

ABSTRACT

DETERMINATION OF ANTIBIOTIC RESISTANCE IN LACTIC ACID BACTERIA ISOLATED FROM FERMENTED DAIRY PRODUCTS BY PHENOTYPIC AND GENOTYPIC METHODS

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Lactic acid bacteria (LAB) are a large group of fermentative, anaerobe facultative, aerotolerant microorganisms. They represent the fundamental microbial community for a large variety of fermented foods and feed either as natural contaminants or as added starter cultures. These commensal bacteria may function as vectors for the dissemination of antibiotic resistance (AR) determinants via the food chain to the consumer. Because of this, researchs on AR in LAB has gained more attention in recent years. In this study, 168 LAB isolated from fermented dairy products obtained from local markets, bazaar and dairies, also home-made products and AR of isolates evaluated by phenotypic and genotypic methods. As a result of 16S rRNA sequence analysis, isolates were found to be belong to the genus *Lactobacillus* (% 55,95), *Lactococcus* (% 15,48), *Enterococcus* (% 11,90), *Streptococcus* (% 10,12), *Leuconostoc* (% 5,35) and *Pediococcus* (% 1,20). Among the isolated LAB, the most prevalent AR was against the lincomycin (% 25,59), following with tetracycline (% 19,04), meropenem (% 16,66), ampicillin (% 16,16), gentamicin (% 7,14), erythromycin (% 5,35), cyprofloxacin (% 5,35), chloramphenicol (% 4,16) and vancomycine (% 3,06). None of the isolates showed resistance to teicoplanin. Positive amplicons were obtained for resistance genes *erm* (B) (% 4,76), *erm* (C) (%0,59), *tet* (M) (%7,14), *tet* (L) (%2,38), *tet* (K) (%0,59), *aac* (6)-*aph* (2) (%5,95) ve *van* (C) (%1,19) from isolates. As a result of our study, it can be concluded that food borne bacteria may be a reservoir for some antibiotic resistance genes.

Key words: Fermented Dairy Products, Lactic Acid Bacteria, Antibiotic Resistance, Agar Dilution Method, PCR.