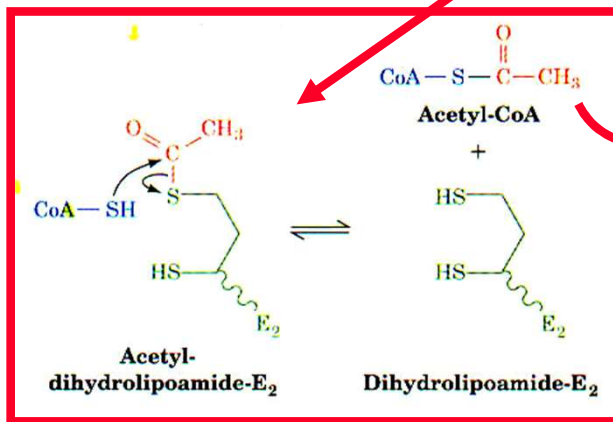
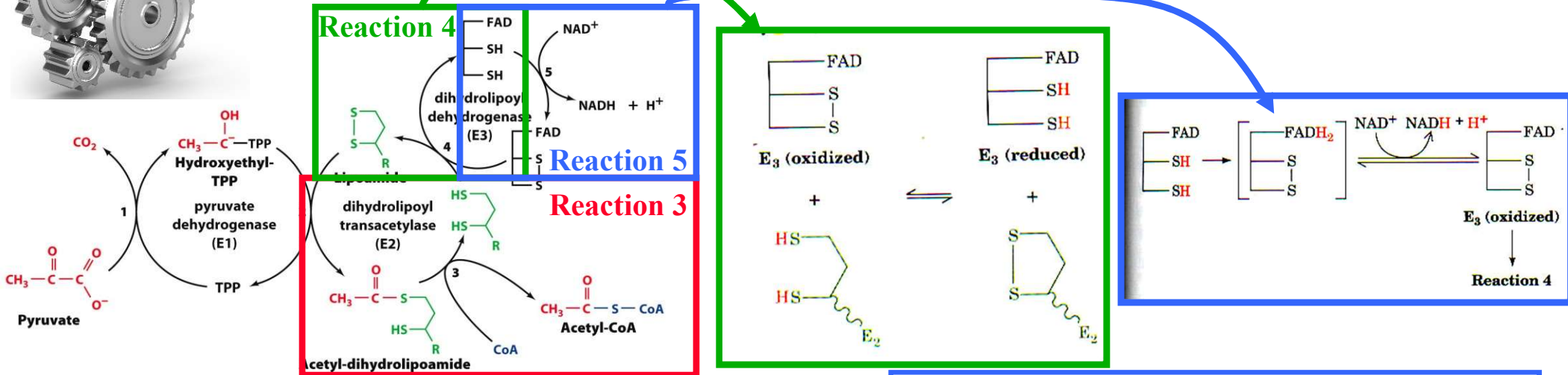


