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Abstract

Regulation of Unusual Enzymes and Their Pathways: Metabolism in Archaea

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Abstract:

The metabolism of Archaea, the third domain of life, resembles in its complexness those of microorganism and lower Eukarya. However, this metabolic complexness in Archaea is among the absence of the many "classical" pathways, significantly in central saccharide metabolism. Instead, Archaea are characterised by the presence of distinctive, changed variants of classical pathways like the Embden-Meyerhof-Pranas (EMP) pathway and also the Entner-Doudoroff (ED) pathway. The simple sugar phosphate pathway is simply partially gift (if at all), and simple sugar degradation additionally considerably differs from that glorious for microorganism model organisms. These modifications are among the invention of "new," uncommon enzymes that cause elementary consequences for the underlying regulative principles, and classical allosteric regulation sites well established in microorganism and Eukarya are lost. The aim of this review is to gift the present understanding of central saccharide metabolic pathways and their regulation in Archaea. so as to provide an outline of their complexness, pathway modifications are mentioned with relevancy uncommon archaeal biocatalysts, their structural and mechanistic characteristics, and their regulative properties as compared to their classic counterparts from microorganism and Eukarya. moreover, an outline specializing in monosaccharose metabolic, i.e., glycolytic also as gluconeogenic, pathways known in archaeal model organisms is given. Their energy gain is mentioned, and new insights into completely different levels of regulation that are ascertained thus far, together with the transcript and supermolecule levels are given.

Biography:

Jacob Puliyel works as an Assistant professor in International Open Institute, he made a lot of research related to enzymes.

Recent Publications:

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2. Structural and thermal stability analysis of Escherichia coli and Alicyclobacillus.
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