



UDS

UNIVERSIDAD DEL SURESTE

• NOMBRE •

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• LICENCIATURA •

Licenciatura en Enfermería

• MATERIA •

Bioquímica

• CATEDRÁTICO •

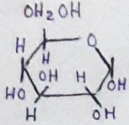
Q. Yeni Karen Canales Hernandez

• TEMA •

Diagramas: Ciclo de Krebs, Glucólisis
y Cadena de Transporte de
Electrones

• FECHA •

Tapachula, Chis. a: 04-DIC-2020

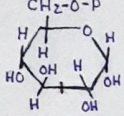


Glucosa

ATP → ADP ← Enzima: Hexoquinasa

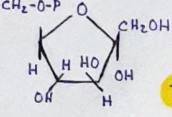
Glucosa-6-fosfato 1

Glucosa-1-fosfato



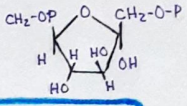
← Enzima: Fosfohexosa Isomerasa

Fructosa-6-fosfato 2



ATP → ADP ← Enzima: Fosfofructocinasa

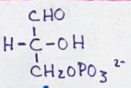
Fructosa-1-6-Bisfosfato 3



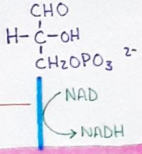
Ruptura por la Enzima: ALDOLASA

Dihidroxiacetona fosfato 4

Gliceraldehido-3-fosfato 5

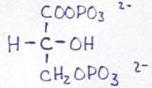
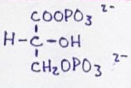


6
Gliceraldehido-3 fosfato
Enzima: deshidrogenasa



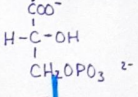
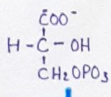
1,3 Bisfosfoglicerato 7

1,3 Bisfosfoglicerato 7



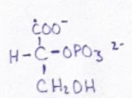
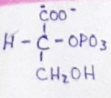
3-fosfoglicerato 8