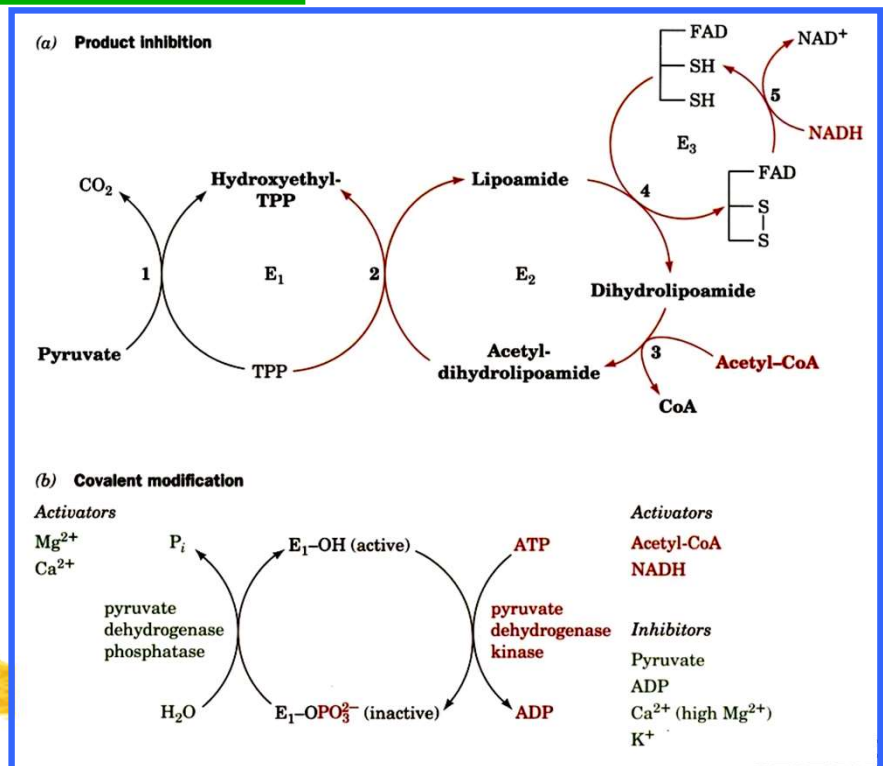
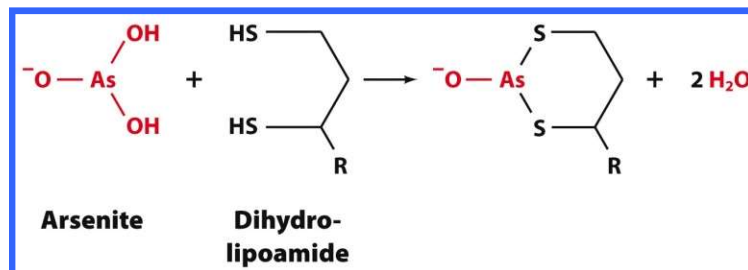
The Remaining Reactions; Regulation, Intended and Not



Citric Acid Cycle

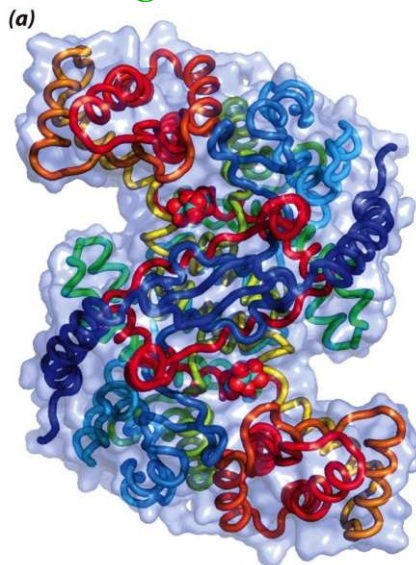
Intentional regulation:

➤ Arsenic compounds poison:

