

综述

抗生素抗性筛选在微生物菌株选育中的作用

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摘要 选育优良微生物菌株对微生物药物研发尤其是对微生物制药实现产业化具有至关重要的意义。抗生素抗性筛选基于微生物对抗生素产生抗性, 因其实验操作简便、效果显著而在有用微生物菌株选育中得到广泛应用。在微生物药物领域抗生素抗性筛选技术主要用来筛选获取高产菌株, 但近来发现微生物的抗生素抗性突变可赋予突变株新生次级产物的代谢生产能力, 因此在拓展药源微生物资源领域具有潜在应用价值。本文主要综述抗生素抗性筛选在微生物菌株选育中的作用以及相关新近研究进展。

关键词 [微生物](#); [菌株选育](#); [抗生素抗性](#); [突变株筛选](#)

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Antibiotic-resistance mutation technique in microorganism breeding

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Abstract

Microbial strain improvement for productivity and useful metabolites is of crucial importance for exploiting microbial resources to develop new drugs, especially, it is of considerable industrial and economic importance to improve the production of antibiotics. Antibiotic-resistance mutation technique, developed on the basis of simple screening method to obtain mutant strains resistant to antibiotics, was widely applied to improve microbial strains due to its experimentally prominent advantage in obtaining mutants by selecting on antibiotic-containing plates. This technique was essentially used for improving the productivity of antibiotic-producing strains since finding the phenomenon that some of antibiotic-resistant mutant strains could acquire new metabolic capability to produce metabolites that did not produce by parent strains, it has recently appeared that the antibiotic-resistance mutation technique possesses a great promising application in extending potential resources of microbial strains. This paper reviews the application of antibiotic-resistant mutation technique in microorganism breeding and its new development in recent years.

Key words [microorganism](#) [strain improvement](#) [antibiotic-resistance](#) [mutant screening](#)

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