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从猪粪中分离抗铜大肠杆菌及其抗铜基因的初步定位

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Isolation of copper-resistant *Escherichia coli* from pig feces and primary location of copper-resistant genes

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- 摘要
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摘要 从云南昆明周边的4个养猪场采集不同年龄段的猪粪样品,分离猪粪中的大肠杆菌.从分离到的大肠杆菌中发现了具有金属铜抗性的菌株并统计出抗性菌株的发生率.摸索了测定硫酸铜对抗铜性大肠杆菌的最低抑菌浓度(MIC)的方法,接合实验确定抗铜基因是否位于可移动的接合质粒上.实验结果初步表明抗铜大肠杆菌的发生率与饲料中添加硫酸铜的量成正相关性,且72%的抗性菌株中的抗铜基因位于可移动的接合质粒上.

关键词： 猪粪 大肠杆菌 抗铜性 接合质粒

Abstract： Samples of feces from pigs at different ages were taken from 4 commercial piggeries around Kunming,Yunnan Province,and the strains of *E.coli* in pig feces were isolated.The strains of copper-resistant E.coli were picked out and the incidence rate of these copper-resistant strains was obtained.The method of determining MIC of $CuSO_4$ for copper-resistant *E.coli* was explored,and the location of copper-resistant genes was investigated by means of conjugative transfer.The preliminary results showed that the incidence rate of these copper-resistant strains amongst *E.coli* isolated from pig feces is related to the amount of $CuSO_4$ added to pigs diets.The copper-resistant genes in the 72% copper-resistant strains were found to located on the mobile conjugative plasmid.

Key words：

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