

# School of Basic & Applied Sciences

Course Code : BSCC3001

Course Name: BIOMOLECULES

## KREB'S CYCLE

Name of the Faculty: Dr. Anjali Gupta

Program Name: B.Sc. (H) Chemistry

# *Prerequisites*

Knowledge of glycolysis

Concept of sugar metabolism

Concepts of enzymes

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## RECAP

Glycolysis takes place in mitochondria

Various enzymes are involved

Electron transfer takes place along with protons

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## Learning Outcomes

Metabolism of different metabolites

Kreb's cycle – metabolic pathway

Agents of Electron transfer

Energy generation in the form of ATP

# Overview of Kreb's Cycle/Citric Acid Cycle

- Used by all aerobic organisms in mitochondria
- It releases stored energy through the oxidation of Acetyl CoA derived from carbohydrates, fats and proteins
- This provides precursors of certain amino acids
- It produces reducing agent NADH which can be used for other reactions

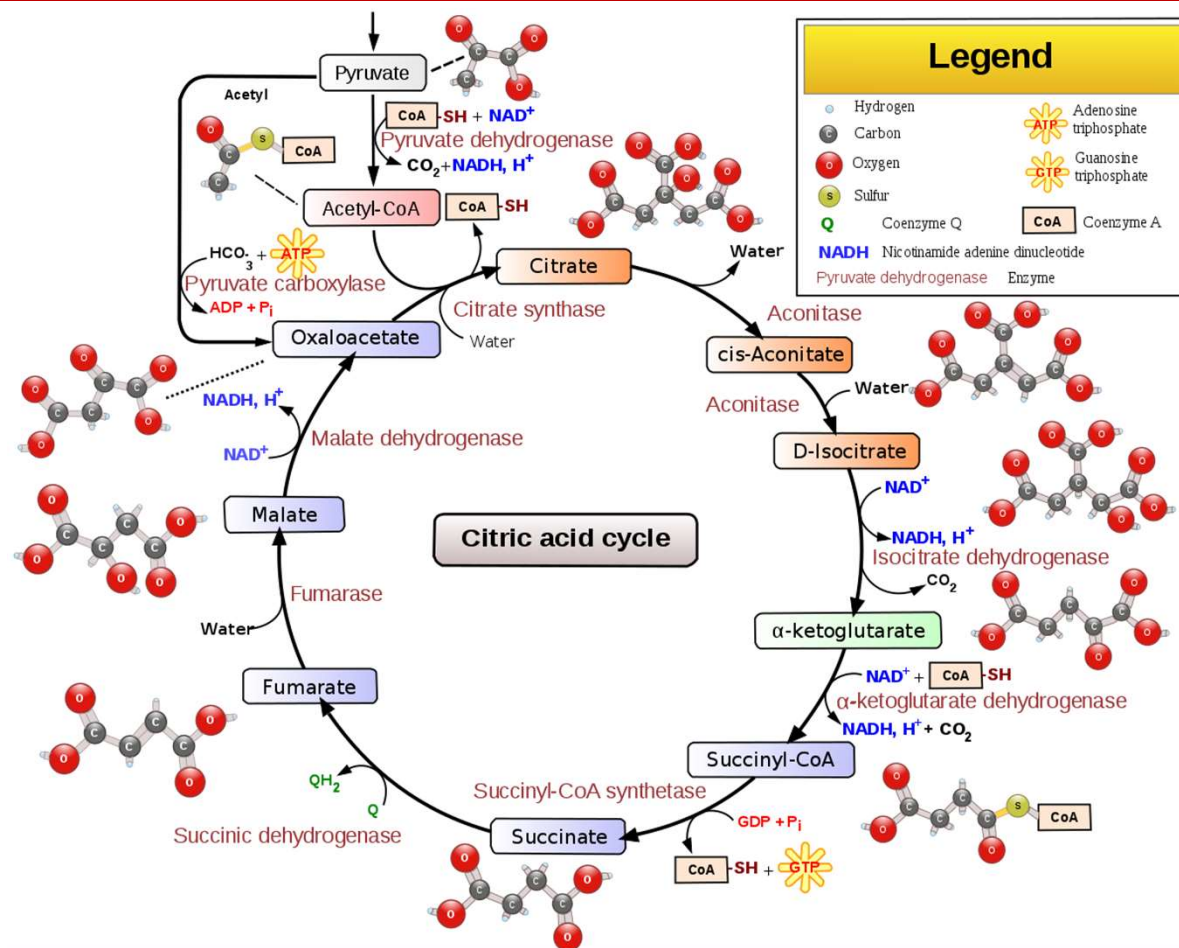
## Kreb's Cycle

- It has central importance to many biochemical pathways.
- The cycle consumes acetate and water, reduces NAD<sup>+</sup> to NADH, releasing carbon dioxide.
- The NADH generated by the citric acid cycle is fed into the oxidative phosphorylation.
- The net result of these two closely linked pathways is the oxidation of nutrients to produce usable chemical energy in the form of ATP.

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## References

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**THANK YOU**

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