

The role of novel probiotics *L. plantarum* and *E. faecium* strains of dadih origin in improving nutritional status of young children

Ingrid S. Surono
BINUS University, Indonesia

L. plantarum IS-10506 and *E. faecium* IS-27526 were isolated from dadih, an Indonesian traditional fermented buffalo milk of West Sumatra. Pilot studies were conducted in apparently healthy young children, a pre-post randomized double blind clinical trial by supplementing each of the probiotic strains for 90 days at 10^{10} cfu/day and 10^8 cfu/day respectively. Each of the strain showed significant increase of body weight after 90 days supplementation. *L. plantarum* IS-10506 in combination with zinc showed significant increase of serum zinc and serum selenium. In *in vivo* previous study, *L. plantarum* IS-10506 revealed brush border repair in rodent model. Taken together, the improvement of bodyweight gain, serum zinc and serum selenium might be due to the integrity of intestine. Moreover, the humoral immune response showed significant increased as shown by increment of fecal sIgA and salivary sIgA, respectively.

Keywords: Novel probiotics, *L. plantarum*, *E. faecium*, Dadih, Nutritional status, Young children

Biography

Ingrid S. Surono has completed her Ph.D. at the age of 39 years from the United Graduate School of Agricultural Sciences, Japan, in 1996. She is an Assoc. Prof. at BINUS University, Jakarta. She serves as the President of Indonesian Scientific Society of Probiotics and Prebiotics (ISSPP), and as Advisory Council of Swedish South Asian Network (SASNET) Fermented Foods. She has published more than 20 papers in reputable journals and serving as an editorial board member of Microbiology and Immunology Journal. She supervised 6 Ph.D., and 3 Pediatrics. She has won Science and Technology Award in 2011 from Indonesia Toray Science Foundation (ITSF), and also was awarded as one of ten best researchers from RISTEK-KALBE Science Award, organized by Ministry of State for Research and Technology, Indonesia and KALBE industry.

gridsw@yahoo.com