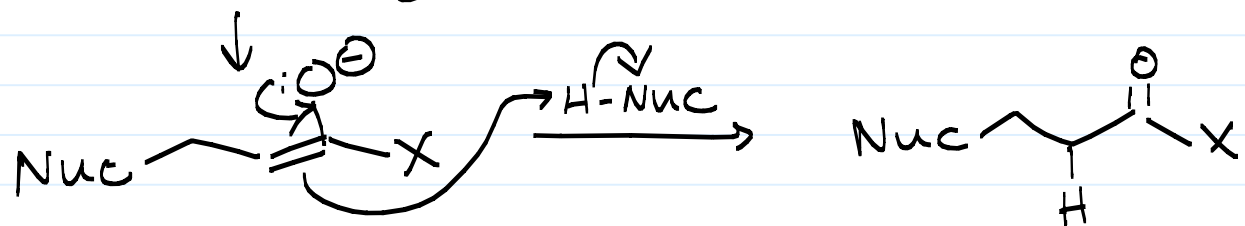


The End of Enolates ...

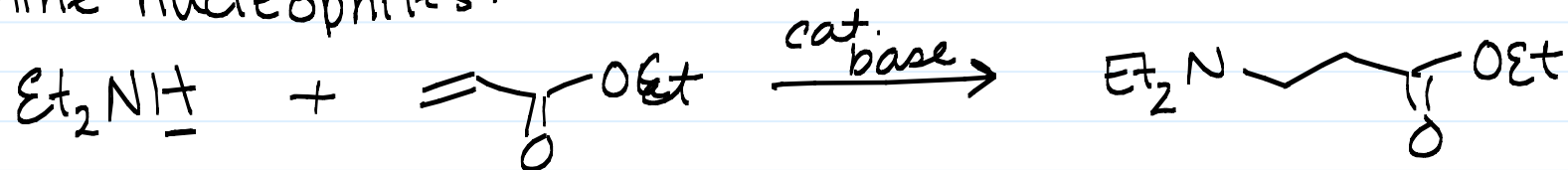
Note Title

5/6/2014

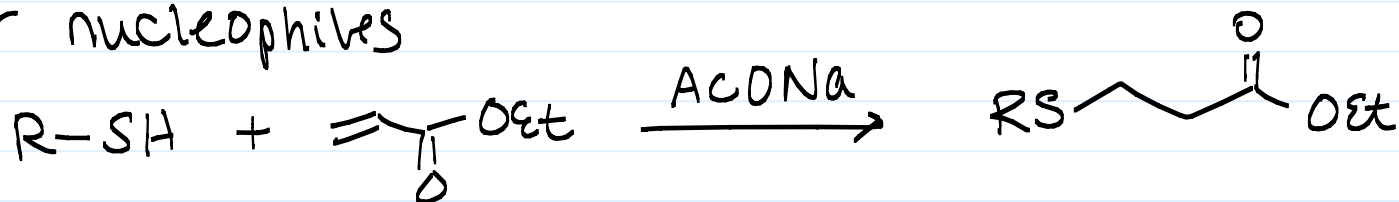
General Reaction: $\text{Nuc}^- + \text{CH}_2=\text{CH}-\text{C}(=\text{O})\text{X} \rightarrow \text{Nuc}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})\text{X}$ = "Conjugate Addition"



a) Amine nucleophiles:

