

(30) **Today**

Chap 16.2: The Citric Acid Cycle

Next Class (31)

Chap 16.2: The Citric Acid Cycle

(32) **Second Class from Today**

Chap 16.2: The Citric Acid Cycle

Chap 19: ETC

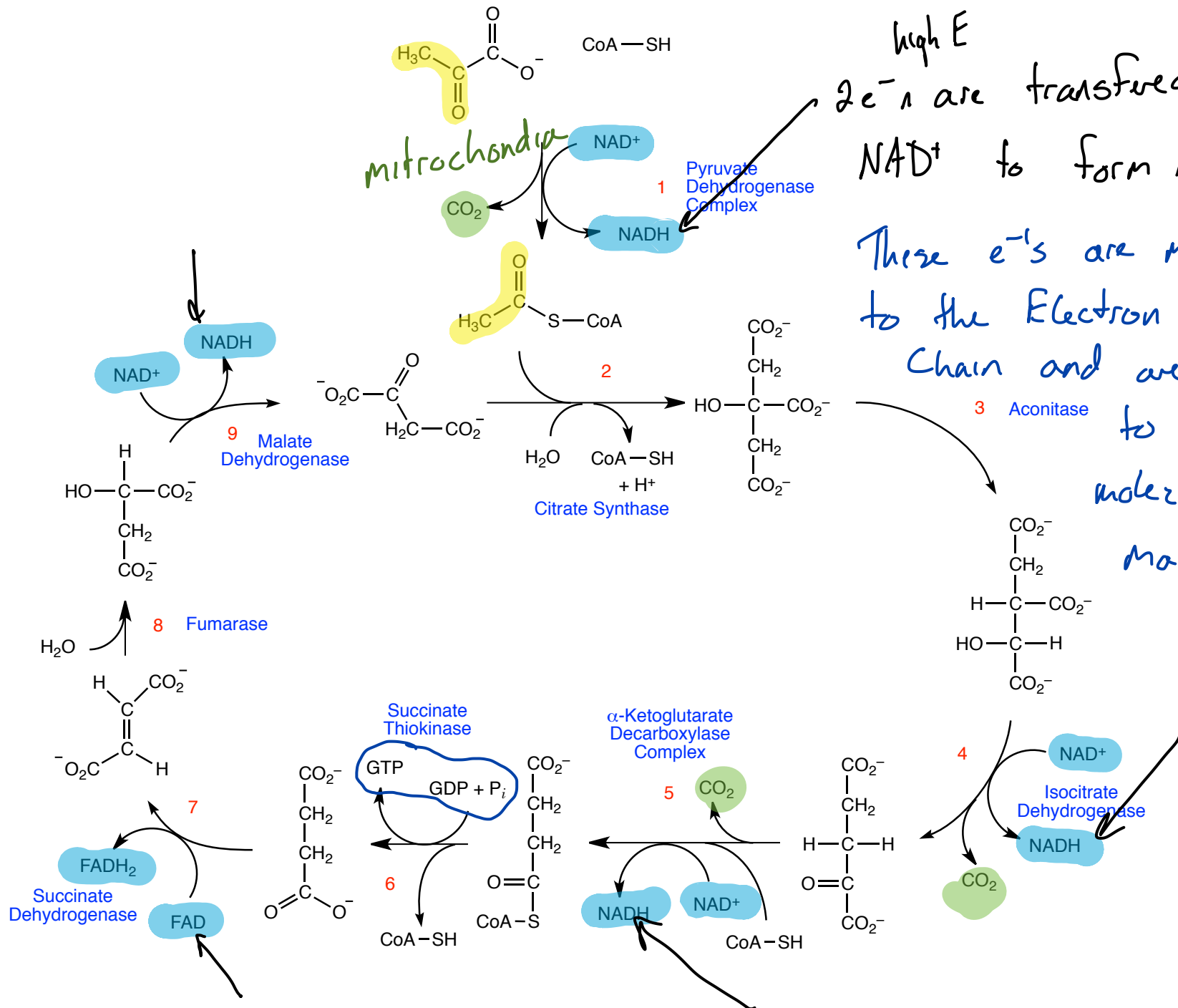
Third Class from Today (33)

