Phosphate Dehydrogenase
GARS - GAR Synthetase
GARTase - GAR Transformylase
GAT - Guanidinoacetate
GBBH - gamma-Butyrobetaine Hydroxylase
GCA - gamma-Glutamylcysteine Synthase
GCH1 - GTP Cyclohydrolase I
GCL - Glutamate-Cysteine Ligase
GDP - Guanosine Diphosphate
GDH - Glutamate Dehydrogenase
GFAT - Glutamine:Fructose-6P Amidotransferase
GGCT - gamma-Glutamyl Cyclotransferases
GHB - γ-Hydroxybutyrate
GK - Glucokinase
Glc-1,6-BP - Glucose-1,6-Bisphosphate
GlcNAc - N-Acetylglucosamine
GlcNAc-1-P - GlcNAc 1-Phosphate
GlcNAc-6-P - GlcNAc 6-Phosphate
GLN - Glutaminase
Gln - Glutamine
GLS - Glutaminase Synthase
Gly - Glycine
GLYCK - Glycerol Kinase
GLYDH - Glycolaldehyde Dehydrogenase
GLYP - Glycogen Phosphorylase
GLYS - Glycogen Synthase
Glut - Glutamate
GNMT - Glycine N-Methyltransferase
GOR - Glyoxylate Reductase
GOX - Glycolate Oxidase
GPD - Glycerol-3-Phosphate Dehydrogenase
GPX - Glutathione Peroxidase
GR - Glutathione Reductase
GS - Glutamine Synthetase
GS-Ado - S-Adenosylglutathione
GS-Me - S-Methylglutathione
GSA - Glutamate-5-Semialdehyde
GSH - Glutathione, reduced
GSK3β - Glycogen Synthase Kinase-3 beta
GSSG - Glutathione disulfide (oxidised)
GSSH - Glutathione Persulfide
GTP - Guanosine Triphosphate
GTase - Glycosyltransferases
H - Hydrogen
H_2O - Water
H_2O_2 - Hydrogen Peroxide
H_2S - Hydrogen Sulfide
H2NTP - 7,8-Dihydroneopterin Triphosphate
HAAO - 3-Hydroxyanthranilic Acid Dioxygenase
HAL - Histidine Ammonia-Lyase
HAS - Hyaluronic Acid Synthase
HADH - 3-Hydroxyacyl-CoA Dehydrogenase
HBDH - Hydroxybutyrate Dehydrogenase
HCDH - 3-Hydroxyacyl-CoA Dehydrogenase
HCO_3 - Bicarbonate
HDC - Histidine Decarboxylase
HK - Hexokinase
HIBADH - 3-Hydroxyisobutyrate Dehydrogenase
HIBCH - 3-Hydroxyisobutyryl-CoA Hydrolase
HICA - 2-Hydroxyisocaproate
HIF - Hypoxia-Inducible Factor
His - Histidine
HIVA - 2-Hydroxyisovalerate
HGA - Homogentisic Acid
HGD - Homogentisate 1,2-Dioxygenase
HMGCL - Hydroxymethylglutaryl-CoA Lyase
HMPAL - 3-Methoxy-4-Hydroxyphenylacetaldehyde
HMT - Histidine Methyltransferase
HOGA - 4-Hydroxy-2-Ketoglutarate Aldolase
HPCL - HydroxyPyruvate Carboxy-Lyase
HPRT - Hypoxanthine-Guanine Phosphoribosyltransferase
HT - Histidine Transaminase
HTMLA - β-hydroxy-ε-N-trimethyllysine Aldolase
HTDH - Hypotaurine Dehydrogenase
HVA - Homovanillic Acid
HYPDH - 4-Hydroxyproline Dehydrogenase

I - Iodine
IAA - Imidazole Acetaldehyde
IAcA - Imidazole Acetic Acid
IAL - Imidazoleacetate-Lyase
ICL - Isocitrate Lyase
IDH - Isocitrate Dehydrogenase
IDO - Indoleamine 2,3-Dioxygenase
