

Effect of Marine Stress Starvation Conditions on Survival and Retention of the Properties of Potential Probiotic Bacillus Strains

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Abstract : Pathogenic bacteria are considered to be responsible for several infectious diseases in aquaculture. To overcome diseases in fish culture, the use of antimicrobial drugs as strategy, have been adopted. The use of probiotic was a promising approach to avoid the risk associated to pathogenic bacteria. To find a biological control treatment against pathogens, we undertook this investigation to study the maintain of the probiotic properties of Bacillus sp., such as viability, adhesive ability to abiotic surface, antibacterial activity and pathogenicity/toxicity, under marine starvation conditions. Our data revealed that the tested strains maintained their capacity to inhibit pathogens in vivo and in vitro conditions. These strains maintain their adhesive capacity to polystyrene and do not demonstrate the pathogenic or toxic effect to the host. The obtained results give insight about the effect of starvation conditions on the physiological responses of these Bacillus strains that can be considered as a potential candidate's probiotic.

Keywords : bacillus, probiotic, cell viability, starvation conditions

Conference Title : ICEBB 2014 : International Conference on Emerging Biosensors and Biotechnology

Conference Location : Paris, France

Conference Dates : December 30-31, 2014