

## عنوان مقاله:

Investigating the Inhibitory Effect of Probiotic Lactobacillus Species Isolated From Dairy Products

## محل انتشار:

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## خلاصه مقاله:

Background: Lactobacilli are among the most important known probiotic species, and efforts are underway to isolate them from various sources. The beneficial effect of probiotics on health is the main reason for their wide use in dairy products, including yogurt. This research was conducted to isolate and identify Lactobacillus species present in traditional Iranian yogurt. Methods: Thirty samples of traditional yogurt were collected from different regions of the Gachsaran district south of Iran. Bacterial isolations were performed according to the standard international protocols. Following successive culturing on selective media, obtaining typical colonies, and conducting microscopic examinations, five isolates were selected and analyzed for anti-microbial activities against three bacteria and two pathogenic fungi. To confirm biochemical results, three bacterial isolates were selected for molecular analysis and identified by 16S rRNA sequencing. Results: Lactobacillus paracasei JCM10171 with 1384 nucleotides and Lactobacillus plantarum subsp. Plantarum.A1 with 1380 nucleotides were isolated based on investigations. The most anti-microbial activities were related to strain A, and the least effects belonged to strain X3. Moreover, among the applied pathogenic microorganisms, Staphylococcus aureus and the fungus, Aspergillus niger had the highest sensitivity. Conclusion: Probiotic bacteria have highly beneficial effects on the host, and their mechanism of action is through functions such as the production of bioactive compounds. In addition to dairy products, this bacterium has the potential to be isolated from non-dairy products and even plant products, and this issue can be an idea to isolate this bacterium from other sources and even identify new species with probiotic potential.

## کلمات کلیدی:

Probiotic bacteria, Anti-microbial activity, Molecular identification

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