IFN - Interferon
IMP - Inosine Monophosphate
IMPCH - IMP Cyclohydrolase
IP_3 - Inositol Trisphosphate
IQ - Indole-5,6-Quinone
IVD - Isovaleryl-CoA Dehydrogenase
K - Potassium
KADC - Ketoacid Decarboxylase (Microbial)
KAT - Kynurenine Aminotransferase
KHK - Ketohexokinase
KIC - alpha-Ketoisocaproate
KIV - alpha-Ketoisovalerate
KMBA - 2-Oxo-4-Methiolbutyric Acid
KMO - Kynurenine 3-Monooxygenase
KYNU - Kynureninase
LDH - Lactate Dehydrogenase
LMBD1 - Lysosomal Cobalamin Transport Escort Protein
LPA - Lipoamide
LPH4 - Lactoyl-PH4
M6P - Mannose 6-Phosphate
MAA - Maleylacetoacetic Acid
MAAI - Maleylacetoacetate Isomerase
MAS - Malate Synthase
MAO - Monoamine Oxidase
MCCC - Methylcrotonoyl-CoA Carboxylase
MDH - Malate Dehydrogenase
ME1 - NADP-dependent Malic Enzyme
MeCbl(III) - Methylcobalamin
MetHb - Methemoglobinemia
Mg - Magnesium
MHPG - 3-Methoxy-4-Hydroxyphenylglycoladehyde
MIF - Macrophage Migration Inhibitory Factor
MMAA - (CblA) MA Type A protein, GTPase
MMAB - (CblB) ATPCob(I)alamin Adenosyltransferase
MMACHC - (CblC) MA and Homocystinuria Type C protein
MMADHC - (CblD) MA and Homocystinuria Type D protein
MMC-M - MethylMalonyl-CoA Mutase
MMC-R - MethylMalonyl-CoA Racemase
MMP - Matrix Metalloproteinase
MMSA - Methylmalonic Semialdehyde
Mn - Manganese
Mo - Molybdenum
Mo-MPT - Mo-Molybdopterin
MPI - Mannose-6-Phosphate Isomerase
MS - Methionine Synthase
MT - Methionine Transaminase
MTA - 5′-Methylthioadenosine
MTHFR - MethyleneTetrahydroFolate Reductase
MTR - 5-Methoxytyramine
MTRR - Methionine Synthase ReductaseNa - Sodium
Na+/K+-ATPase - Sodium-Potassium ATP Pump
N-Ac-Put - N-Acetyl-Putrescine
N-Ac-ABAL - N-Acetyl-Gamma-Aminobutyraldehyde
N-Ac-GABA - N-Acetyl-Gamma-Aminobutyrate
NAD - Nicotinamide Adenine Dinucleotide
NADK - NAD Kinase
NADPT - NAD(P)+ Transhydrogenase
NADSYN - NAD Synthetase
NADK - N-Acetylglucosamine Kinase
NAM - Nicotinamide
NAMPT - Nicotinamide Phosphoribosyltransferase
NAPRT - Nicotinate Phosphoribosyltransferase
N-AS - N-Acetylspermine
N-ASD - N-Acetylspermidine
NCS - Noncoelaurine Synthase
NDPK - Nucleoside Diphosphokinase
NET - Norepinephrine Transporter
NH_3 - Ammonia
NMNAT - Nicotinamide Mononucleotide Adenylyltransferase
NO - Nitric Oxide
NOS - Endothelial Nitric Oxide Synthase
NTSC2 - Cytosolic 5′-nucleotidase II
O_2 - Oxygen
OAA - Oxaloacetate
OAADPR - 2′-O-Acetyl-ADP-Ribose
OAT - Ornithine Aminotransferase
ODC - Ornithine Decarboxylase
OH-Cob(III)alamin - Hydroxycobalamin
OH-ENP - 4-Hydroxy-Enol-Phenylpyruvate
