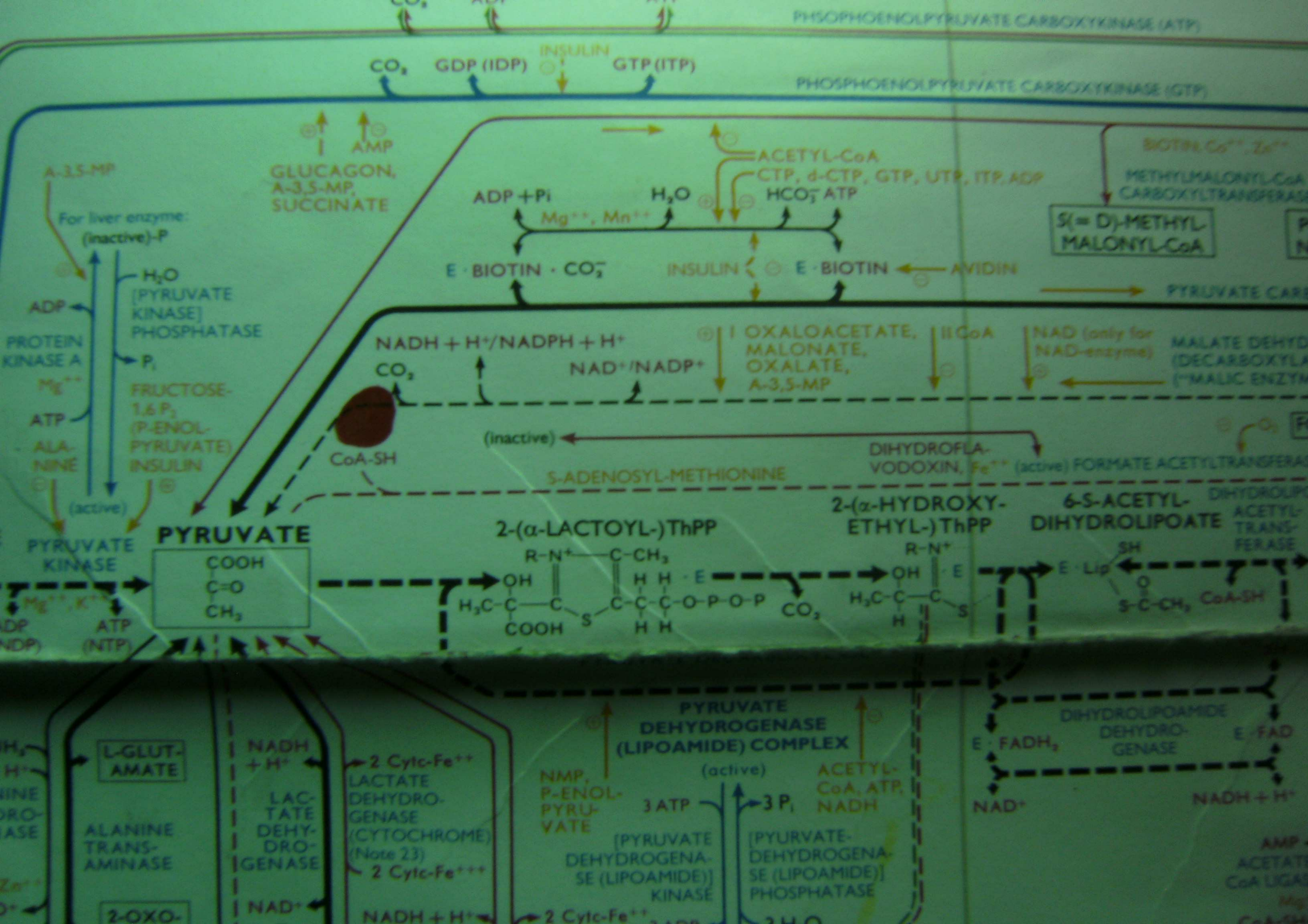
PHOSPHOENOLPYRUVATE CARBOXYKINASE (ATP)
CO₂
GDP (IDP)
INSULIN
GTP (ITP)
PHOSPHOENOLPYRUVATE CARBOXYKINASE (GTP)
AMP
GLUCAGON, A-3,5-MP, SUCCINATE
A-3,5-MP
For liver enzyme:
(inactive)-P
H₂O
[PYRUVATE KINASE] PHOSPHATASE
ADP
PROTEIN KINASE A
Mg⁺⁺
ATP
ALA-NINE
FRUCTOSE-1,6 P₂ (P-ENOL-PYRUVATE) INSULIN
Pi
(active)
PYRUVATE KINASE
Mg⁺⁺, K⁺⁺
ATP (NTP)
PYRUVATE
COOH
C=O
CH₃
ADP + Pi
Mg⁺⁺, Mn⁺⁺
H₂O
HCO₃⁻ ATP
ACETYL-CoA
CTP, d-CTP, GTP, UTP, ITP, ADP
E · BIOTIN · CO₂⁻
INSULIN
E · BIOTIN
AVIDIN
BIOTIN, Co⁺⁺, Zn⁺⁺
METHYLMALONYL-CoA CARBOXYLTRANSFERASE
S(=D)-METHYL MALONYL-CoA
PYRUVATE CARB
NADH + H⁺/NADPH + H⁺
CO₂
NAD⁺/NADP⁺
I OXALOACETATE, MALONATE, OXALATE, A-3,5-MP
II CoA
NAD (only for NAD-enzyme)
MALATE DEHYD (DECARBOXYLA ("MALIC ENZYM
CoA-SH
(inactive)
S-ADENOSYL-METHIONINE
DIHYDROFLA-VODOXIN, Fe⁺⁺ (active)
FORMATE ACETYLTRANSFERAS
2-(α-LACTOYL-)ThPP
2-(α-HYDROXY-ETHYL-)ThPP
6-S-ACETYL-DIHYDROLIPOATE
DIHYDROLIP ACETYL-TRANS-FERASE
E · Lip
SH
S-C-CH₃
CoA-SH
CO₂
L-GLUT-AMATE
ALANINE TRANS-AMINASE
2-OXO-
NADH + H⁺
LAC-TATE DEHY-DRO-GENASE
NAD⁺
NADH + H⁺
2 Cytc-Fe⁺⁺
LACTATE DEHYDRO-GENASE (CYTOCHROME) (Note 23)
2 Cytc-Fe⁺⁺⁺
2 Cytc-Fe⁺⁺
PYRUVATE DEHYDROGENASE (LIPOAMIDE) COMPLEX
(active)
NMP, P-ENOL-PYRU-VATE
3 ATP
[PYRUVATE DEHYDROGENA-SE (LIPOAMIDE)] KINASE
3 Pi
[PYURVATE-DEHYDROGENA-SE (LIPOAMIDE)] PHOSPHATASE
ACETYL-CoA, ATP, NADH
DIHYDROLIPOAMIDE DEHYDRO-GENASE
E · FADH₂
E · FAD
NAD⁺
NADH + H⁺