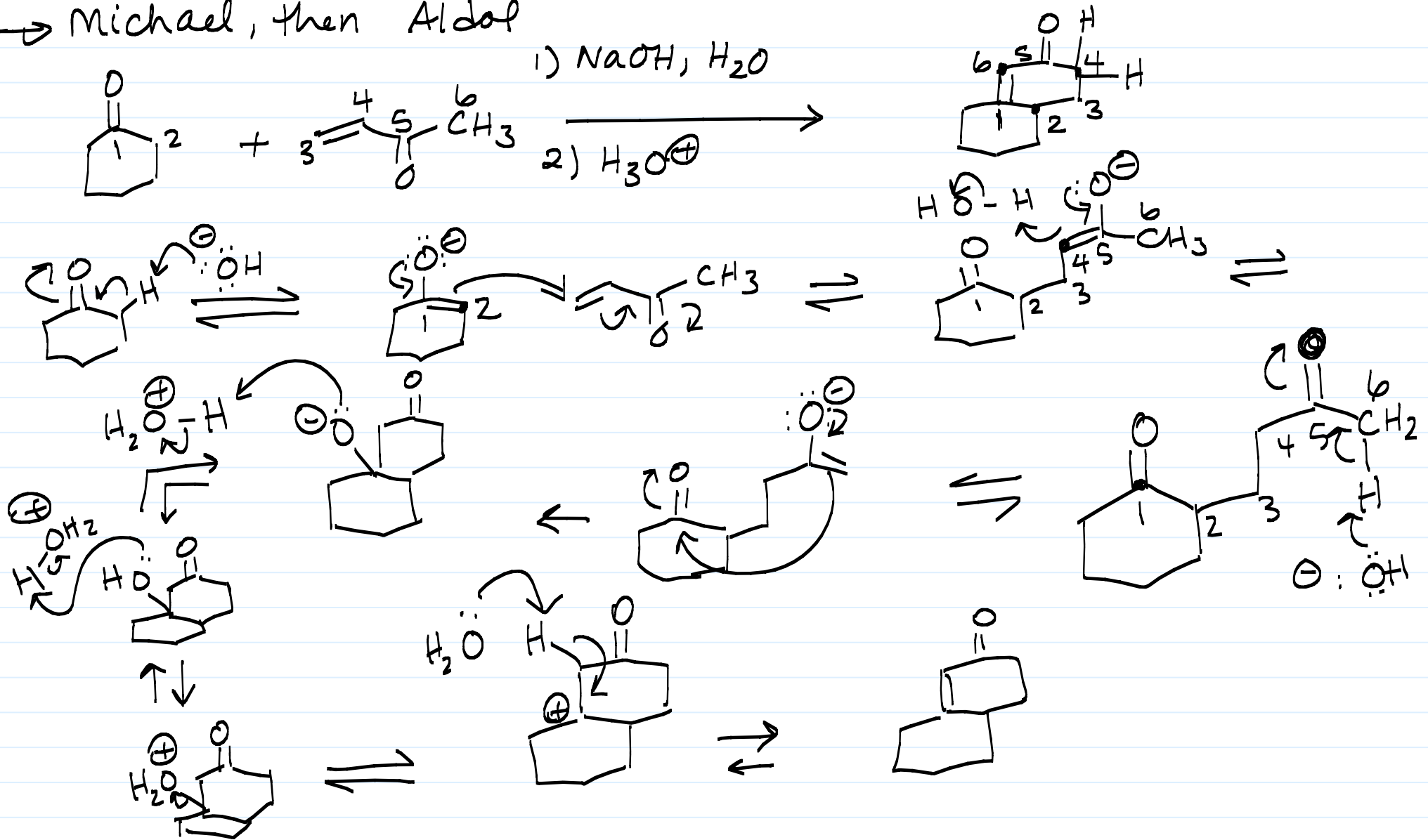


b) sulfur nucleophiles

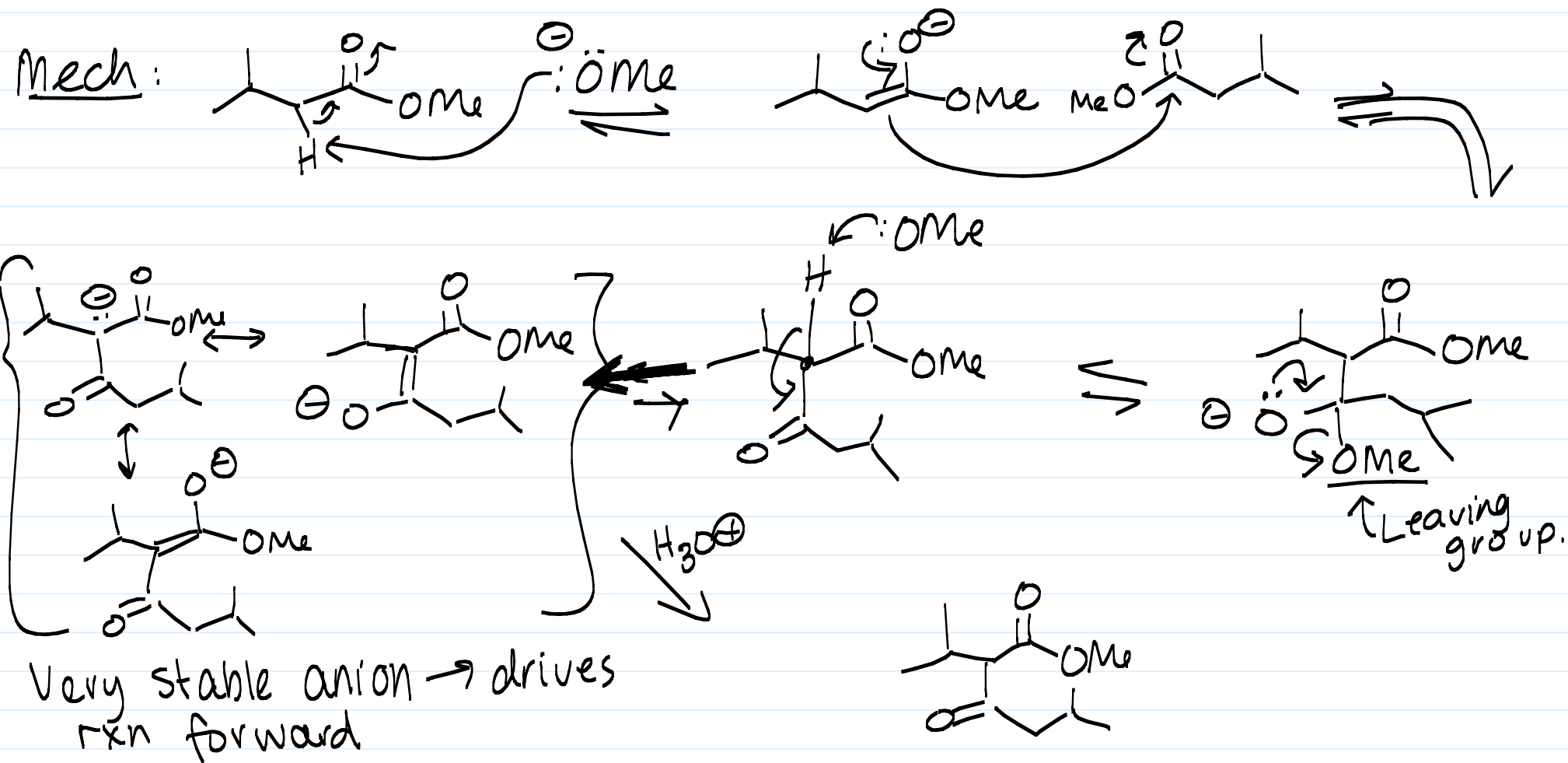
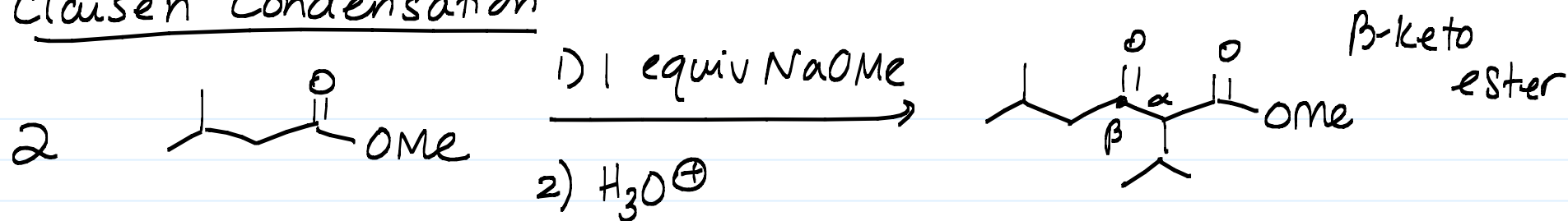


Robinson Annulation: Builds 6-membered rings

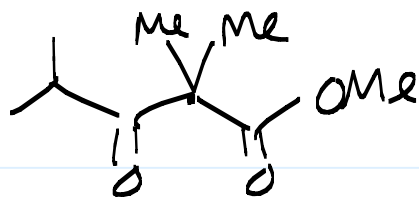
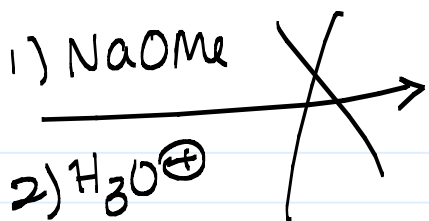
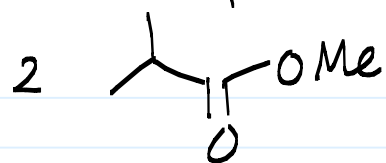
→ Michael, then Aldol



