Study on Bacillus spp. Isolated from Fermented Foods and Fish Samples for Some Probiotic Properties.

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ABSTRACT

This study aimed to investigate Bacillus spp. isolated from fermented foods and fish intestines for their probiotic properties including antioxidant and antimicrobial activities. Antioxidant activity was determined using 1,1-diphenyl-2-picrylhydrazyl (DPPH) assay. Antimicrobial activity was evaluated against some bacterial food pathogens using an agar well diffusion method. Among 47 strains of Bacillus spp. tested, two prominent strains i.e. Bacillus strain F24i and B. siamensis strain B44v possessed antioxidant and bacteriocin-like activities. They could inhibit the growth of bacterial food pathogens including methicillin-resistant Staphylococcus aureus, Listeria monocytogenes, Listeria innocua, Bacillus cereus, Escherichia coli O157:H7, Salmonella enterica serovar Typhimurium and Shigella sp.

Keywords: Antioxidant, Bacteriocin, Bacillus

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