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Biosynthesis of proteus mirabilis nuclease

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Abstract

The culture liquid and periplasm of *Proteus mirabilis* contained nuclease, an enzyme with DNase and RNase activities. The nuclease was most actively synthesized in the early exponential and stationary growth phases. Nuclease synthesis was regulated by nucleic acids (induction by substrate) and inorganic phosphate (end-product inhibition). The synthesis and secretion of nuclease by *P. mirabilis* was induced by mitomycin C, an inducer of the SOS functions of cells. This suggests the involvement of SOS response proteins in the regulation of nuclease synthesis.

Keywords

Nuclease, induction, *Proteus mirabilis*, Repression