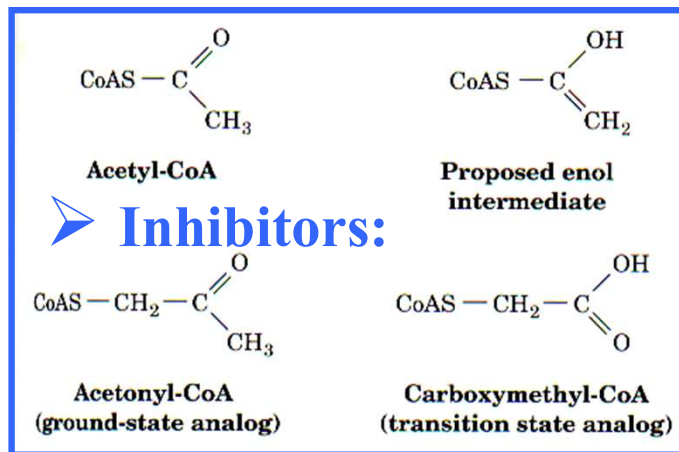
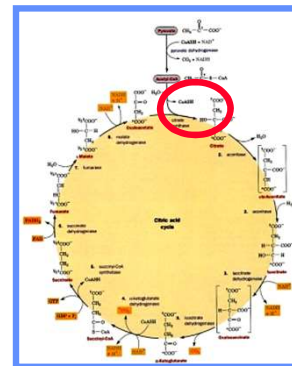
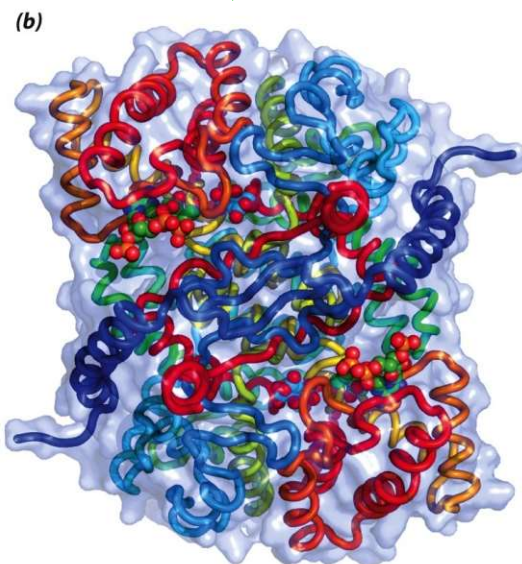


Citrate Synthase

Induced fit after binding oxaloacetate generates acetyl-CoA binding site and excludes solvent (as in hexokinase!)