Chap 19: ETC

The Citric Acid Cycle

From glycolysis in cytoplasm

Section 16.1, 16.2



Pyruvate Dehydrogenase Complex: Pyruvate Decarboxylase

Section 16.1

thiamine pyrophosphate

start here

now there is a place for the e^- 's to go

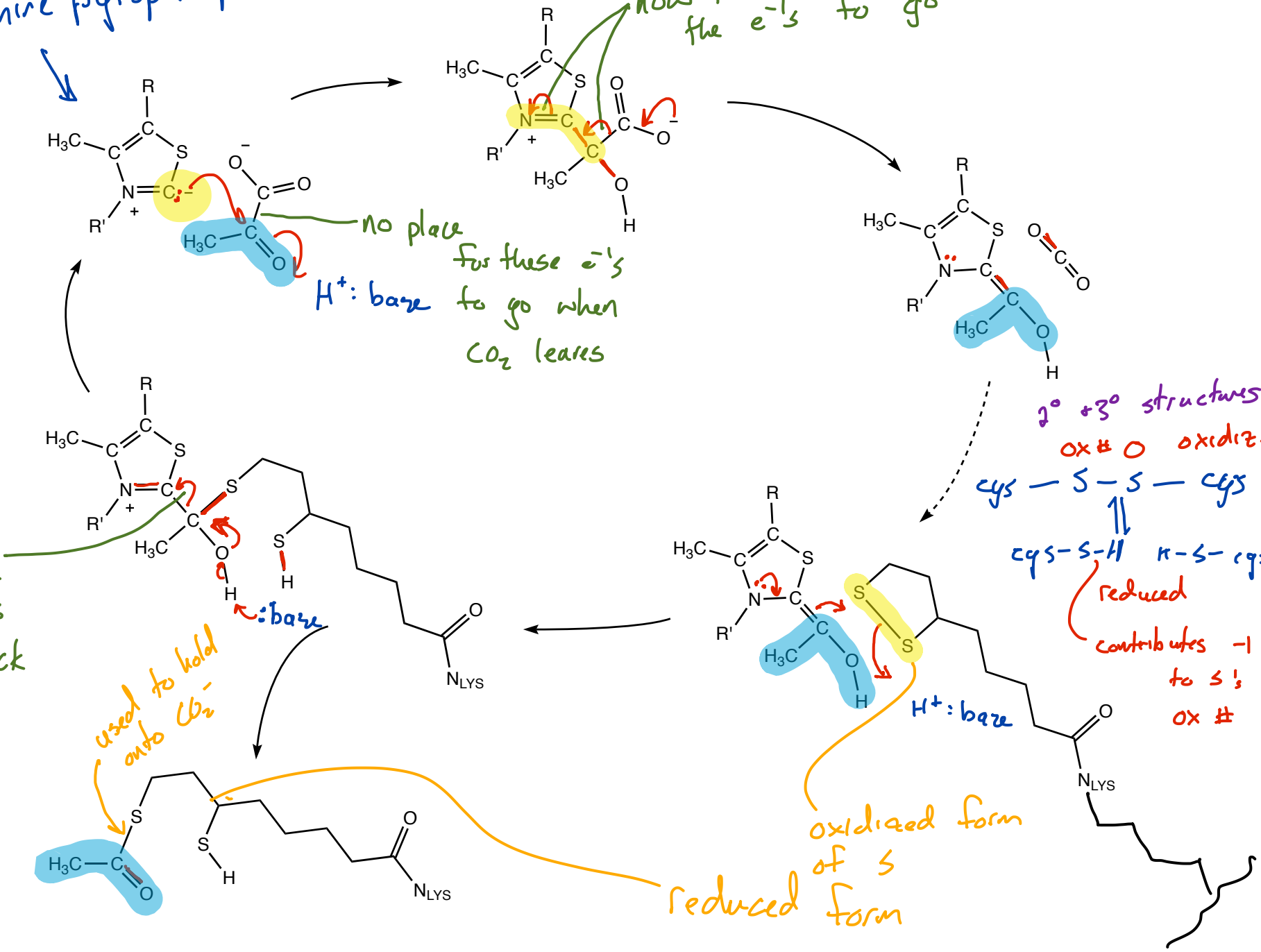
no place for these e^- 's
 H^+ : base to go when CO_2 leaves

thiamine gets its e^- 's back

used to hold onto CO_2

oxidized form of S
reduced form

2° + 3° structures
ox # 0 oxidized
cys-S-S-cys
cys-S-H H-S-cys
reduced
contributes -1 to S's
ox #