3-fosfoglicerato 8



2-fosfoglicerato 9

2-fosfoglicerato 9



PIRUVATO 10

PIRUVATO 10



FASE 1: (Paso 1-5) Gasto Energético

RESULTADO: 2 NADH
2 ATP
2 PIRUVATO

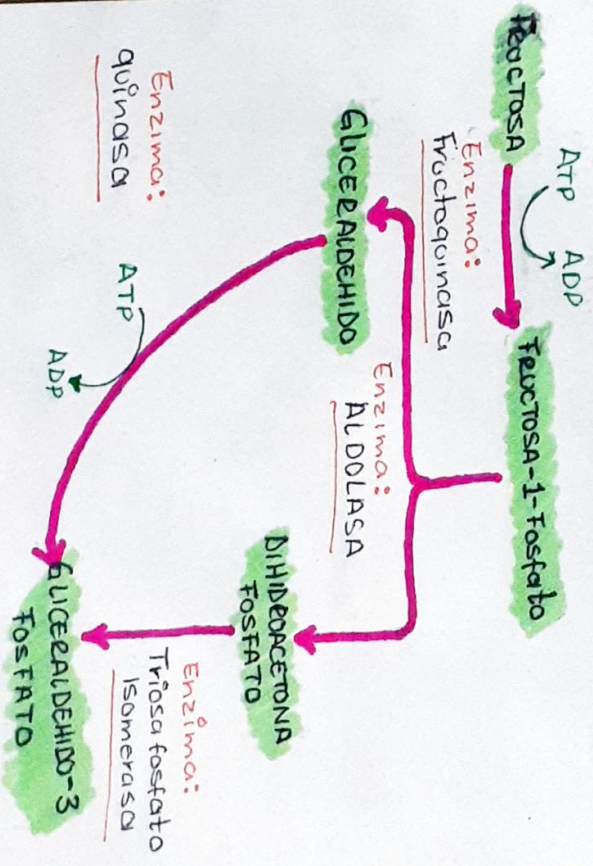
BENEFICIO NETO: 2 NADH
2 ATP
2 PIRUVATO

FASE 2: (PASO 6-10) Beneficio Energético

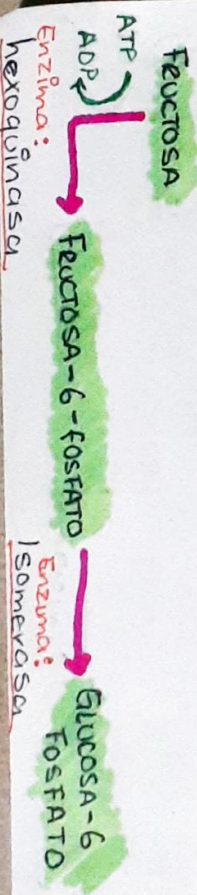
glucólisis

FRUCTOLISIS

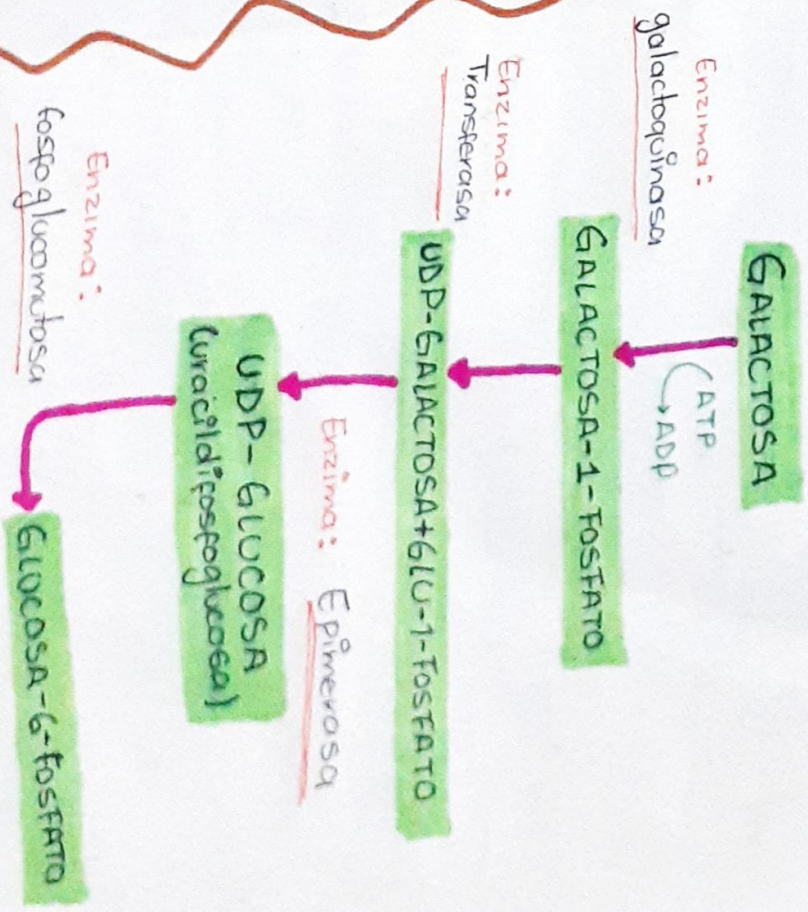
• En el Hígado:



• En un Adipocito:



GALACTOLISIS



PIRUVATO

Enzima: Piruvato Desidrogenasa
CO₂ + NADH

ACETIL-CoA

Enzima: Citrato Sintetasa

CITRATO

Enzima: Aconitasa

OXALACETATO

Agua (H₂O)

CISACONITATO

Agua (H₂O)

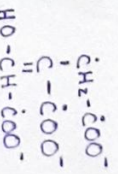
Enzima: Aconitasa

ISOCITRATO

Agua (H₂O)

ISOCITRATO

Enzima: Isocitrato desidrogenasa

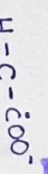


MALATO

Enzima: Desidrogenasa

Agua (H₂O)

FUMARATO



Enzima: Fumarasa

Enzima: Succinato Desidrogenasa

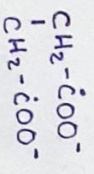
SUCCINATO

FADH₂

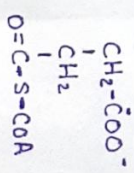
SUCCINIL-CoA

CoA-SH

Enzima: Succinil-CoA Sintetasa



SUCCINIL-CoA

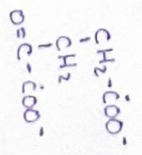


A-CETOGLUTARATO

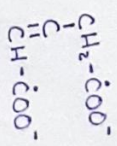
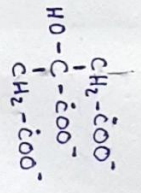
NADH, H⁺

