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枯草杆菌中通过细胞融合的质粒转移

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摘要 在PEG存在下，枯草杆菌BD366（pUB110）菌株和G1菌株的原生质体以10-6-10-4的融合率发生融合。在染色体的抗药性标记，营养要求和一般细菌学特征鉴定方面，多数融合子相似于亲本G1，所不同的是质粒上的抗药性标记相同于另一亲本菌株BD366，并且在高渗培养基上具有独特的菌落形态。融合子的以上一些特征极为稳定。高温能使质粒pUB110消除，质粒消除后融子的菌落形态转变成为亲本G1的形态特征。我们认为双亲细胞融合后没有发生遗传重组，而是在分裂过程中发生分离，于是质粒pUB110可能出现在G1细胞中，因此本文为通过细胞融合的质粒转移和由于某一特定质粒的存在而改变菌落形态提供了初步证据。

关键词

分类号

The Transfer of Plasmid through Cell Fusion between Bacillus subtilis

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Abstract

In the presence of PEG the protoplasts of B.subtilis BD366(pUB110) and G1fused at a frequency of 10-6—10-4. The majority of the fusion products were similarto the ments and convertional diagnostic characteristics with the exception of the plasmid coded drug resistance of the other parental strain BD366 and their fusion products were phology on hypertonic medium. All of these characteristics of the fusion products were highly stable. The plasmid pUB110 is curable by high temperature . On curing the colonial morphology changed to that of the G1 parent. It is concluded that there was no genetic recombination after fusion of the parental cells,instead segregation occurred in subsequent fissions. The plasmid pUB110 may then appear in the G1 clees. Preliminary evidence is therefore provided for the transfer of plasmid through cell fusion and the change of colonial morphology in the presesce of a particular plasmid.

Key words

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