
Antimicrobial Resistance of Lactic Acid Bacteria Isolated From Human Milk

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Resumo

Probiotic foods have been used mainly to restore the equilibrium of human flora, reducing inflammatory bowel disease. The use of these functional foods has also been reported for prevention of other diseases such as reducing cholesterol levels and the incidence of colon cancer. Human milk contributes to the composition of the intestinal tract, since this intestinal microflora is installed on the first days after birth, with much of this acquired by breast-fed infants. Hence, human milk is a potential source of potential probiotic lactic acid bacteria. Several approaches to the evaluation of the safety of proprieties have been applied. Laboratory tests applied in the safety assessment of probiotic include resistance to antibiotics. Thus, the objective this work was to evaluate the antimicrobial resistance of lactic acid bacteria isolated from human milk obtained in the milk bank from Clériston Andrade Hospital in the city of Feira de Santana - Bahia, Brazil. Thirty two strains of lactic acid bacteria were tested against nine antimicrobials using disk diffusion method: ampicillin (10 µg), amoxicillin-clavulanic acid (10 µg), clindamycin (2 µg), chloramphenicol (30 µg), erythromycin (5 µg), gentamicin (10 µg), imipenem (10 µg), tetracycline (30 µg) and vancomycin (30 µg). Fifty percent of isolates were resistant to gentamicin, followed by vancomycin (47%), ampicillin (28.1%), clindamycin and tetracycline (12.5%), erythromycin and amoxicillin-

Referência:

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clavulanic acid (9.3 %), and chloramphenicol and imipenem (3.1%). The antimicrobial resistance is an important characteristic to select a good probiotic micro-organism, therefore, the isolates resistant to antibiotics were not considered safe for use as probiotic, once the antimicrobial resistance genes can be transmitted to other bacteria including pathogens.

Palavras-Chave: antimicrobial resistance, health, probiotics

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