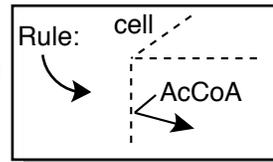
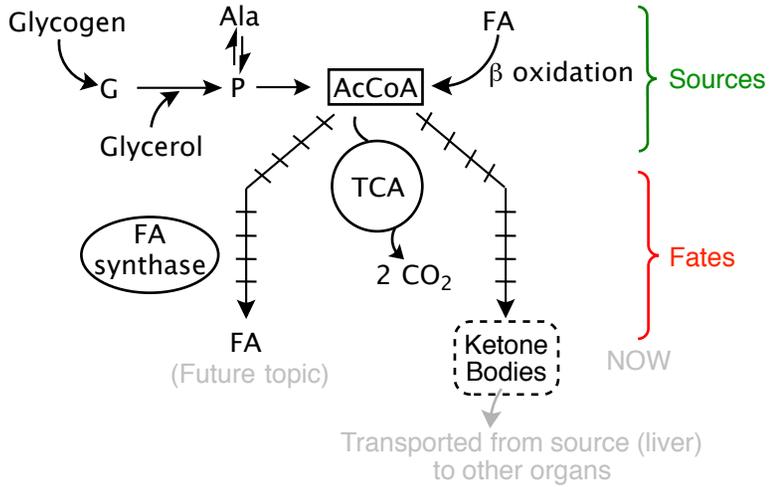


Session 16 - Ketone Bodies (KB)

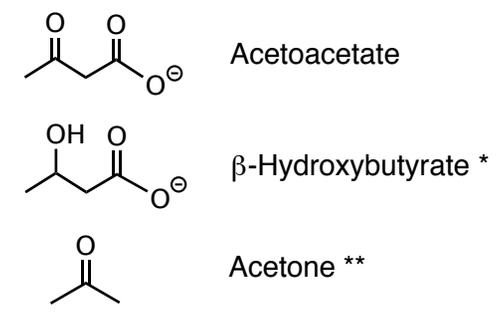
-- Sources (so far) and fates of Acetyl CoA:



KB Facts

1. Produced by liver (mainly) - when OA becomes limiting
2. Primary (or very important) metabolic fuels of *heart & skeletal muscle*
3. Used by all organs (even brain) in times of starvation
4. Produced in excess in Diabetes Mellitus (also in Type I diabetes)
5. Ketogenesis = Mitochondrial reaction