OH-Glut - 4-Hydroxyglutamate
OH-GluSA - 4-Hydroxyglutamate Semialdehyde
OH-KG - 4-Hydroxy-2-Ketoglutarate
OH-P5C - Pyrroline Hydroxycarboxylate
OH-PA - 4-Hydroxyphenylacetaldehyde
OH-PAA - 4-Hydroxyphenylacetic Acid
OH-PD - 4-Hydroxyphenylpyruvate Dioxygenase
OH-PH4 - 1-Hydroxy-2-Oxopterin Triphosphate
OH-PLA - Hydroxyphenyllactic Acid
OH-PPA - 4-Hydroxyphenylpyruvic Acid
OH-PPD - 4-Hydroxyphenyl-Pyruvate Dioxygenase
OH-Pyr - Hydroxypyruvate
OMP - Orotidine-5′-Monophosphate
OMPDC - OMP Decarboxylase
OPRT - Orotate Phosphoribosyltransferase
OTC - Ornithine Transcarbamoylase
Ox - Oxalate
OXH - Oxaloacetase (Microbial)
P5C - Pyrroline-5-Carboxylate
P5CR - P5C Reductase
PSP - Pyridoxal 5′-Phosphate
PAA - Phenylacetic Acid
PAcAL - Phenylacetaldehyde
PAGM - Phosphoacetylglucosamine Mutase
PAGN - Phenylacetylglutamine
PAGS - Phenylacetylglutamine Synthetase
PAH - Phenylalanine Hydroxylase
PACS,C - AIR carboxylase
PACS,N - SAICAR synthetase
PAL - Phenylalanine
PAMOAT - Pyridoxamine:Oxaloacetate Aminotransferase
PANK - Pantethene Kinase
PAO - Polyamine Oxidase
PAP - Adenosine 3′,5′-Diphosphate
PAPS - 3′-Phosphoadenosine-5′-Phosphosulfate
PAT - Phenylalanine Aminotransferase
PATK - Pantothenate Kinase
PCB - Pyruvate Carboxylase
PC - Phosphatidylcholine
PCC - Propionyl-CoA Carboxylase
PCre - Phosphocreatine
PCYT1A - Choline-Phosphate Cytidylyltransferase
PDH - Pyruvate Dehydrogenase (Complex)
PDH-OP - O-Phospho-L-Seryl-PDH E1 alpha Subunit
PDK - Pyruvate Dehydrogenase Kinase
PDP - Pyruvate Dehydrogenase Phosphatase
PE - Phosphatidylethanolamine
PEPC - Phosphoenolpyruvate Carboxylase
PEPCK - Phosphoenolpyruvate Carboxykinase
PFAS - Phosphoribosylformylglycinamidine Synthase
PFK-1 - Phosphofructokinase
PFK-2 - 6-Phosphofructo-2-Kinase
PGAM - Phosphoglycerate Mutase
PGC1α - PPAR-gamma Coactivator 1-Alpha
PGI - Phosphoglucose Isomerase
PGK - Phosphoglycerate Kinase
PGLS - 6-Phosphogluconolactonase
PGM - Phosphoglucomutase
PHACA - Phenylacetate 2-Hydroxylase
PHBH - Pyrroline-3-Hydroxy-5-Carboxylate Dehydrogenase
PHD - Prolyl Hydroxylase
PHGDH - Phosphoglycerate Dehydrogenase
PHT - Phenylpyruvate Tautomerase
P_i - Phosphate
PK - Pyridoxal Kinase
PKM - Pyruvate Kinase
PKA - Protein Kinase A
PKC - Protein Kinase C
PLA - Phenylactic Acid
PLD - Prolidase
PMP - Pyridoxamine 5′-Phosphate
PNMT - Phenylethanolamine N-Methyltransferase
PNP - Purine Nucleoside Phosphorylase
PNPO - Pyridoxine 5′-Phosphate Oxidase
PPA - Phenylpyruvic Acid
PPAR - Peroxisome Proliferator-Activated Receptor
