

**SOME PROBIOTIC CHARACTERISTICS OF
LACTOBACILLUS SPECIES ISOLATED FROM
FACES OF BREAST-FED NEWBORN BABIES**

L. Mehrnia¹, Z. N. Yuksekdağ^{2*}

¹⁾ Molana Mohtaşem, Asivandzade C., No:115, Behdari, Urmiyeh, Iran

²⁾ Gazi University, Faculty of Science, Dept of Biology, Ankara, Turkey

The present study was conducted to select appropriate microbial strains for the development of potential probiotic. 15 lactobacilli isolated from faces of breast-fed newborn babies were to determine their lactic acid, hydrogen peroxide and exopolysaccharide production, antibiotic susceptibility, antimicrobial activity, resistance to acid and bile tolerance. In order to determine the amount of acid produced by the strains, two different medium were used. Skim milk medium provided a higher acid production (1.05%-2.79%) than MRS medium. The quantities of hydrogen peroxide production of the bacteria ranged between 0.68-3.83 mg/mL and the quantities of EPS produced ranged between 142.99-425.16 mg/L. Disk diffusion method has been used to determine the sensitivity of the strains to various antibiotics. The strains were 100% sensitive against penicillin G, chloramphenicol, and amoxicillin, but 100% resistant against streptomycin and vancomycin. The antimicrobial effect of the lactobacilli strains against the some pathogenic bacteria that can cause disease in infants (*Escherichia coli* ATCC 11229, *Staphylococcus aureus* ATCC 25923, *Listeria monocytogenes* ATCC 7644, *Pseudomonas aeruginosa* ATCC 27853) were 93.3%, 73.3%, 86.6%, and 100%, respectively. The bacteria viability diminished at decreasing acid and increasing bile concentrations and the data is statistically significant.

Keywords: *Lactobacillus*, probiotic, newborn's faces

* Corresponding author: zehranur@gazi.edu.tr