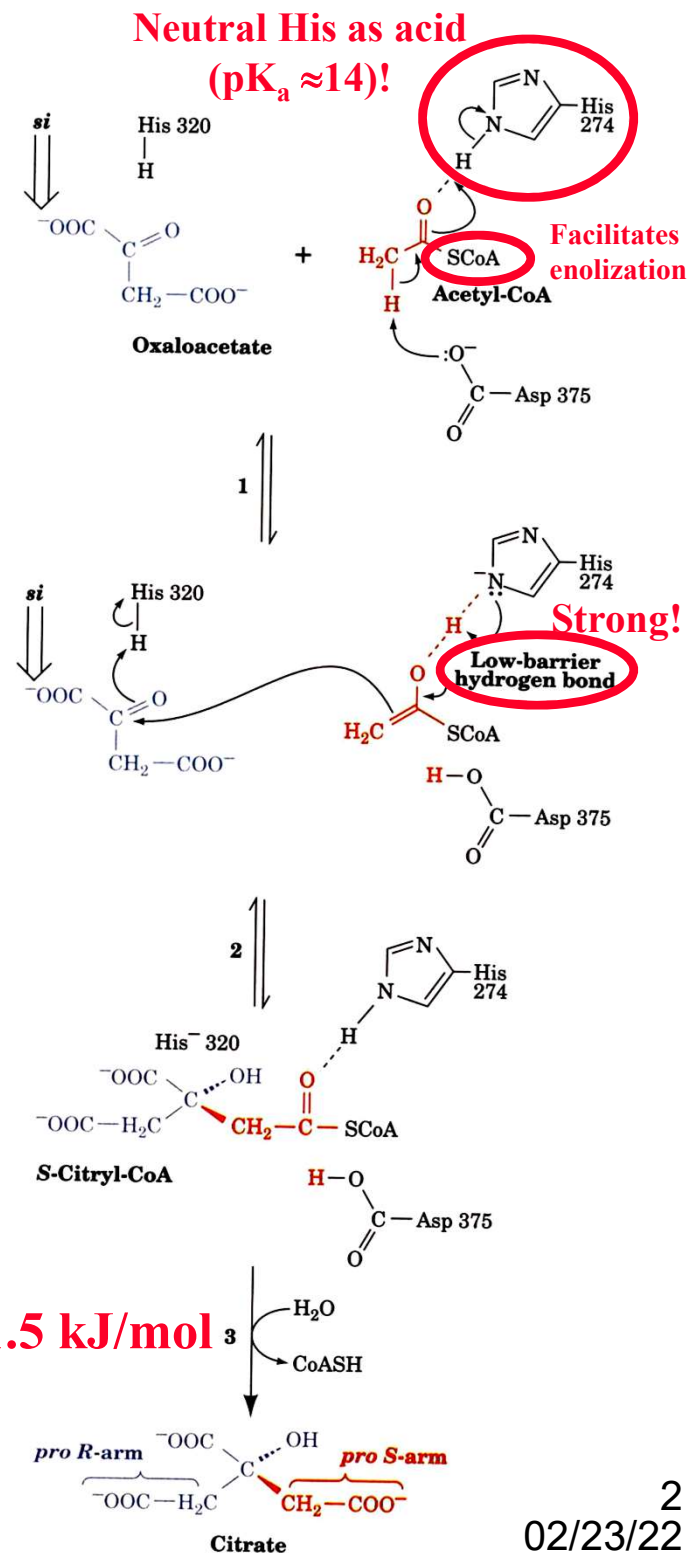
↓ Oxaloacetate



- Mixed aldol-Claisen ester condensation!
- “Feeding the furnace”