PPAT - Amidophosphoribosyltransferase
PPM - Pyridoxal Phosphate Phosphatase
PP - Pyrophosphate
PPCDC - Phosphopantothenoylcysteine Decarboxylase
PPCS - Phosphopantothenoylcysteine Synthetase
PPDC - Phenylpyruvate Decarboxylase
PPP - Triphosphate
PQQ - Pyrroloquinoline Quinone
PRA - 5-Phosphoribosylamine
PRMT - Histone-Arginine Methyltransferase
PRODH - Proline Dehydrogenase
PRPP - 5-Phosphoribosyl-1-Pyrophosphate
PRPS - Phosphoribosyl Pyrophosphate Synthetase
PSP - Protein Synthesis Pathway
PS - Phosphatidylserine
PSAT - Phosphoserine Aminotransferase
PSPH - Phosphoserine Phosphatase
PSS - Phosphatidylserine Synthase
PTP - 6-Pyruvoyl-Tetrahydropterin
PTPS - 6-Pyruvoyl-Tetrahydropterin Synthase
Pyr - Pyruvate
Q - Ubiquinone (Coenzyme Q10)
Q_2 - Ubiquinol (Reduced Coenzyme Q10)
Qu - Quinine
Qus - Queuosine
QRPT - Quinolinate Phosphoribosyltransferase
R1P - Ribose-1-Phosphate
R5P - Ribose-5-Phosphate
RBK5 - Ribokinase
RET - Reverse Electron Transfer (Inner Mitochondrial Membrane)
RK - Riboflavin Kinase
ROS - Reactive Oxygen Species
RPE - Ribulose-5-Phosphate 3-Epimerase
RPI - Ribose-5-Phosphate Isomerase A
RuBP - Ribulose-5-Phosphate
S7P - Sedoheptulose-7-Phosphate
SAH - S-Adenosyl-L-Homocysteine
SAICAR - 5-Aminoimidazole-4-(N-succinylcarboxamide) Ribonucleotide
SAMe - S-Adenosylmethionine
SAMeA - S-Adenosylmethioninamine
SAMeDC - S-Adenosylmethionine Decarboxylase
SAMeS - S-Adenosylmethionine Synthase
SARDH - Sarcosine Dehydrogenase
SAT - Serotonin N-Acetyltransferase
SCOT - Succinyl-CoA:3-ketoacid CoA Transferase
SCS - Succinyl-CoA Synthetase
SDH - Succinate Dehydrogenase
Se - Selenium
Ser - Serine
SGLT - Serine-Glyoxylate Transaminase
SHMT - Serine Hydroxymethyltransferase
Si - Silicon
SLC - Solute Carrier
SORD - Sorbitol Dehydrogenase
SPDS - Spermidine Synthase
SPOX - Spermine Oxidase
SPS - Spermine Synthase
SQOR - Sulfide Quinone Oxidoreductase
SR - Sepiapterin Reductase
SSAL - Succinic Semialdehyde
SSAT1 - Spermidine/Spermine-N1-Acetyltransferase
Succ - Succinate
SULTs - Sulfotransferases
SUOX - Sulfite Oxidase
T3 - Triiodothyronine
TA - Tyrosinase
TALDO1 - Transaldolase 1
TAT - Tyrosine Aminotransferase
TDC - Tyrosine Decarboxylase
TGF - Transforming Growth Factor
TGT - tRNA Guanine Transglycosylase
TH - Tyrosine Hydroxylase
ThDP - Thiamine Diphosphate
THF - Tetrahydrofolate
THL - Thiolase
THP - Tetrahydropapaveroline
TKT - Transketolase
TMLH - Trimethyllysine Hydroxylase
TNF - Tumour Necrosis Factor
TPH - Tryptophan Hydroxylase
TPI - Triose Phosphate Isomerase
TPP - Thiamine Pyrophosphate
TPQ - Topaquinone
TRP - Thioredoxin-related Protein
TS - Thymidylate Synthase
TST - Thiosulfate Sulfurtransferase
UCK - Uridine-Cytidine Kinase
UDP - Uridine Diphosphate
UGPase - UDP-Glucose Pyrophosphorylase
UGAPase - UDP-GlcNAc Pyrophosphorylase
UMP - Uridine Monophosphate
UPP - Uridine Phosphorylase
UPRT - Uracil Phosphoribosyltransferase
UROC - Urocanase
UTP - Uridine Triphosphate
V - Vanadium
V-ATPase - Vesicular H+-ATP Pump
Vit C - Ascorbic Acid
Vit E - Tocopherols, Tocotrienols
VMA - Vanillylmandelic Acid
VMAT - Vesicular Monoamine Transporter
VNN - Vanin-1 (Pantetheinase)
XO - Xanthine Oxidase
Xu5P - Xylulose-5-Phosphate
Zn - Zinc

COLOUR KEY (Labels)

ATP, ADP, AMP, GTP, GDP, GMP, CTP, CDP, CMP, UTP, UDP, UMP
TPP
FAD, FMN

NAD+, NADH, NADP, NADPH
P5P
O_2, QH_2
REACTION
TRANSAMINATION
TRANSPORTERS
MICROBIAL / PATHOGENIC
PROMOTER
INHIBITOR
*MDX OAT MARKER#
(Others - Illustrative)

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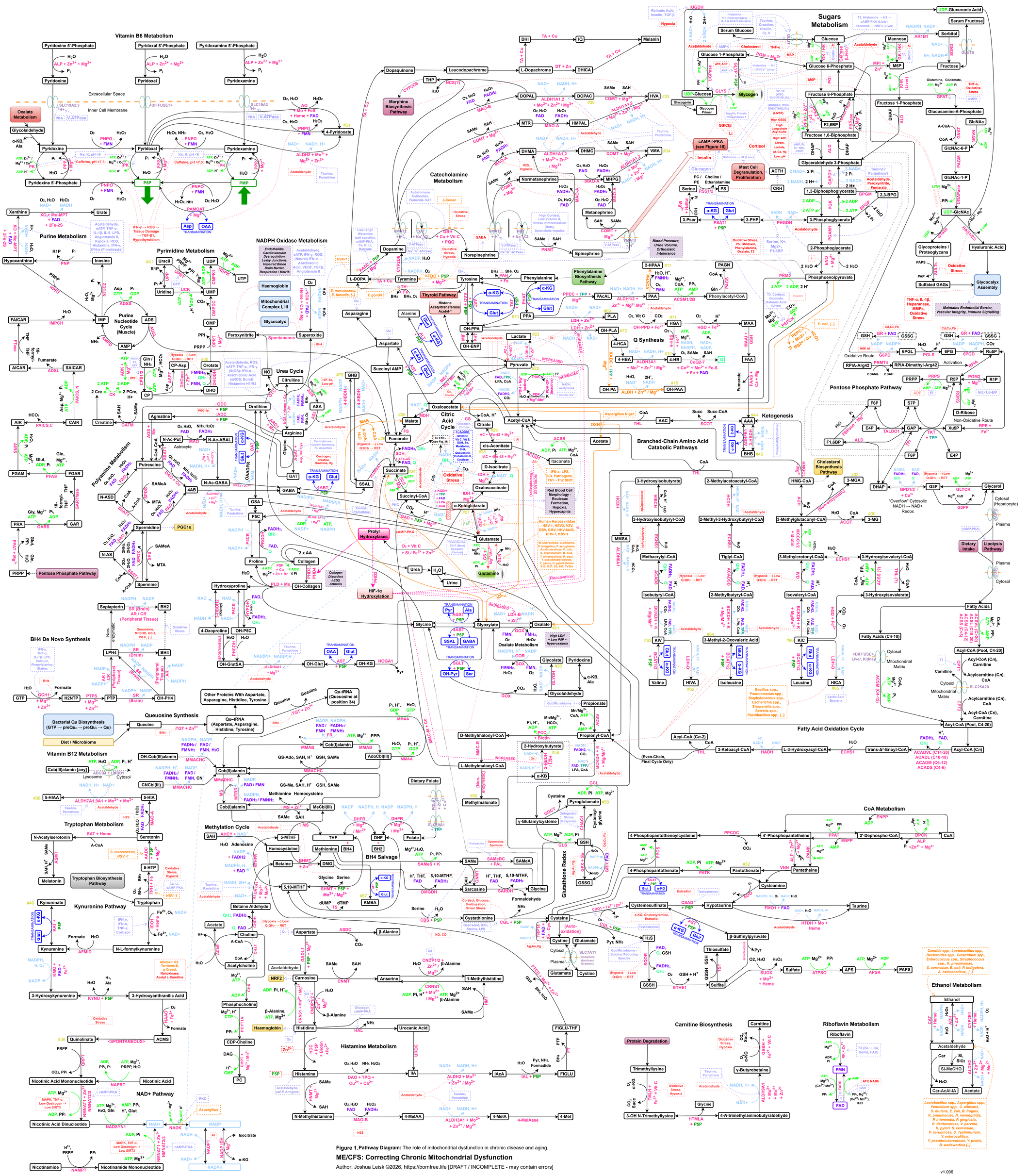
Vitamin B6 Metabolism
Extracellular Space
Inner Cell Membrane
Oxalate Metabolism
Glycolaldehyde
Purine Metabolism
Pyrimidine Metabolism
Purine Nucleotide Cycle (Muscle)
Urea Cycle
Polyamine Metabolism
Pentose Phosphate Pathway
Catecholamine Metabolism
NADPH Oxidase Metabolism
Citric Acid Cycle
Sugars Metabolism
Glycogen
Ketogenesis
Branched-Chain Amino Acid Catabolic Pathways
Cholesterol Biosynthesis Pathway
Fatty Acid Oxidation Cycle
Glycoprotein / Proteoglycans
Glycocalyx Assembly
Sulfated GAGs
Hyaluronic Acid
Q Synthesis
Phenylalanine Biosynthesis Pathway
Thyroid Pathway
Histone Acetyltransferase Acetyl-
Mast Cell Degranulation, Proliferation
cAMP->PKA (see Figure 18)
Blood Pressure, Urine Volume, Orthostatic Intolerance
Endothelitis, Cardiovascular Dysregulation, Leaky Junctions, Impaired Blood Brain Barrier, Respiration / MetHb
Haemoglobin
Mitochondrial Complex I, III
Glycocalyx
Oxidative Stress
Spontaneous
Prolyl Hydroxylases
HIF-1α Hydroxylation
Collagen Disorders NEDS Arthritis
Human Herpesviridae - HSV-1, HSV2, VZV, EBV, CMV, HHV-6A/B, HHV-7, KSVH
M.tuberculosis, C.albicans, P. indigoferea, P. aeruginosa, A.calcoaceticus, E. coli, S. Typhimurium, B. suis, Y. enterocolitica, R. equi, Y. pseudotuberculosis, Y. pestis, H. pylori strains P12, G27, 26, 695, Tx30a
Candida spp., Lactobacillus spp., Bacteroides spp., Clostridium spp., Enterococcus spp., Streptococcus K. pneumoniae, S. cerevisiae, E. coli, P. indigofera, A. calcoaceticus, [..]
