

Central Carbon Metabolism (Glycolysis, TCA cycle, Pentose phosphate pathway)

G6P, G1P, F6P, F1P, F1,6BP, G3P, DHAP, 2,3BPG, 2PG, 3PG, PEP, Pyruvate, Lactate, Citrate, Isocitrate, cis-Aconitate, 2OG, 2HG, Succinate, Fumarate, Malate, 6PG, PRPP, Ru5P, R5P, R1P, X5P, S7P, E4P, UDP-Glc

Amino acid Metabolism (Branched-chain amino acid (BCAA), Urea & Met cycle)

Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val, Urea, Carbamoyl-P, Carbamoyl-Asp, Citrulline, Ornithine, Argininosuccinate, GABA, 2OIVA, Carnosine, Cystathionine, Homocysteine, Homoserine, Hydroxyproline, N-AcGlu, β-Ala

Lipid Metabolism (Choline, Fatty acids)

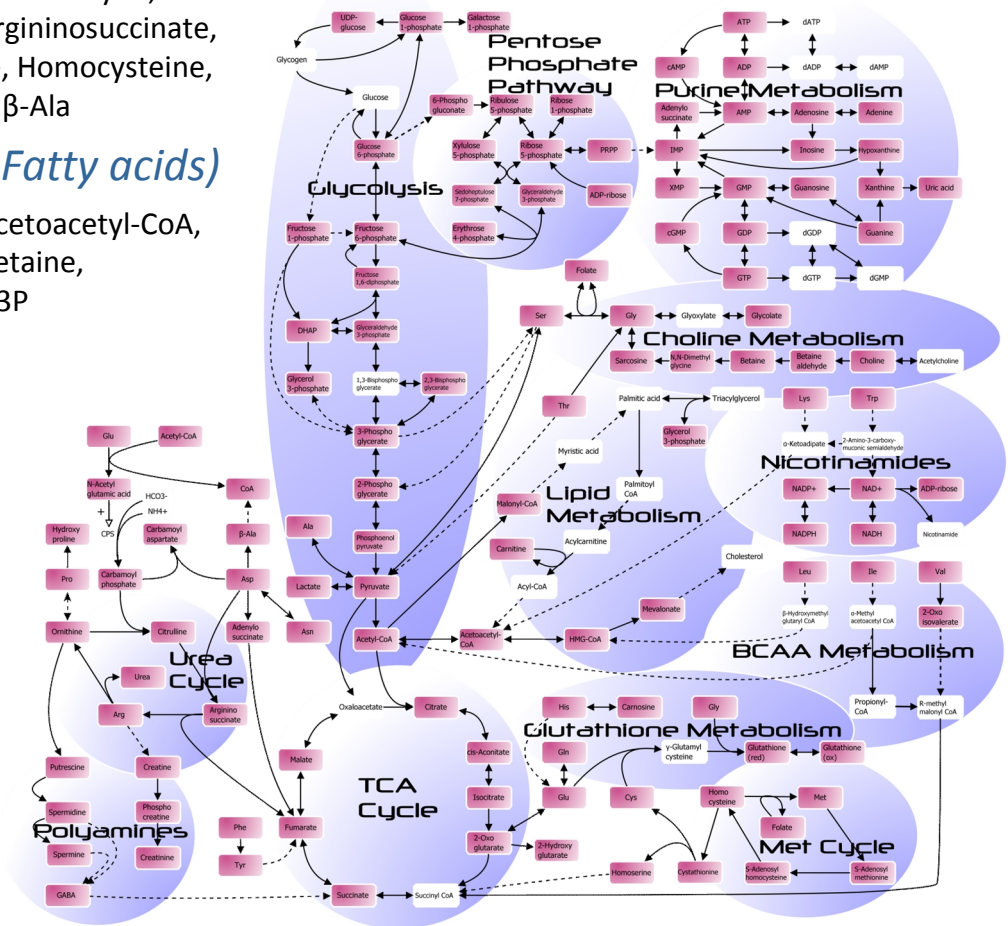
Acetyl-CoA, Malonyl-CoA, HMG-CoA, Acetoacetyl-CoA, CoA, Mevalonate, Carnitine, Choline, Betaine, Betaine aldehyde, DMG, Sarcosine, Gly3P

Purine Metabolism

AMP, ADP, ATP, GMP, GDP, GTP, IMP, XMP, cAMP, cGMP, Adenine, Adenosine, Guanine, Guanosine, Inosine, Xanthine, Hypoxanthine, Uric acid, ADP-ribose, Adenylosuccinate

Other Functions

NADH, NAD⁺, NADPH, NADP⁺, Folate, GSH, GSSG, SAH, SAM, Creatine, Creatinine, Phosphocreatine, Putrescine, Spermidine, Spermine, Gal1P, Glycolate, Glyoxylate



30 biochemical parameters

Bioenergetics

Adenylate Energy Charge, Guanylate Energy Charge, Lactate / Pyruvate (LP ratio), G6P / R5P, Malate / Asp

Oxidative Stress & Mitochondrial Function

NADPH / NADP⁺, NADH / NAD⁺, Glutathione Redox Ratio, Citrulline / Ornithine, Gly3P / DHAP

Turn-over of cellular components

Total Adenylate, Total Guanylate, Total Amino Acids, Total Glutathione, BCAA / AAA (Fischer's Ratio), SAM / SAH, Putrescine / Spermidine, Glu / 2-Oxoglutarate

Amino acid (AA) pool

Essential AA, Non-essential AA, Glucogenic AA, Ketogenic AA, BCAA, Aromatic AA (AAA), Glu-related AA, Pyr-related AA, Acetyl CoA-related AA, Fumarate-related AA, Succinyl CoA-related AA, Oxaloacetate-related AA