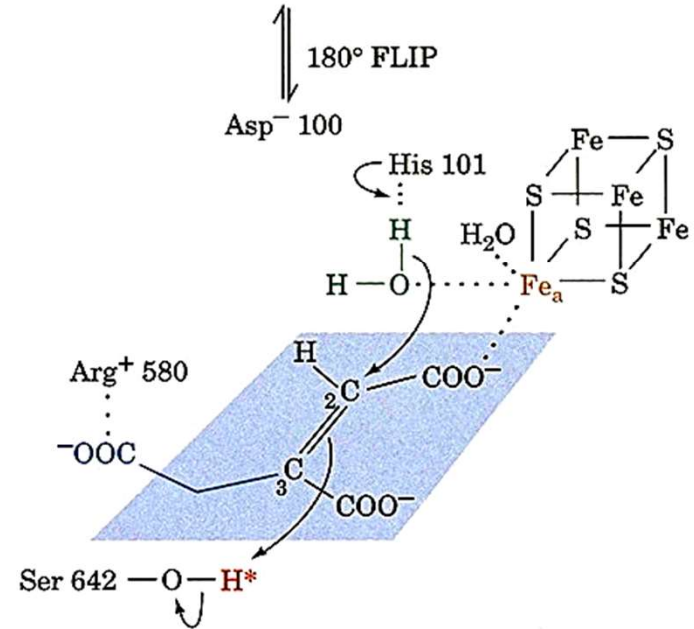
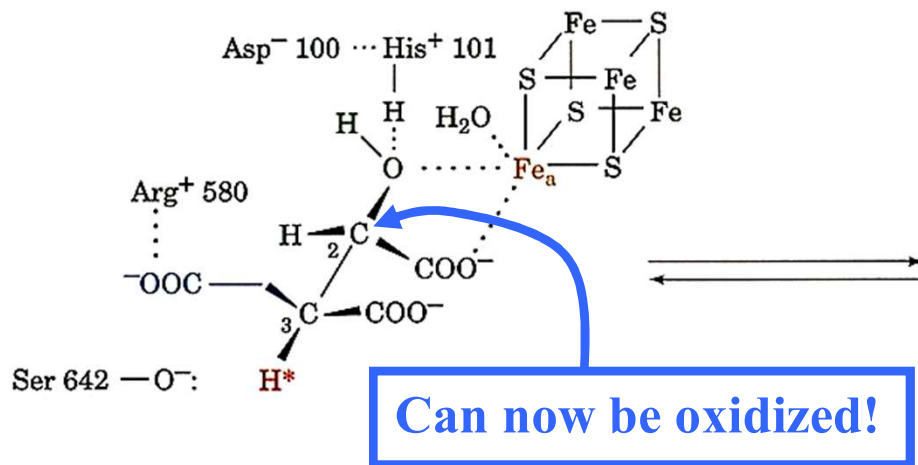
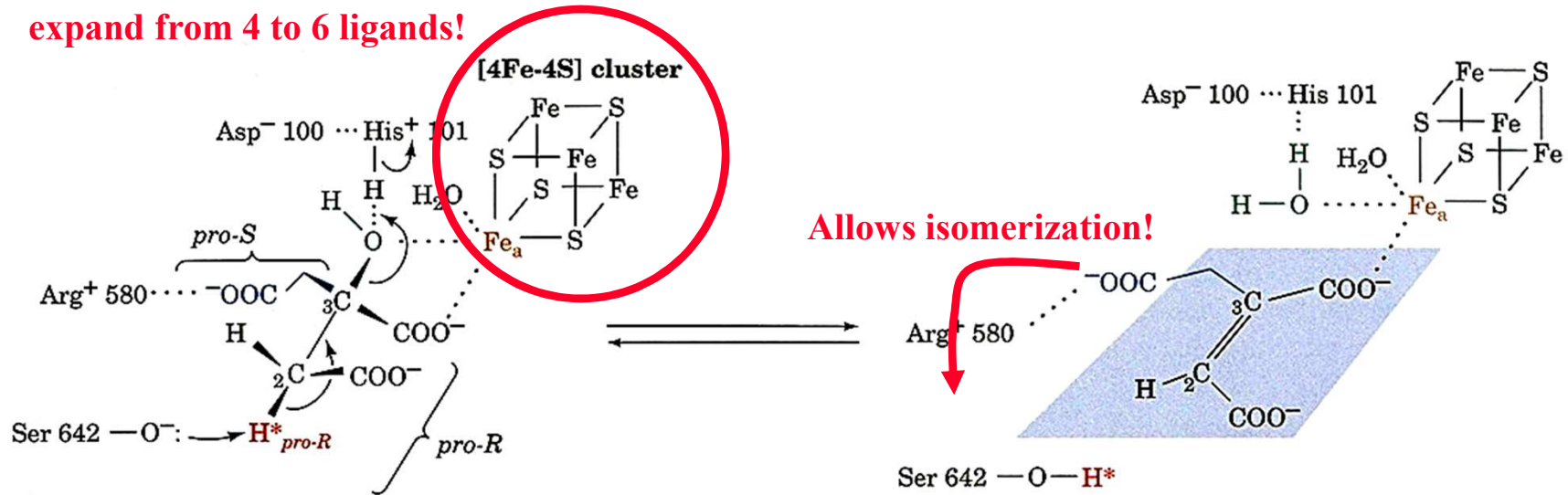
Driving Force!

