Identification of Lactobacillus pobuzihii from tungtap: A traditionally fermented fish food, and analysis of its bacteriocinogenic potential

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Abstract: Lactic acid bacteria (LAB) were selectively isolated from tungtap, a traditionally fermented fish food product. Five such bacteria with bacteriocinogenic potential were characterized by polyphasic taxonomic approach. The phylogenetic analyses of 16S rRNA gene sequences showed their relatedness to Lactobacillus pobuzihii (>= 99.4% similarity), while biochemical and physiological characteristics revealed significant differences among the isolates. Bacteriocinogenic activity assay against selected bacterial strains: Salmonella typhi MTCC 733, Bacillus cereus MTCC 430, Klebsiella pneumoniae MTCC 109, Escherichia coli MTCC 118 and Bacillus licheniformis MTCC 429 were performed with crude extracts using ethyl acetate as solvent, as well as by solvent and cell free supernatants. The growth inhibition zones were measured after incubation and compared with antibiotics like ampicillin, gentamicin, vancomycin, chloramphenicol and tetracycline. The culture extract of L. pobuzihii showed significant bacteriocinogenic activity against the tested strains.
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