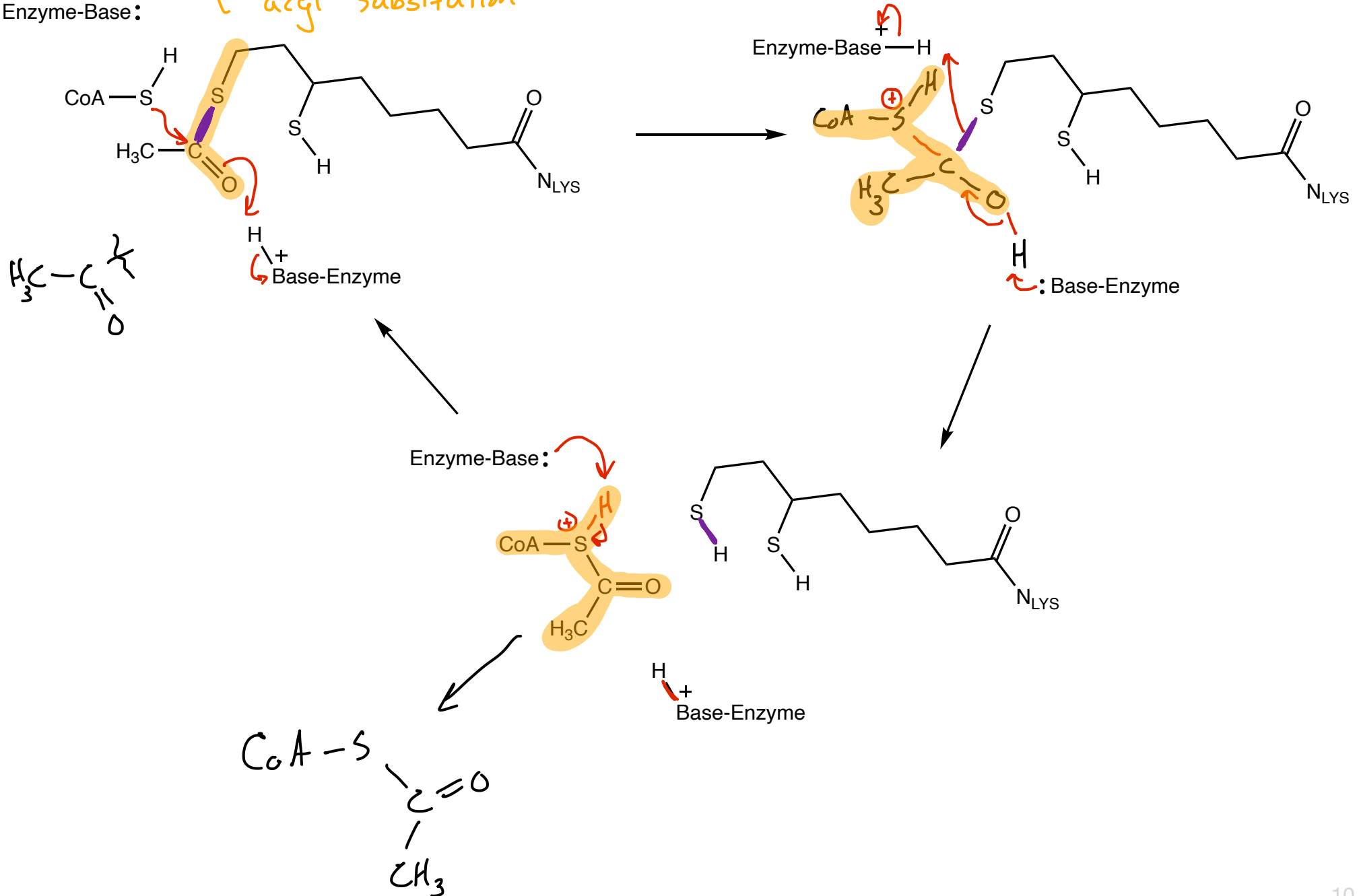


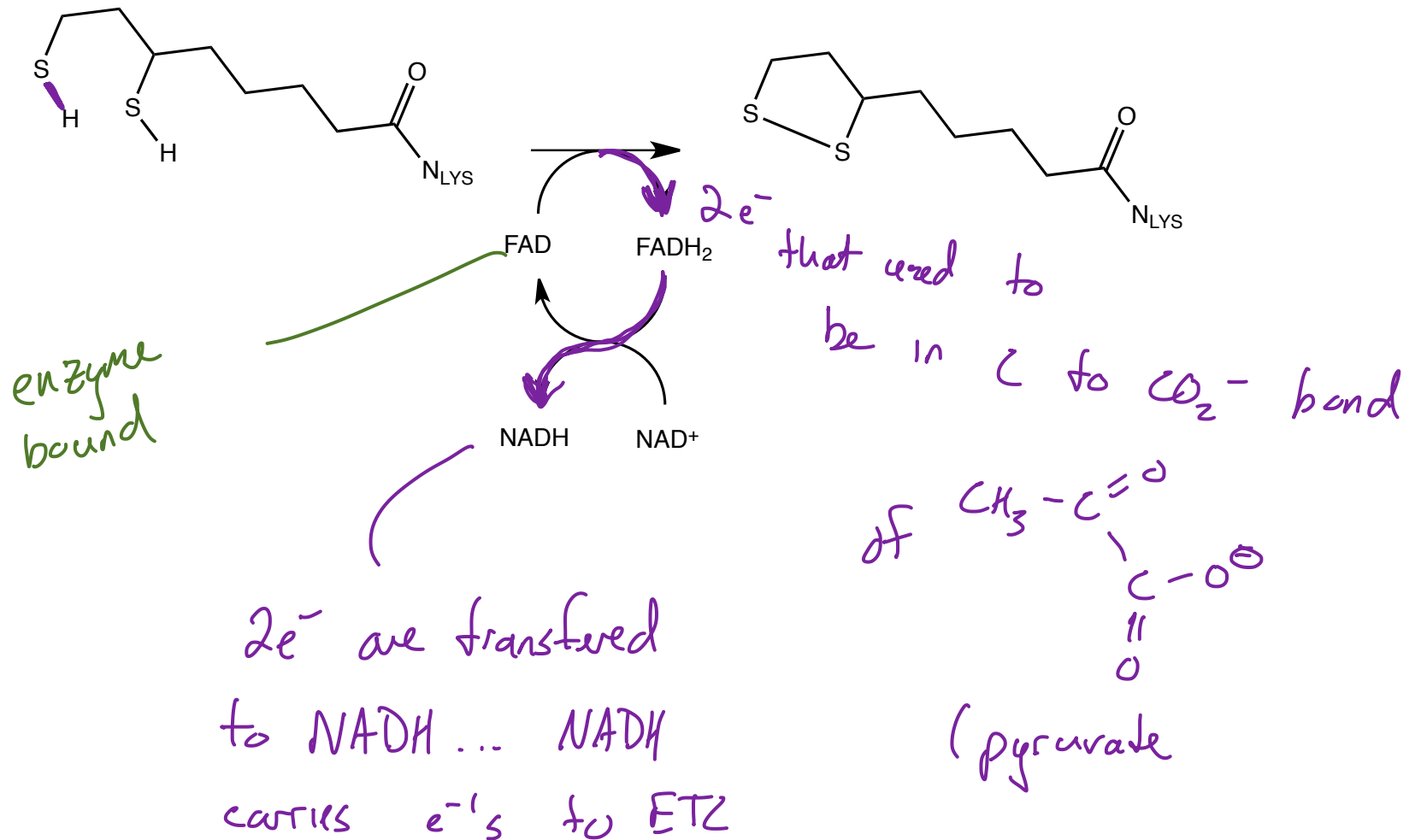
Pyruvate Dehydrogenase Complex: Dihydrolipoyl Acetyltransferase

Section 16.1

Enzyme-Base:

