

GENETICAL IDENTIFICATION OF ANTIBACTERIAL AGENTS PRODUCING MICROORGANISMS AND ANALYSIS OF BACTERIOCINS AND KILLER TOXINS PRODUCED BY THEM

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Research on naturally occurring antibacterial agents has attracted considerable scientific attention worldwide over the last twenty years. Instead of chemical food additives, it is possible to use natural antimicrobials released by lactic acid bacteria and yeast. The pure antimicrobials produced by microorganisms or the microorganisms that produce these substances can be used for food bio-preservation or as antibiotics in medicine and veterinary medicine. Searching for lactic acid bacteria and yeast in natural foods and researching their application possibilities are relevant worldwide. Depending on the environment, microorganisms adapt, resulting in different strains that can produce antibacterial substances with different properties. Such substances are bacteriocins, produced by lactic acid bacteria and killer toxins, produced by yeast [1, 2].

The aim of this work is genotyping of microorganisms, isolated from cottage cheese, which shows antibacterial activity against *S. aureus*, *E. coli*, *M. luteus* and *P. vulgaris* strains. MALDI-TOF MS method was used for this task [3]. *Leuconostoc mesenteroides* lactic acid bacteria and *Kluyveromyces marxianus*, *Debaromyces hansenii*, *Candida zeylanoides*, *Candida inconspicua* yeasts were identified during this work. To analyse what kind of bacteriocins and killer toxins were produced, capillary electrophoresis was used [4]. Detailed results of the work will be presented during the conference.

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