Extremophiles and Their Biotechnological Applications

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ABSTRACT

Extremophiles are to a great extent unexplored group of organisms with the capacity to flourish in extreme conditions. They can grow and live in extreme environment such as temperature, ionic strength, pH and other harsh conditions. The disclosures of new extremophiles and their enzymes will offer novel industrially significant potentials. Extremozymes are the enzymes produced by extremophiles that are impervious to outrageous conditions and due to their extraordinarily strength, they are better at functional level over their mesophilic partners for applications at extraordinary industrial conditions. Extremozymes have incredible financial potential in numerous modern procedures, including industrial and pharmaceutical applications. They generally catalyze compounds responses in non-standard conditions. These enzymes are equipped for catalyzing their individual responses in extreme environmental condition. Extremozymes along with its producing microbes are sustainable source that might be better exploited in numerous biotechnological areas towards the expansion of a bio-based economy. The presentation includes up-to-date information about extremozymes and extremophiles along with their potential applications.

Keywords: Extremophiles, Extremozymes, Biotechnology, Sustainable source, Bio-based economy

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