

4th International Conference and Exhibition on **Probiotics, Functional and Baby Foods** November 03-05, 2015 Valencia, Spain

Safety assessment of potential probiotic *Lactobacilli* isolated from brines of naturally fermented Aloreña green table olives

H Abriouel, M C Casado Muñoz, L Lavilla Lerma, B Perez Montoro, A Gálvez and N Benomar
Universidad de Jaén, Spain

Lactobacilli isolated from brines of naturally fermented Aloreña green table olives identified as *Lactobacillus pentosus* by molecular methods showed potential probiotic traits including inhibition of human pathogenic bacteria, survival at low pH (1.5) and bile salt tolerance (3%). *Lactobacillus pentosus* strains showed intrinsic resistance to some antibiotics but they were very sensitive to others. However, molecular methods revealed the absence of transferable antibiotic resistance determinants. In this study, the safety of lactobacilli was supported by the absence of DNase activity, gelatinase activity, haemolysis and biogenic amine production. On the other hand, molecular screening of virulence determinants commonly found in lactic acid bacteria and especially in *Lactobacillus* sp. revealed the absence of such determinants in all strains tested which confirm their safety under *in vitro* conditions. These results suggest that all lactobacilli isolated from naturally fermented Aloreña green table olives are generally free from known virulence traits. Thus, taking into consideration their functional and technological properties besides their probiotic potential, lactobacilli strains could be proposed as good candidates to be used as starter cultures in several fermentations and also as probiotics. However, further in-depth analysis should be done screening the genome of selected strains for new virulence genes or genes coding for undesirable effects.

Biography

Hikmate Abriouel is a Professor of Microbiology at the University of Jaén, Spain. She carried out her PhD thesis at the University of Granada, Spain in 2000, studying the antibacterial effect of enterocin AS-48. She has then spent two Postdoctoral years at the Federal Research Centre for Nutrition (now Max Rubner-Institut) in Karlsruhe, Germany, where she has worked on molecular aspects of lactic acid bacteria isolated from foods. She has experience in Molecular Genetics of Microorganisms and Biotechnology, Antibiotic Resistance and Microbial Ecology with more than 120 publications. Presently, she is supervising a national project about probiotic lactobacilli of food origin.

hikmate@ujaen.es

Notes: