Summary of Lec 16

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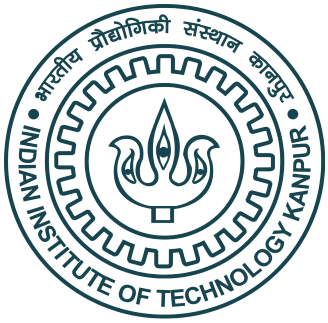

Contents

1 Biological Tethers

Biological tethers are the cofactors that bind to the enzymes and help moving intermediates from one active site to the next in the enzyme complex, without dissociating from it.

One perfect example is **biotin-avidin interaction**. The affinity is made use of in biochemistry to elute avidin protein from the chromatography column with the excess of free biotin.

2 TCA cycle and its regulation

The pyruvate after decarboxylation to acetyl Co-A is fed to the citric acid cycle. The acetyl-CoA is oxidised in multiple steps and energy of oxidation is stored in the electron carriers NADPH and $FADH_2$, which is tranferred to the oxygen in the mitochondrian channels where the electron flow energy is harvested in ATP. Besides acetyl-CoA, any compound that gives rise to a four-or five-carbon intermediate of the citric acid cycle—for example, the breakdown products of many amino acids—can be oxidized by the cycle.

The Citric acid cycle is regulated by the conversion of pyruvate to acetyl-CoA and by the flux through citrate synthase, isocitrate dehydrogenase and α-ketoglutarate dehydrogenase.