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Invitro adhesion and invivo colonization are desired probiotic characters of MBTU PBBM1 Bacillus subtilis isolated from milk

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Present study was to investigate invitro adhesive properties and invivo colonization potentials of *Bacillus subtilis* MBTU PBBM1 in Balb/c mice. Spores of MBTU PBBM1 showed a higher hydrophobicity than their vegetative cells. Vegetative cells exhibit capabilities for autoaggregation and coaggregation with enteric pathogens. Invitro adhesion studies revealed that spores of MBTU PBBM1 were found to be more adhesive on intestinal mucous than their vegetative cells. So spores of MBTU PBBM1 were selected for in vivo colonization studies in Balb/c mice. Stable spore counts in the feces observed even after the 4th day of oral administration of the potential strain reveals the possibility of regermination of the spores in gastrointestinal tract. Measurable spore count of this strain detected in the ileac biopsies confirms colonization capability in small intestine. In vivo studies indicated no observable changes in the total body weight and normal health status in Balb/c mice. In nutshell invitro and in vivo studies revealed that the spores of MBTU PBBM1 have the capability for adhesion and colonization which are desirable probiotic characters.

Biography

T. R. Keerthi has completed her PhD at the age of 31years from Cochin University of Science and Technology, Cochin. She is Associate Professor at Mahatma Gandhi University, Kerala, India and the chief principal investigator of UGC funded major project "Production Purification and characterization of Antagonistic principles of potential Aquaculture Probiotics"[UGC-F.No.37-1/2009(KER)(SR)]. Her area of interest is Probiotics, Marine Microbial Products and Plant Microbe Interactions. She has more than fourteen years of experience in Biotechnological studies, attended trainings and workshops in this field. She has published more than 10 papers in reputed journals and serving as a member of board of studies in reputed Universities. She presented her research findings in reputed International conferences like Asian Congress on Biotechnology "ACB 2011" held at Shanghai, China and International Conference on Advances in Biological Sciences "ICABS 2012" Kannur, Kerala.

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