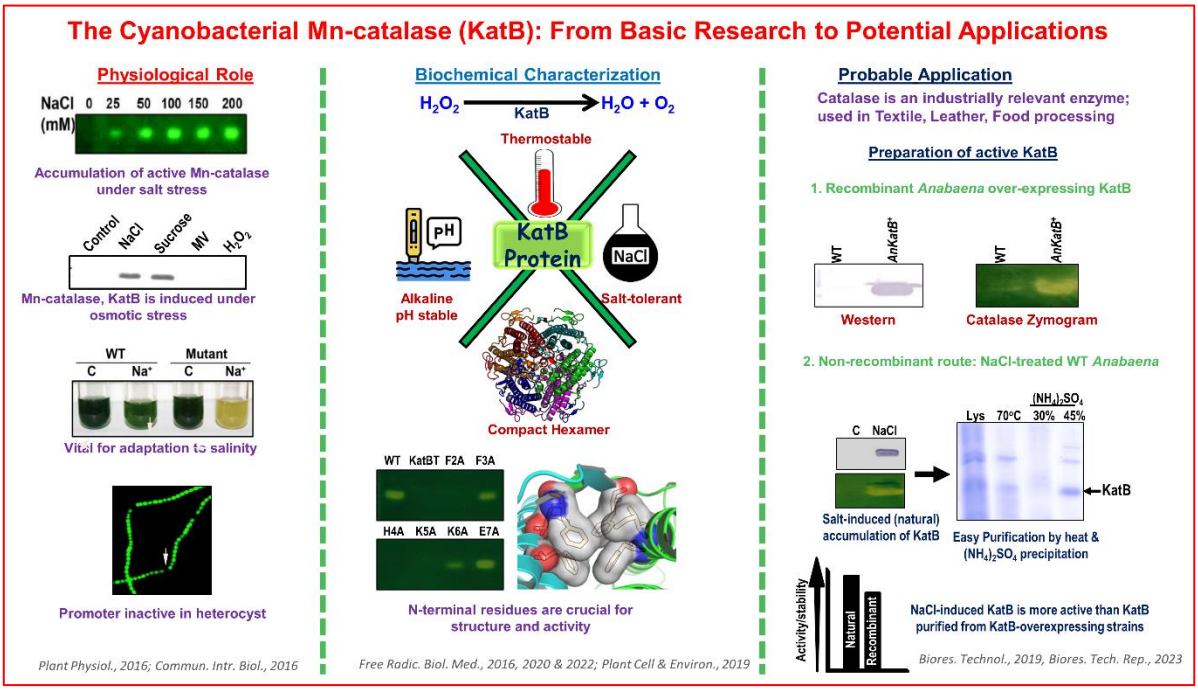
Physiological role and structural characterization of a salt-inducible Mn-catalase (KatB) from *Anabaena*

The Mn-catalase, KatB, plays a vital role in adaptation to salinity and oxidative stress in the cyanobacterium *Anabaena*. Biochemically, KatB is a thermostable, robust Mn-catalase that functions at alkaline pH. The KatB crystal structure, the first one from a photosynthetic organism, showed its active site to be distinct from other Mn-catalases. The N-terminal region of this enzyme was shown to play a crucial role in subunit interaction and maintaining the proper active site geometry. Very recently, KatB was purified from the salt-stressed wild-type *Anabaena,* showcasing a non-recombinant route of obtaining this catalase.



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Harnessing salt stress to drive the efficient and inexpensive bioproduction of a valuable thermotolerant biocatalyst (Mn-catalase) from cyanobacterial biomass

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Unique functional insights into the antioxidant response of the cyanobacterial Mn-catalase (KatB)

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Review Article

Gazing into the remarkable world of non-heme catalases through the window of the cyanobacterial Mn-catalase 'KatB'

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Facile generation of a biotechnologically-relevant catalase showcases the efficacy of a blue-green algal biomass as a suitable bioresource for protein overproduction

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Novel molecular insights into the anti-oxidative stress response and structure–function of a salt-inducible cyanobacterial Mn-catalase

Dhiman Chakravarty[1,3] | Subhash C. Bihani[2] | Manisha Banerjee[1,3] | Anand Ballal[1,3]

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A Salt-Inducible Mn-Catalase (KatB) Protects Cyanobacterium from Oxidative Stress

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SHORT COMMUNICATION

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Cyanobacterial Mn-catalase 'KatB': Molecular link between salinity and oxidative stress resistance

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