CoA-SH

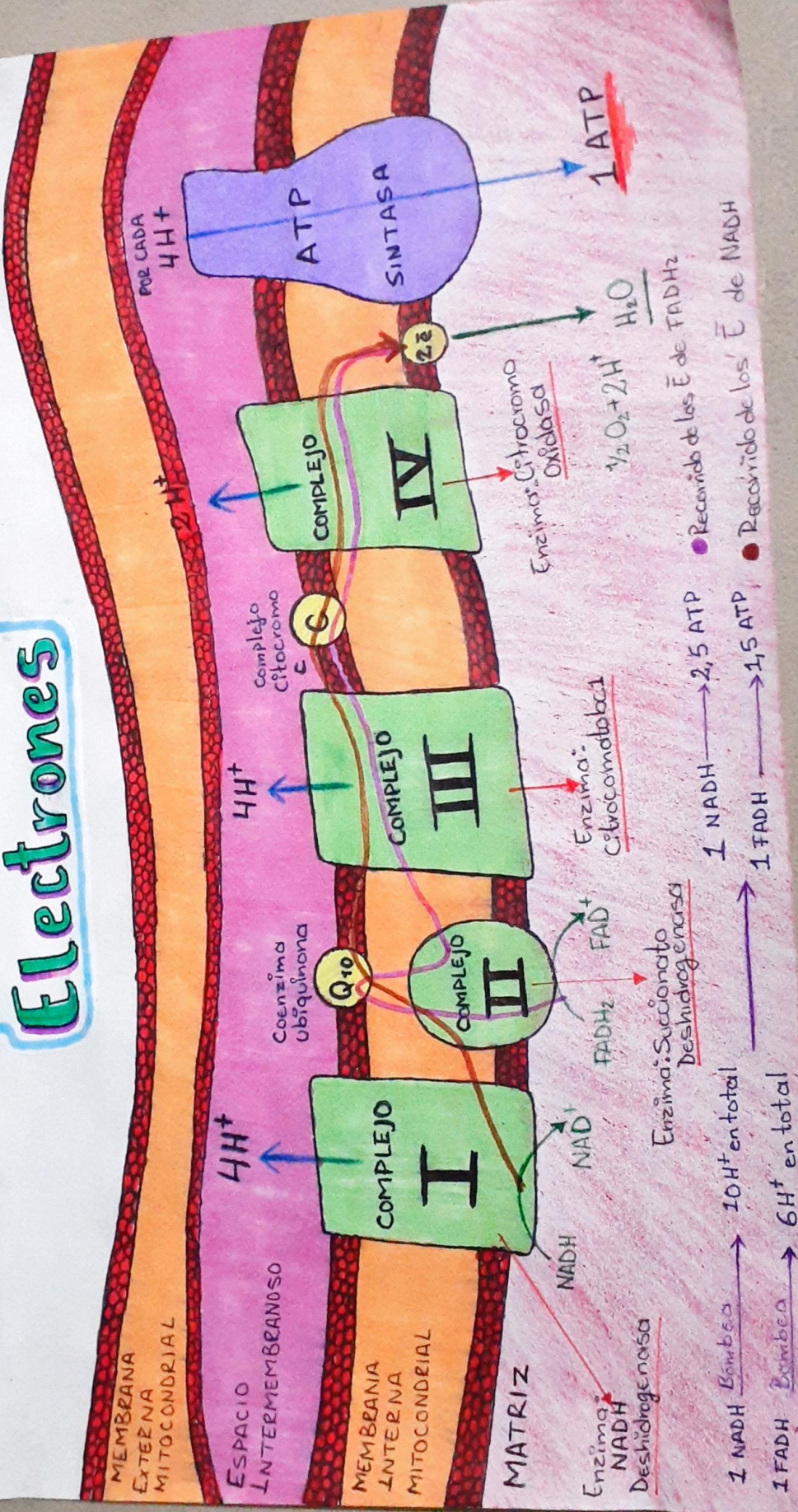
Enzima: Cetoglutarato Desidrogenasa



Ciclo de Krebs



Transporte de Electrones



Bibliografía:

Robert K. Murray, David A. Bender,

Harper Bioquímica Ilustrada (2012),

Editorial LANGE, Pág. 115-177

Link: <https://plataformamedicativauds.com.mx/assets/>

biblioteca/8adfd0b9222548e9c0bd37dbc24f4c0.pdf