

论文

生物被膜主动分散机制研究进展

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摘要:

细菌生物被膜(bacterial biofilm, BBF)为微生物栖息提供了所需要的保护屏障和生长微环境。生物被膜对抗菌药物的耐受性使得它在医学治疗等领域产生了严重的危害。因此如何分散被膜显得意义重大。综述了生物被膜主动分散的几种主要机制,包括降解酶的合成、运动力的恢复、表面活性剂的产生和细胞死亡。

关键词: 被膜分散 降解酶 种子分散 细胞死亡

Advance in Active Biofilm Dispersal Mechanism

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Abstract:

Microbial biofilms are composed of a hydrated matrix of biopolymers including polypeptides, polysaccharides and nucleic acids and act as a protective barrier and microenvironment for the inhabiting microbes. The resistance of biofilms to antimicrobial agents leads to a range of problems, including medical treatment, which highlights the significance of biofilm dispersal. The mechanisms that result in active dispersal of bacteria from biofilm, which include the synthesis of enzymes, the return of motility, surfactant production and cell lysis were reviewed.

Keywords: Biofilm dispersal Degrading enzymes Seeding dispersal Cell lysis

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