$\Delta G = -31.5 \text{ kJ/mol}$

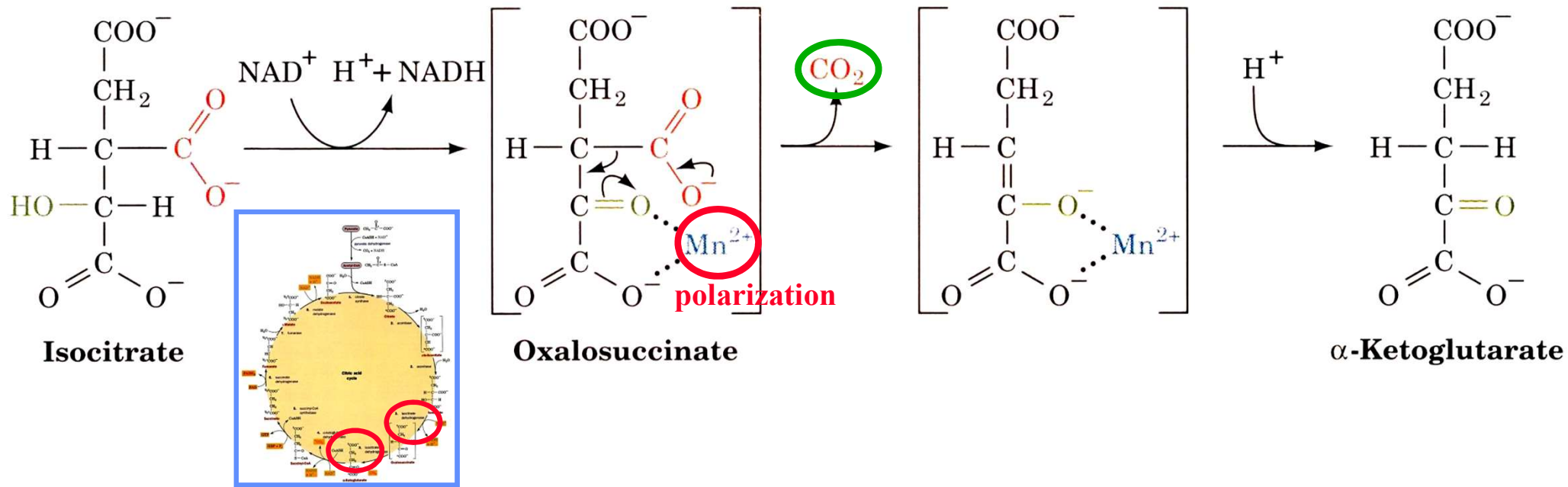


Aconitase

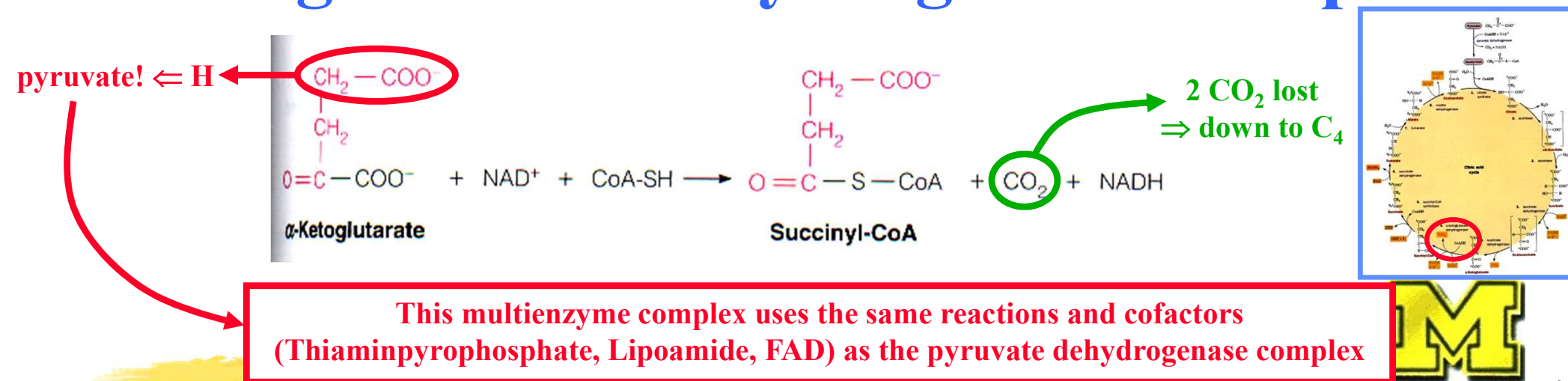
Not used for redox reaction but to expand from 4 to 6 ligands!



