

The benefit of probiotic isolate from dadih and zinc supplementation for Pregnant mothers and the outcomes in West Sumatera, Indonesia

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Dadiah is traditional fermented buffalo milk. It's a local food of Minangkabau people and can find in some district in West Sumatera Province, Indonesia, especially in Bukiitinggi, Padang Panjang, Solok, Lima Puluh Kota and Tanah Datar districts. The objective of this study was to evaluate the benefit of intervention dadiah during pregnancy on the nutritional status of infant's birth. This study initiated with extraction DNA from bacterial cultures, Ribosomal DNA amplification and sequencing, analysis of amino acid using UPLC. Intervention was conducted in two district for 138 pregnancy mothers for 6 months. In this study, we have identification spontaneous species probiotics strain of dadiah West Sumatera, there are *Lactobacillus plantarum*, *Lactobacillus casei*, *Lactobacillus durans*, *Leuconostoc pseudomesenteroides*, and *Lactobacillus cactis*. Glutamic acid is the highest quantity of non-essential amino acid in dadiah, about 16.28 mg/g, while Lysine and Leucine are the

highest essential amino acids about 7.22 and 6.42 mg/g dadiah. After 6 months intervention, we found that about 66.7 percent of infants birth weight > 3000 grams found and only 2.1 percent infants birth weight <2500 grams for dadiah group and about 60.0 percent had infant birth weight > 3000 grams and 4.4 percents infants with low birth found in control groups. Most mothers gave birth to a baby with body length of 48-50 cm. In control groups. about 62.2 percent of infants had birth length of 48-50 cm, in dadiah groups 43.8 percent of infant had birth length 48-50 cm and >50 cm, and 40.0 percent of infant had birth length >50 cm. The result of this study shows that there were no significant differences in birth weight and length at birth. It can't complete the intake nutrition of pregnant mother and the benefits both nutrients and probiotic for the outcomes.

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