Claisen Condensation

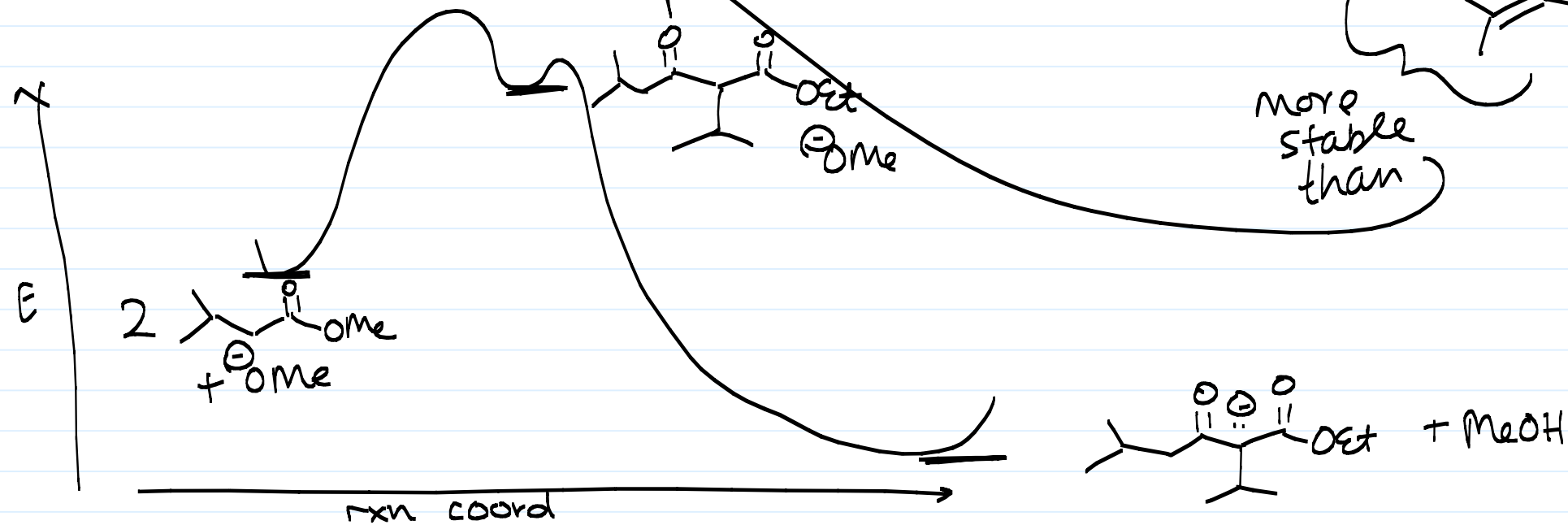
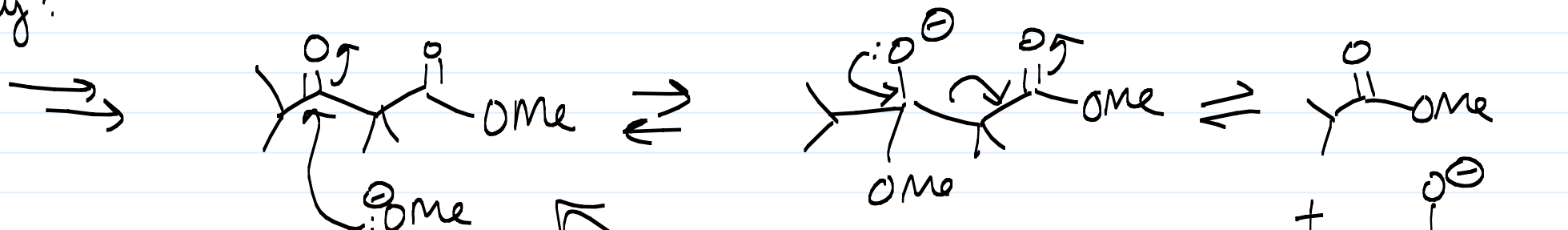


Without proton:



