



TRADITIONAL DAIRY PRODUCTS AS A VALUABLE SOURCE OF LACTIC ACID BACTERIA WITH UNIQUE PROPERTIES

Jelena M. Lozo^{1,2,*}, ***Milan O. Kojić***², ***Amarela I. Terzić Vidojević***²

¹*University of Belgrade – Faculty of Biology, Belgrade, Serbia*

²*Institute of molecular genetics and genetic engineering, University of Belgrade, Belgrade, Serbia*

* *Corresponding author: jlozo@bio.bg.ac.rs*

Traditional dairy products, white brined cheese, fresh cheese, hard cheese, yogurt, produced in Serbia are made from raw milk, while kajmak is made from boiled milk. These products are made according to a traditional recipe without the use of commercial starter cultures. They represent a rich source of various microorganisms, including lactic acid bacteria (LAB). LAB are known to synthesize antimicrobial compounds, proteolytic enzymes, exopolysaccharides, aromatic compounds and have the ability to aggregate. Some of them may be probiotic strains which, among other things, may have an immunomodulatory effect. Natural LAB isolates, which originate from autochthonous dairy products, often have one or more unique properties that cannot be found in industrial strains, which is important from both a fundamental and an applicative point of view. Isolation, characterization, and identification of these strains, and then the methods of molecular genetics, enabled the discovery of new antimicrobial compounds as well as new mechanisms of their action. These results could be the basis for their potential application in the food, medical and pharmaceutical industries. Among these strains, there are candidates that could be used to formulate new starter cultures to obtain functional dairy products. Although LAB from dairy products has been studied for decades, the novelty is the application of new approaches in the quest for new strains with specific characteristics, such as *in silico* analysis followed by targeted isolation.

Keywords: natural bacterial isolates, antimicrobial compounds, health

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