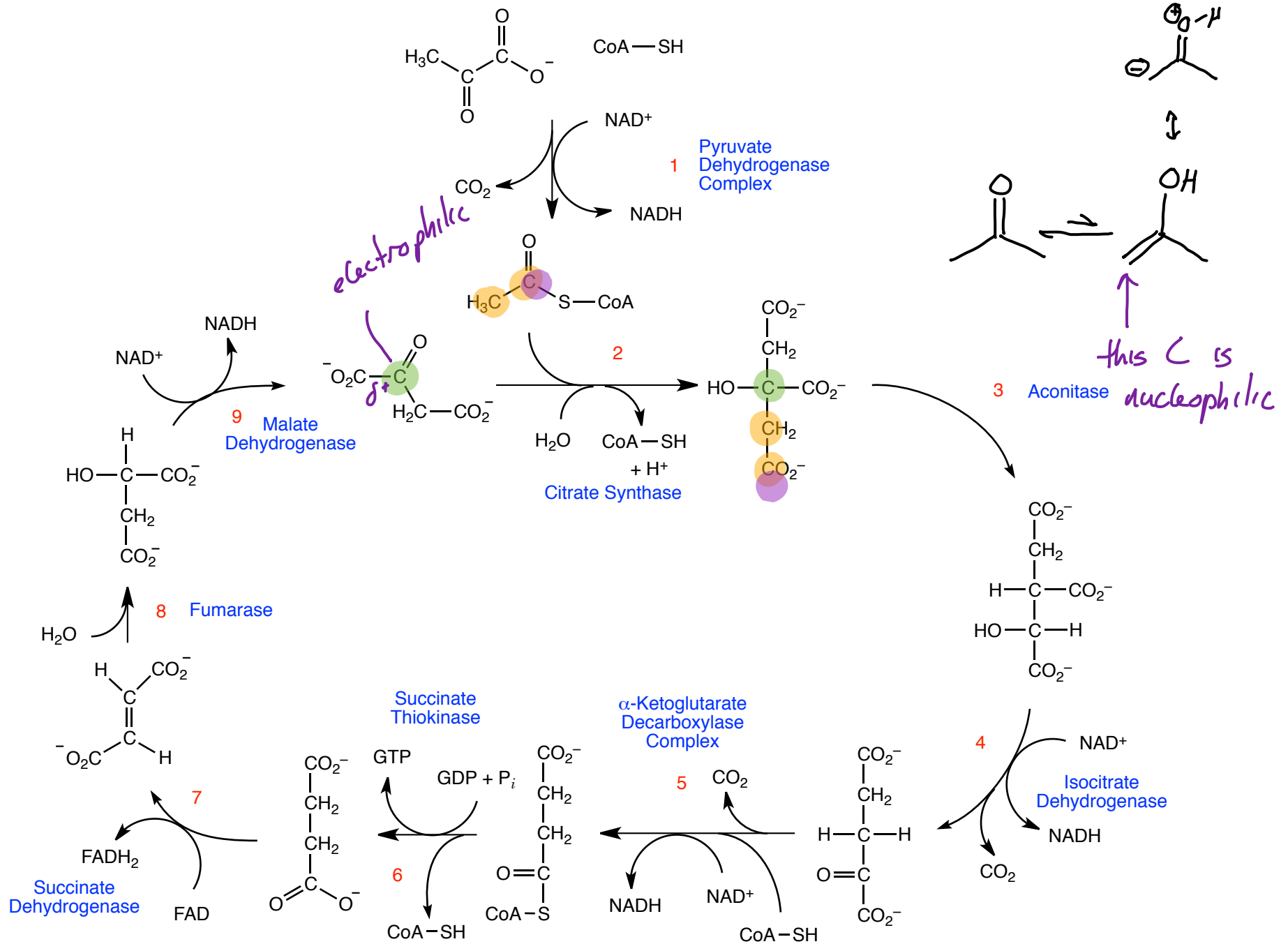
(carboxylic acid derivative
acyl substitution)

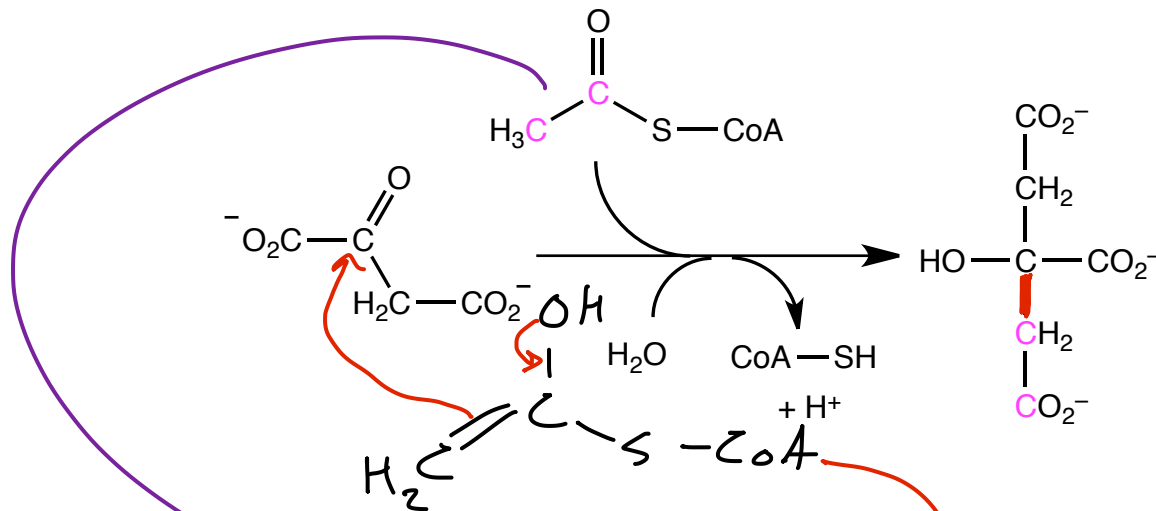




Formation of Citrate

Section 16.1, 16.2





Aldol condensation

Citrate Synthase

Section 16.1, 16.2

*enzyme made enol formation faster
CH₂ C is now nucleophilic*

enter here