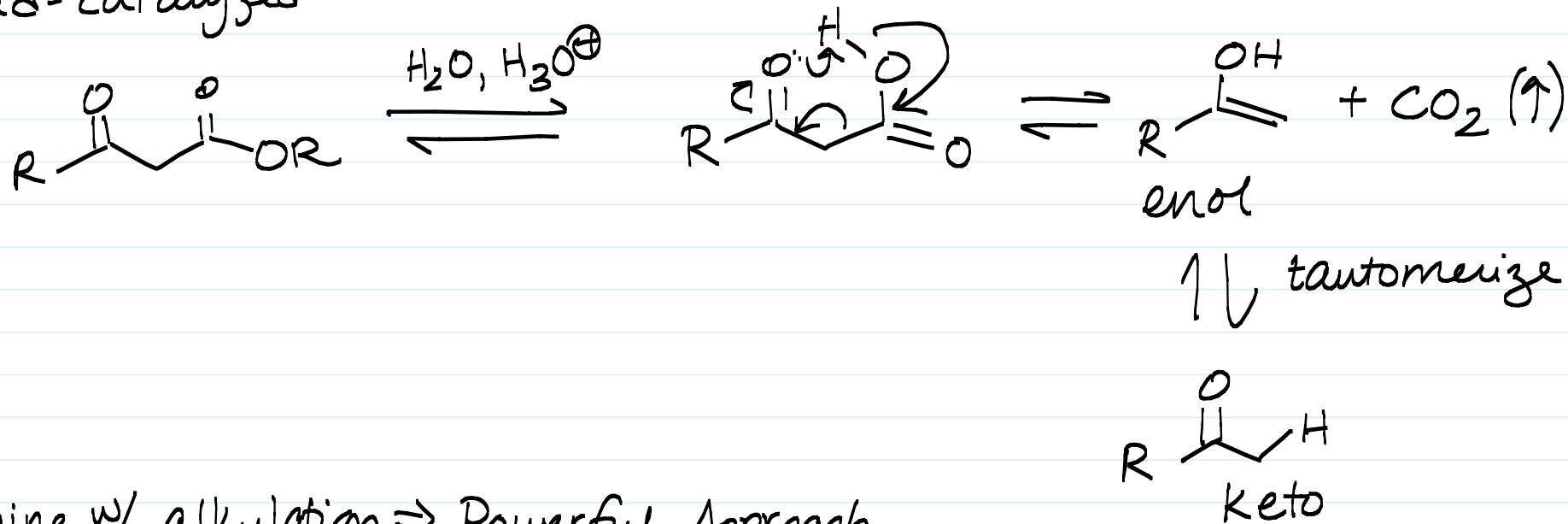
No Rxn

Why?

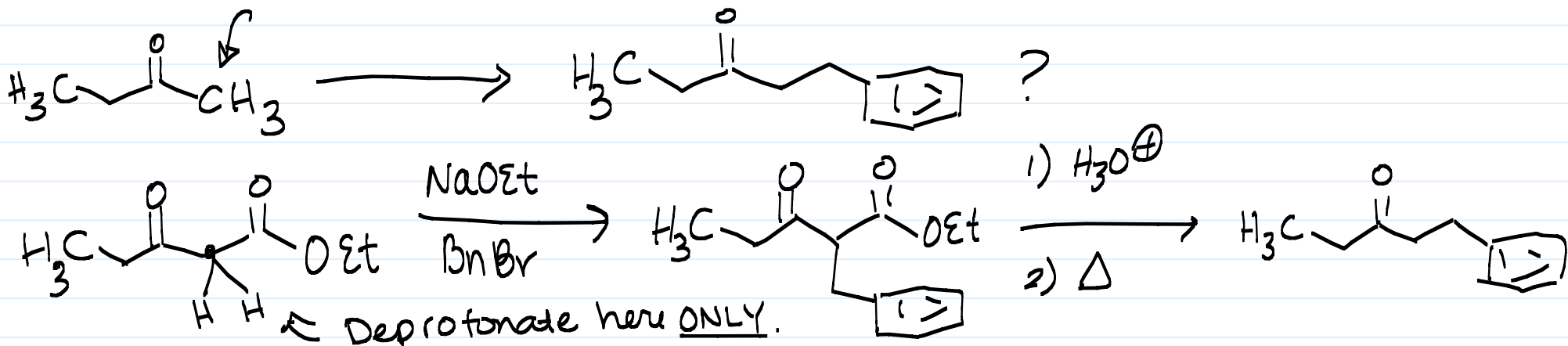


Related Rxn: Decarboxylation of β -keto ester

Acid-catalyzed:



Combine w/ alkylation \Rightarrow Powerful Approach to Ketones



Claisen Condensations in Biology → Fatty Acid Synthesis