Lactobacillus spp., Aspergillus spp., Penicillium spp., C. albicans, S. mutans, E. coli, B. fragilis, K. pneumoniae, N. meningitidis, P. intermedia, P. gingivalis, R. dentocariosa, V. parvula, H. pylori, S. cerevisiae, P. aeruginosa, S. Typhimurium, Y. enterocolitica, Y. pseudotuberculosis, Y. pestis, B. wadsworthia [..]
BH4 De Novo Synthesis
Vitamin B12 Metabolism
Tryptophan Metabolism
Kynurenine Pathway
NAD+ Pathway
Queuosine Synthesis
Methylation Cycle
BH4 Salvage
Histamine Metabolism
Carnitine Biosynthesis
Riboflavin Metabolism
CoA Metabolism
Ethanol Metabolism
Glutathione Redox
Protein Degradation
Pentose Phosphate Pathway
Non-Oxidative Route
Oxidative Route
Activation
Plasma
Cytosol
Mitochondrial Matrix
Dietary Intake
Lipolysis Pathway
Fatty Acids
Acyl-CoA (Pool, C4-20)
Acyl-CoA (Cn), Carnitine
Acylcarnitine (Cn), CoA
Acyl-CoA (Cn)
Acyl-CoA (Cn-2)
Acyl-CoA (C4-12)
Acyl-CoA (C4-10)
Fatty Acids (C4-10)
ACADVL (C14-20)
ACADL (C10-18)
ACADM (C6-12)
ACADS (C4-6)
(Even-Chain, Final Cycle Only)
"Overflow" Cytosolic NADH → NAD+ Redox
(Non-enzymatic)
(Reactivation)
Oxidative Stress, Hypoxia
Aspergillus
Aflatoxin B1, Territrem B, p-Cresol, Nattokinase, Acetyl L-Carnitine
Gut Microbiome - Sulphur Reducing Species
Gut Microbiome - Urea Cycle Disorders
Gut Microbiome - Propionate Producers
Gut Microbiome - Butyrate Producers
Gut Microbiome - Acetate Producers
Gut Microbiome - Lactate Producers
Gut Microbiome - Ethanol Producers
Gut Microbiome - Choline Metabolism
Gut Microbiome - Carnitine Metabolism
Gut Microbiome - Histamine Metabolism
Gut Microbiome - Tryptophan Metabolism
Gut Microbiome - Phenylalanine Metabolism
Gut Microbiome - Tyrosine Metabolism
Gut Microbiome - Glucuronidation
Gut Microbiome - Sulfonation
Gut Microbiome - Glycine Conjugation
Gut Microbiome - Glutamine Conjugation
Gut Microbiome - Methylation
Gut Microbiome - Acetylation
Gut Microbiome - Deacetylation
Gut Microbiome - Deconjugation
Gut Microbiome - Nitrosation
Gut Microbiome - Nitration
Gut Microbiome - Dehydroxylation
Gut Microbiome - Dehydrogenation
Gut Microbiome - Reduction
Gut Microbiome - Hydrolysis
Gut Microbiome - Deglucuronidation
Gut Microbiome - Desulfonation
Gut Microbiome - Deglycination
Gut Microbiome - Degluthionylation
Gut Microbiome - Demethylation
Gut Microbiome - Deacetylation