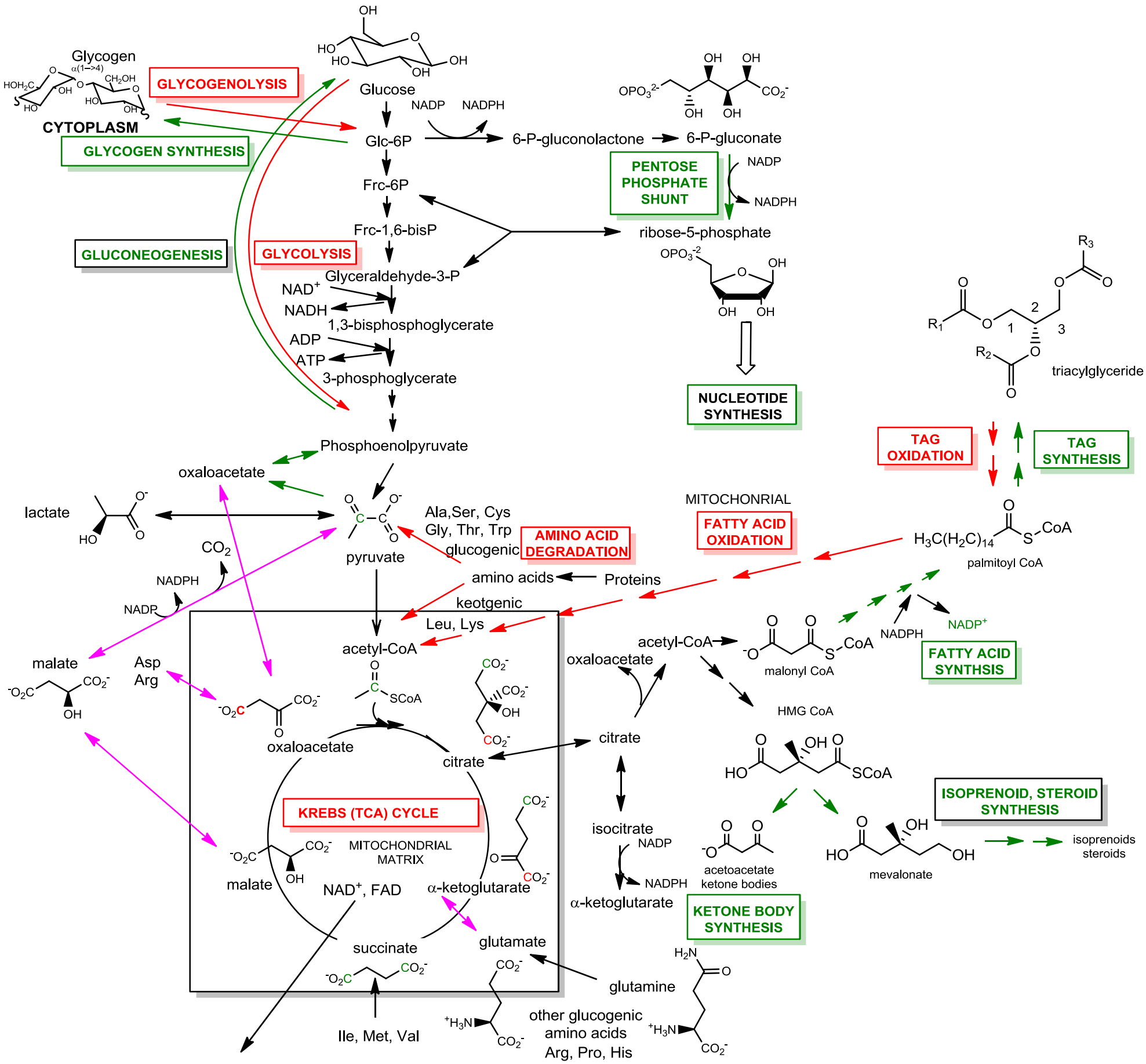
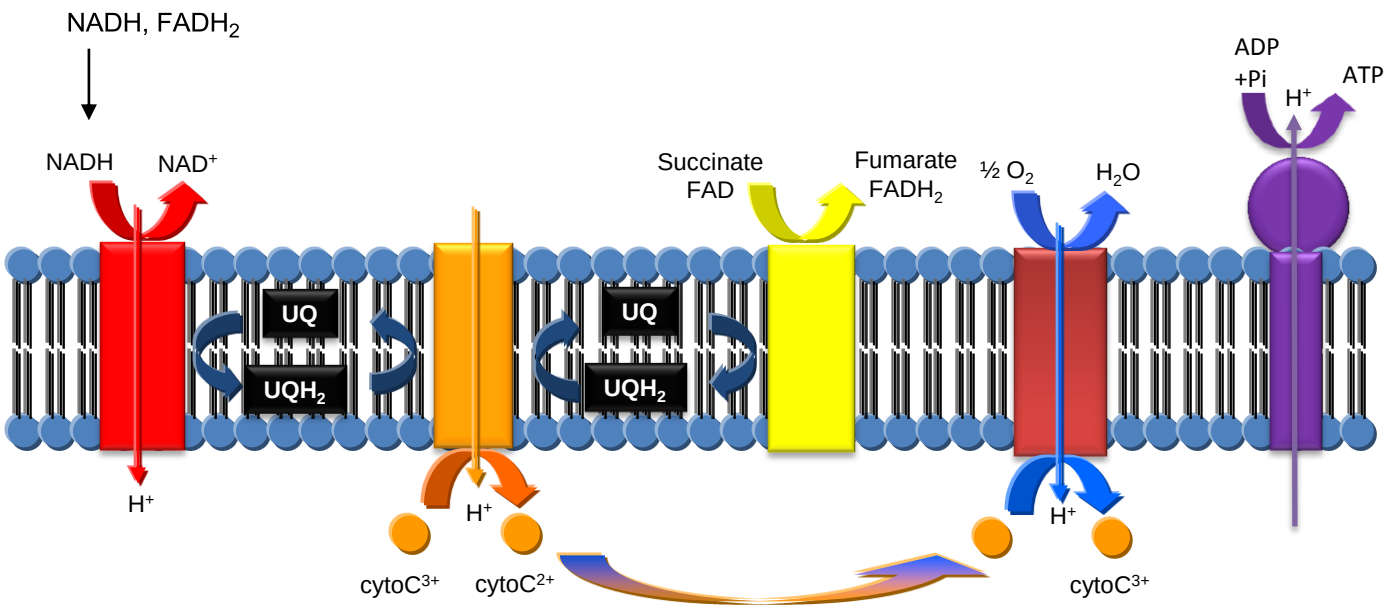

Glycogen
α(1→4)
CYTOPLASM
GLYCOGENOLYSIS
GLYCOGEN SYNTHESIS
Glucose
NADP
NADPH
Glc-6P
6-P-gluconolactone
6-P-gluconate
PENTOSE PHOSPHATE SHUNT
NADP
NADPH
Frc-6P
Frc-1,6-bisP
ribose-5-phosphate
GLUCONEOGENESIS
GLYCOLYSIS
Glyceraldehyde-3-P
NAD+
NADH
1,3-bisphosphoglycerate
ADP
ATP
3-phosphoglycerate
NUCLEOTIDE SYNTHESIS
triacylglyceride
TAG OXIDATION
TAG SYNTHESIS
Phosphoenolpyruvate
oxaloacetate
lactate
pyruvate
Ala,Ser, Cys
Gly, Thr, Trp
glucogenic
AMINO ACID DEGRADATION
MITOCHONRIAL
FATTY ACID OXIDATION
palmitoyl CoA
CO2
NADPH
NADP
amino acids
Proteins
keotgenic
Leu, Lys
acetyl-CoA
malate
Asp
Arg
oxaloacetate
citrate
KREBS (TCA) CYCLE
MITOCHONDRIAL MATRIX
malate
NAD+, FAD
α-ketoglutarate
succinate
glutamate
Ile, Met, Val
NADH, FADH2
acetyl-CoA
malonyl CoA
NADPH
NADP+
FATTY ACID SYNTHSIS
oxaloacetate
citrate
HMG CoA
isocitrate
NADP
NADPH
α-ketoglutarate
acetoacetate
ketone bodies
KETONE BODY SYNTHESIS
mevalonate
ISOPRENOID, STEROID SYNTHESIS
isoprenoids
steroids
glutamine
other glucogenic
amino acids
Arg, Pro, His


NADH
NAD+
Succinate
FAD
Fumarate
FADH2
½ O2
H2O
ADP
+Pi
ATP
H+
UQ
UQH2
UQ
UQH2
H+
H+
H+
cytoC3+
cytoC2+
cytoC3+