

3rd International Conference on Clinical Microbiology & Microbial Genomics

September 24-26, 2014 Valencia Convention Centre, Spain

Screening for antimicrobial activity of lactic acid bacteria strains isolated from different Romanian food products

Tanase Ana-Maria, Sarbu Ionela, Zamfir Medana, Vassu Tatiana, Stoica Ileana, Chifiriuc Carmen, Ionescu Robertina and Pelinescu Diana University of Bucharest, Romania

Practical and economical importance of lactic acid bacteria (LAB) in food and feed manufacturing was confirmed over centuries. Our study main goal was represented by the selection and characterization of LAB strains isolated from fermented/ unfermented vegetables and dairy products with antimicrobial activity against potential pathogenic microorganisms and microbial strains involved in food degradation. The antimicrobial activity of 282 newly isolated LAB strains was determined against 15 bacterial and yeast strains by agar spot assay method. The correlation of antimicrobial activity with acid organic or bacteriocin biosynthesis was assessed. Bacteriocins produced by LAB strains were characterized in terms of stability at different pH and temperature values. Selected LAB strains were identified using BIOLOG system. LAB strains (208 strains) exhibited antimicrobial activity against one or more microbial strains. For six LAB strains antimicrobial activity was correlated with bacteriocin production and for the rest with organic acid biosynthesis. Bacteriocin produced by two strains presented wide antimicrobial spectrum and high stability at heat shock. LAB strains were preliminary taxonomic identified in genera *Lactobacillus, Enterococcus, Lactococcus, Leuconostoc and Pediococcus*.

Biography

Tanase Ana-Maria has completed her PhD at the age of 31 years from Department of Genetics, University of Bucharest and postdoctoral studies in microbial genetics from University of Agronomic Science and Veterinary Medicine, Bucharest. She is a former FEMS Invited Scientist Holder and currently she is teaching as Assistant Professor, Department of Genetics. She published more than 25 papers in reputed journals or Conference Abstract Book.

geneticuss@yahoo.com