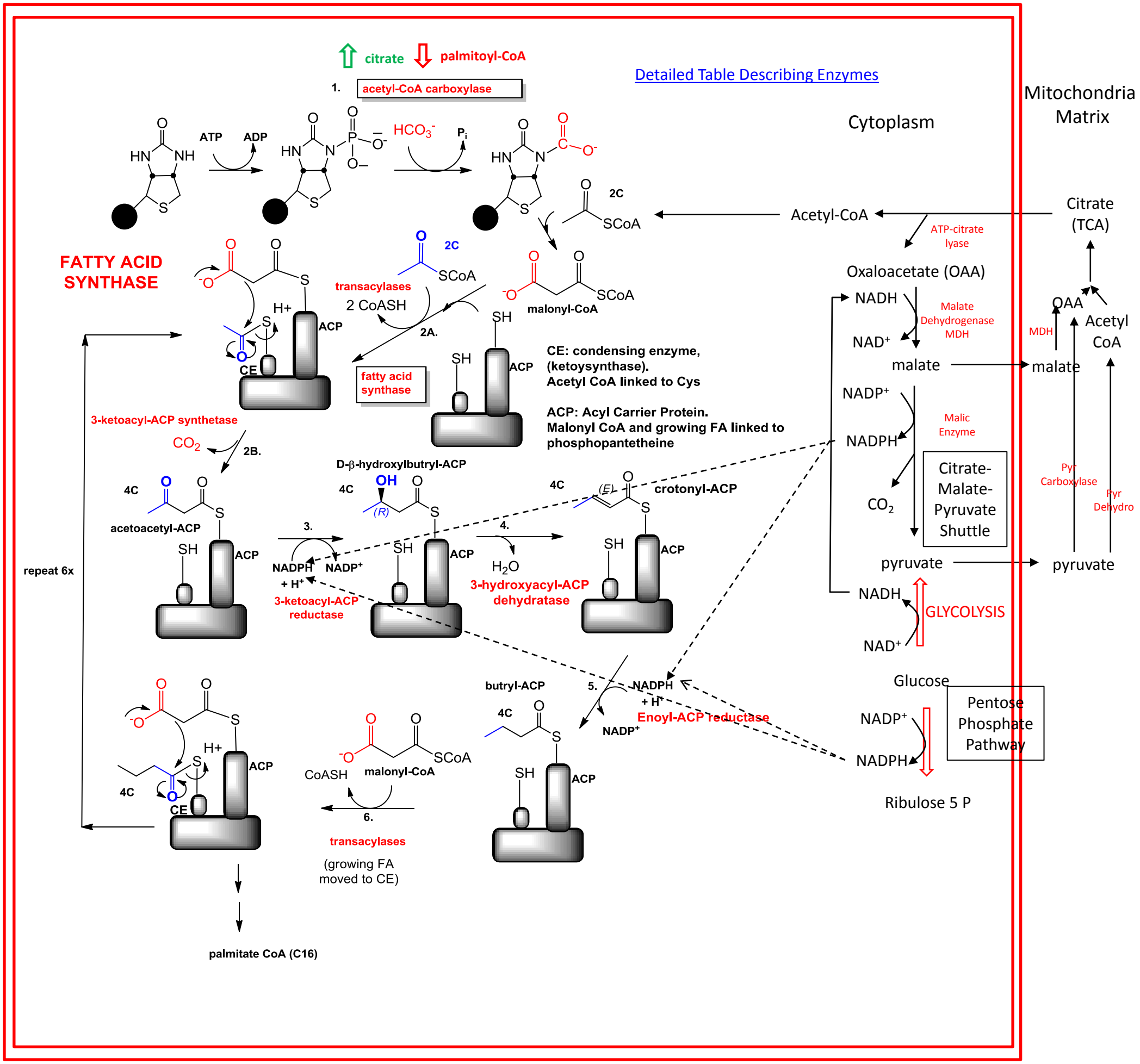
citrate
palmitoyl-CoA
Detailed Table Describing Enzymes
1.
acetyl-CoA carboxylase
ATP
ADP
HCO_3^-
P_i
Cytoplasm
Mitochondria Matrix
2C
SCoA
Acetyl-CoA
Citrate (TCA)
ATP-citrate lyase
FATTY ACID SYNTHASE
transacylases
2 CoASH
2A.
malonyl-CoA
Oxaloacetate (OAA)
NADH
Malate Dehydrogenase MDH
NAD^+
malate
OAA
MDH
Acetyl CoA
H+
ACP
CE
fatty acid synthase
CE: condensing enzyme, (ketoysynthase). Acetyl CoA linked to Cys
ACP: Acyl Carrier Protein. Malonyl CoA and growing FA linked to phosphopantetheine
$NADP^+$
Malic Enzyme
NADPH
3-ketoacyl-ACP synthetase
CO_2
2B.
D-β-hydroxylbutyryl-ACP
4C
acetoacetyl-ACP
crotonyl-ACP
CO_2
Citrate-Malate-Pyruvate Shuttle
Pyr Carboxylase
Pyr Dehydro
3.
4.
H_2O
repeat 6x
NADPH + H^+
$NADP^+$
3-ketoacyl-ACP reductase
3-hydroxyacyl-ACP dehydratase
pyruvate
GLYCOLYSIS
Glucose
butryl-ACP
5.
Enoyl-ACP reductase
Pentose Phosphate Pathway
Ribulose 5 P
CoASH
6.
transacylases
(growing FA moved to CE)
palmitate CoA (C16)