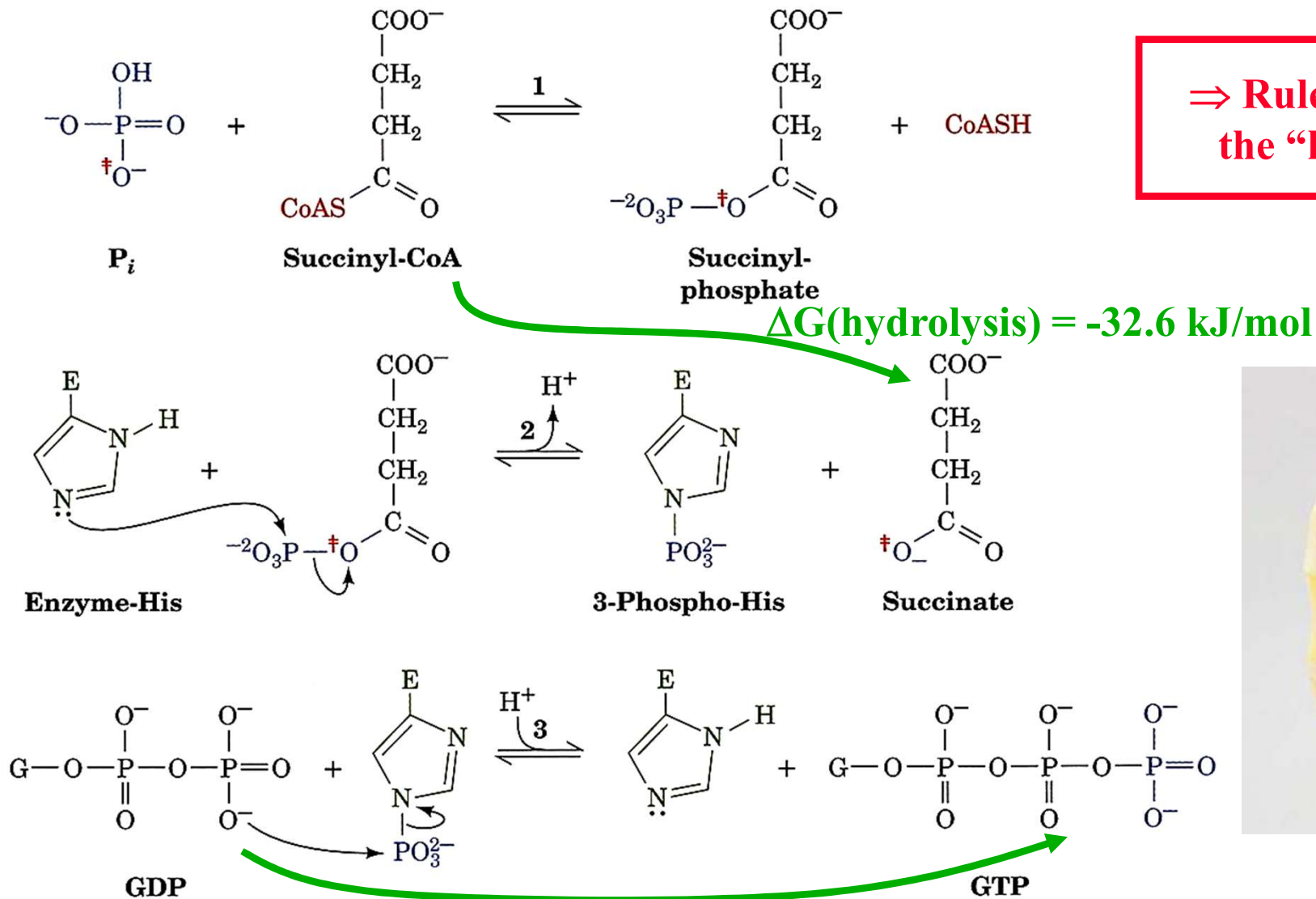
NAD⁺ Dependent Isocitrate Dehydrogenase



α-Ketoglutarate Dehydrogenase Complex



Succinyl-CoA Synthetase: Recovering the High Energy of the Thioester



⇒ Rule: Never drop the “hot potato”!