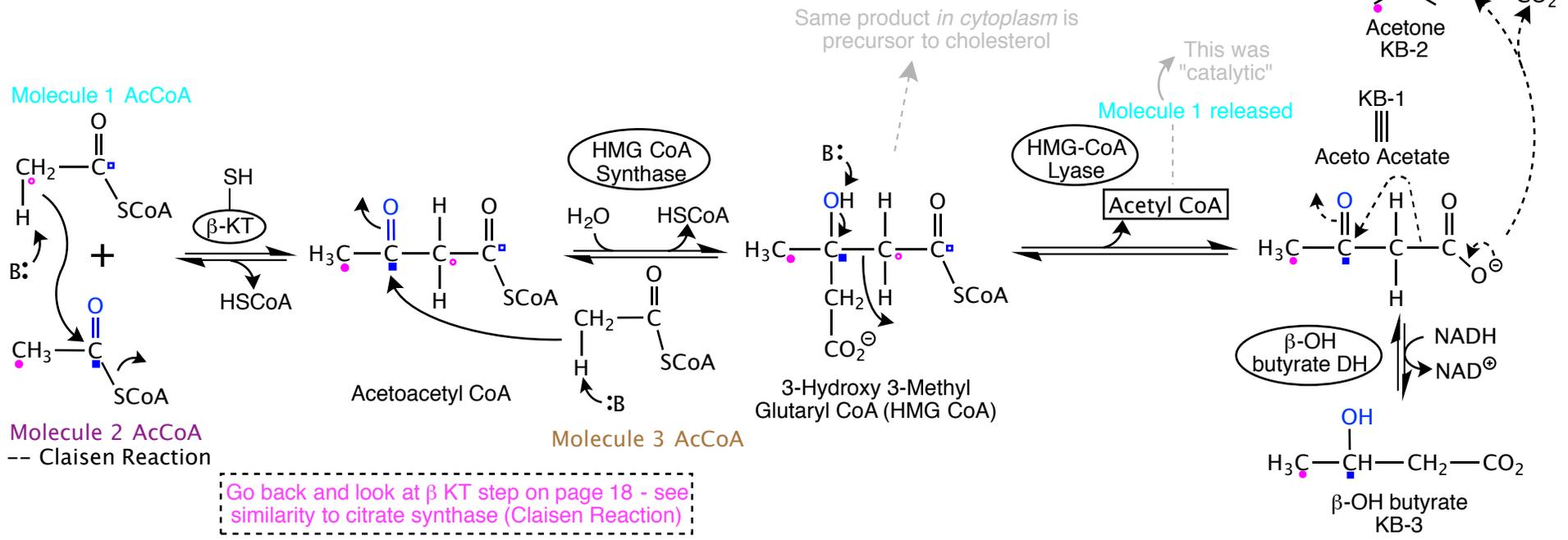
Typical KBs



* Not actually a ketone
 ** Fruity breath in diabetes

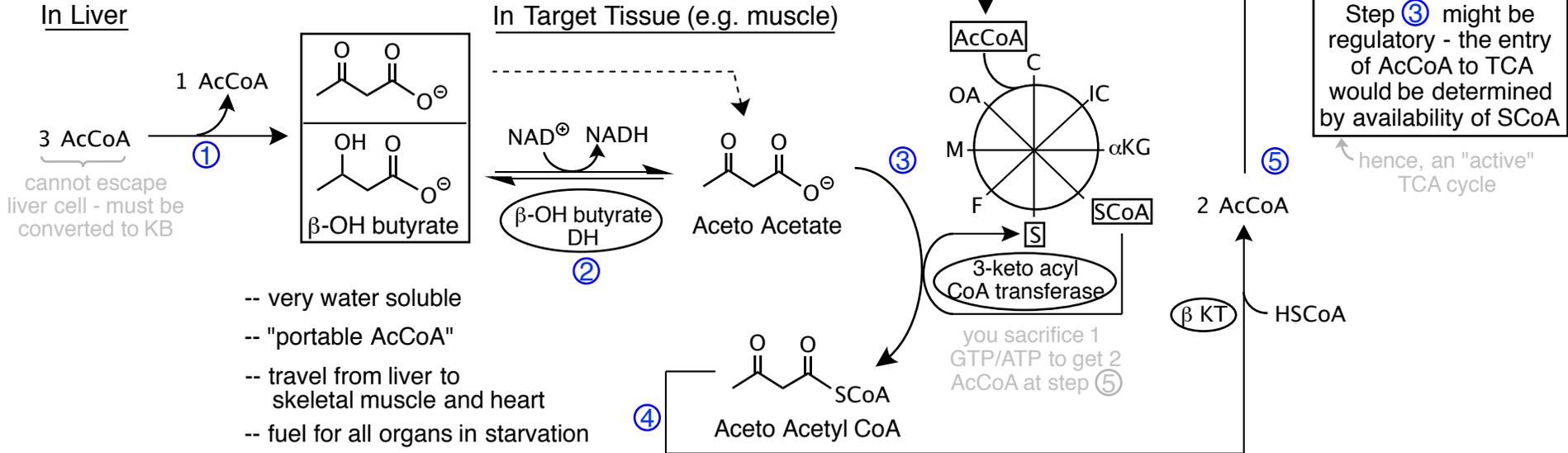
They can ↓ pH of blood from 7.4 to < 7 (e.g., 6.8) in diabetics

KB Formation - starts with β -ketothiolase running *in reverse* (of β -oxidation direction)

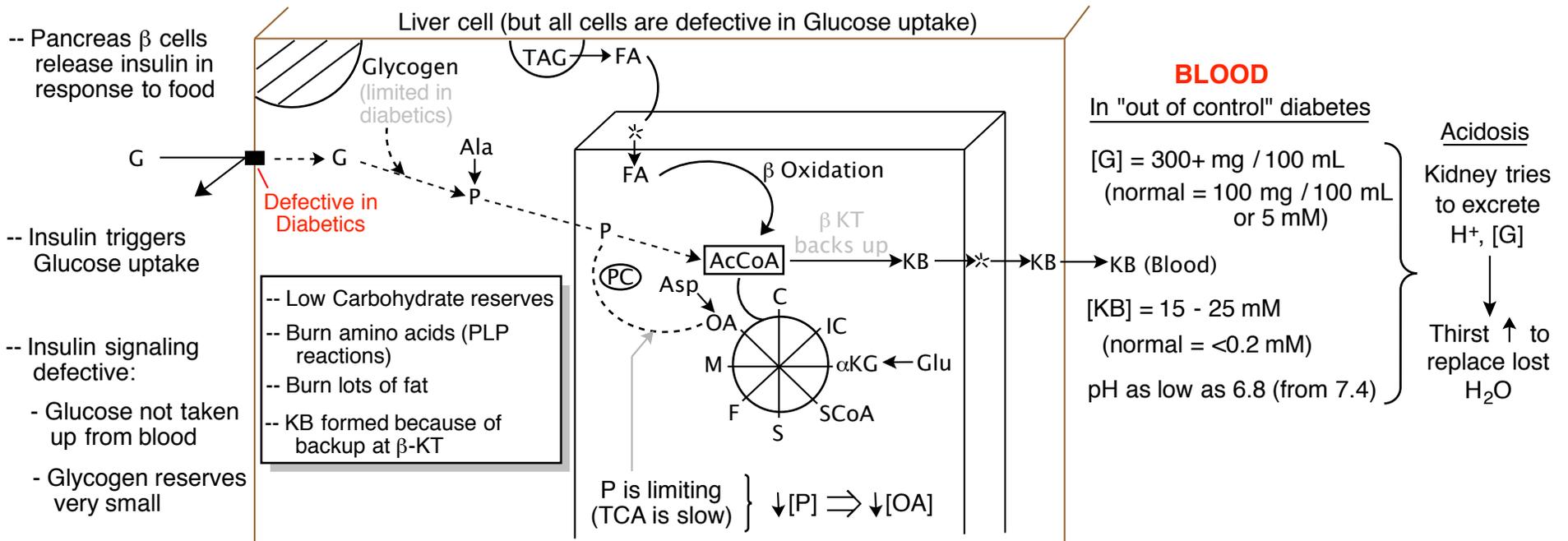


KB Formation and Utilization

Follow numbers ①-⑥



Diabetes Scenario \rightarrow technical state of starvation



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5.07SC Biological Chemistry I
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