Evaluation Of Probiotics Properties Of Lactic Acid Bacteria Isolated From Breast Milk And Their Potency As Starter Culture For Yoghurt Fermentation

Abstract
Purpose: The objective of this study was to evaluate probiotic properties of four LAB isolated from breast milk, i.e. Lactobacillus rhamnosus R21, L. rhamnosus B16, Pediococcus. pentosaceus A16 and L. fermentum A17 and their potency as starter cultures for yoghurt fermentation.

Methodology: In vivo evaluation was done by feeding Sprague Dawley rats with standard diet and 109 cells of each LAB for 10 days.

Findings: The four isolates showed good survival both in pH 2 and bile salt for 5 h, and ability to suppress the growth of pathogenic bacteria. In vivo evaluation revealed that the four isolates reduced the number of E. coli in caecum, and increased the number of total LAB, without potency of invasion. They also induce proliferation of splenocytes, and A16 induce secretion of IgA in blood serum.

Value: R21 and B16 were potential as a single starter culture for yoghurt fermentation, while A16 have to be mixed with yoghurt starter cultures. The present finding suggests that the isolates are potential to be used for development of probiotic products.

Author:Lilis Nuraida, Susanti, Nurheni S. Palupi, Hana, Rizka R. Bastomi, Dhieta Priscilia, Siti Nurjanah