

Original Paper

Isolation of Lactobacilli from Dairy Products and Their Effects on the Main Pathogenic Bacteria in Stomach and Intestine

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Abstract

Background and objective: The effects of lactobacillus Species and their metabolites on dairy products were proved as probiotics on pathogenic bacteria. The aim of this study was to isolate the lactobacillus from dairy product (Yogurt, cheese, milk and whey ...) and to determine the antimicrobial activity against some pathogenic bacteria (*Salmonella typhimurium*, *E.coli*, *Helicobacter pylori*).

Material and methods: Samples of dairy products were collected and were serially diluted in peptone medium. To isolate lactobacillus, diluted sample were plated on MRS Agar medium and incubated at 37°C for 48-72h in anaerobic condition. Identification of the lactobacilli was performed according to their morphological, cultural, physiological and biochemical characteristics. The inhibitory effect of isolated lactobacillus strains were performed against pathogenic bacteria by Agar Well Diffusion Assay and Disc method.

Results: of 50 samples of isolated Lactobacillus from dairy products (including 11 identified Lactobacillus), 19 samples have inhibitory effect on pathogenic bacteria such as *Salmonella typhimurium*, *Escherichia coli* and *Helicobacter pylori*. The most identified strains are *Lactobacillus bulgaris*, *Lactobacillus Salivarius* and *Lactobacillus delbrueki*.

Conclusion: According to this study, some lactobacillus strains isolated from dairy products are useful in the management of diarrhea and other gastrointestinal diseases, and the use of these strains can be useful for prevention and treatment.

Keywords: Lactobacillus, Dairy products, *Salmonella Typhimurium*, *E.coli*, *Helicobacter pylori*

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