
Isolation and Identification of Lactic Acid Bacteria From Human Breast Milk

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Resumo

Human breast milk is recognized as the most important postpartum element in the health of neonates, because it contributes to the colonization of the intestinal microbiota, which plays important roles in the gastrointestinal tract, such as nutrient absorption, forming barriers against pathogens and maturation of the immune system. If bacteria with the ability to confer health benefits to human host were isolated from breast milk, they would be considered attractive probiotic organisms, because they fulfill some of the main criteria recommended for human probiotic, such as human origin, a history of safe and adaptation to dairy substrates. Hence, human milk is a suitable source for isolating microorganisms with probiotic potential, so that they can be used in the development of new functional products. In the current study, we isolated and identified lactic acid bacteria in breast milk of human. Thirteen human milk samples were obtained from the Human Milk Bank (HMB) located in Clériston Andrade General Hospital in the city of Feira de Santana, Bahia. The lactic acid bacteria were obtained from six samples of human milk. The isolates were examined by microscopy to determine cell morphology and Gram-staining and were tested for catalase activities. Thirty-three isolates were Gram-positive, catalase-negative cocci. The lactic acid bacteria were isolated and identified by using the assays of fermentation of carbohydrates (glucose, mannitol, sorbitol, and

Referência:

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arabinose), growth at temperatures of 10 ° C and 45 ° C and in saline (6.5% NaCl). The results revealed the presence of Enterococcus (70%), Vagococcus (15%), Lactococcus (9%) and Pediococcus (6%). The genera of Lactococcus, Pediococcus, and Enterococcus are among the micro-organisms used as probiotics. There is a concern regarding the use of the genus Enterococcus as probiotics, since some strains may contain resistance genes to antibiotic used as chemotherapeutic and may transmit resistance to pathogenic bacteria. Nevertheless, the data on the bacteria used as probiotics indicate that they are safe. To define with more certainty the species of isolates the molecular identification will be carry out as well as the selection of strains with probiotic characteristics.

Palavras-Chave: Health, Intestinal microbiota, Micro-organisms

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