

عنوان مقاله:

Safety Assessment of a New Strain of Lactobacillus pentosus (IBRC=۱۱۱۴۳) as a Candidate Probiotic

محل انتشار:

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خلاصه مقاله:

Background: It is believed that the consumption of an adequate amount of live lactic acid bacteria (as probiotic) may improve the health of the host. Many strains of lactic acid bacteria are generally considered to be safe. However, some strains have shown some adverse effects. Objectives: This study aimed to investigate the safety of a new strain of Lactobacillus pentosus (IBRC=۱۱۱۴۳) in Wistar rats. Methods: In this experimental study, male and female Wistar rats (n=۶) were used. A subacute toxicity study (for ۲۸ days) was conducted by oral administration of Lactobacillus pentosus to the animals. In each sex, one group received saline, and the other two groups received the bacteria at doses of 1×10^8 and 1×10^9 Colony-Forming Units (CFU)/rat. Results: No significant alteration in the liver and kidney tissues was seen. However, in both sexes, there were significant differences in urea and creatinine levels between the control and the experimental groups. Some blood parameters (Lymphocyte, red blood cell, hematocrit, and hemoglobin) also showed significant changes in the groups that received the bacteria. Moreover, a significant increase in alkaline phosphatase level was observed in male rats. Conclusion: The results indicate that Lactobacillus pentosus (۱۱۱۴۳) is not entirely safe like other Lactobacillus strains. Therefore, the Lactobacillus pentosus (۱۱۱۴۳) strain may not be the right choice as a probiotic for human consumption.

کلمات کلیدی:

Probiotics, Lactobacillus pentosus, Toxicity tests

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