

**Pengaruh Konsumsi Probiotik *Indigenous Powder Lactobacillus plantarum* Dad-13 pada Anak-Anak Malnutrisi di Sekolah Dasar Belanting, Lombok Timur Terhadap Populasi *Lactobacillus plantarum*, *Bifidobacterium*, *Enterobacteriaceae* dan Short Chain Fatty Acid**

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**Intisari**

Malnutrisi merupakan kondisi ketidak seimbangan antara kebutuhan nutrisi tubuh dan asupan zat gizi. Selain kekurangan zat gizi, infeksi penyakit bakteri patogen merupakan penyebab malnutrisi. Tujuan penelitian ini adalah untuk mengetahui pengaruh konsumsi probiotik *powder Lactobacillus plantarum* Dad-13 terhadap populasi *Lactobacillus plantarum*, *Bifidobacterium*, *Enterobacteriaceae* dan *Short-chain fatty acid*. Desain penelitian yang digunakan adalah *Randomized Double-Blind Placebo-Controlled*. Konsumsi probiotik *powder L. plantarum* Dad-13 ( $1.18 \times 10^9$  CFU/g) dilakukan selama 60 hari pada 40 subjek malnutrisi siswa sekolah dasar yang dibagi menjadi kelompok plasebo dan kelompok probiotik. Hasil penelitian menunjukkan bahwa pada kelompok yang mengonsumsi probiotik *L. plantarum* Dad-13 terjadi peningkatan signifikan jumlah *Lactobacillus plantarum*, dan *Bifidobacterium* ( $p < 0.05$ ) serta menurunkan *Enterobacteriaceae*. Pada kelompok probiotik juga terjadi peningkatan konsentrasi *Short-chain fatty acid* (asetat, propionat, butirat) dan menurunkan pH secara signifikan ( $p < 0.05$ ). Sedangkan kelompok plasebo tidak terjadi perubahan yang signifikan ( $p > 0.05$ ). Kesimpulan dari penelitian ini adalah konsumsi *Lactobacillus plantarum* Dad-13 dapat meningkatkan bakteri baik dan menurunkan *Enterobacteriaceae* serta meningkatkan *Short-chain fatty acid* dan menurunkan pH pada subjek anak-anak malnutrisi di sekolah dasar Belanting, Lombok Timur, Nusa Tenggara Barat.

Kata Kunci : Probiotik *indigenous powder*, Malnutrisi, *L. plantarum* Dad-13  
*Short-chain fatty acid*

**The Effect of Consumption *Indigenous Probiotic Powder Lactobacillus plantarum* Dad-13 of Malnourished Children in Belanting Elementary School, East Lombok on The Population *L. plantarum*, *Bifidobacterium*, *Enterobacteriaceae* and Short-Chain Fatty acids**

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**Abstract**

Malnutrition is a condition of imbalance between the body's nutritional needs and nutrient intake. In addition to lack of nutrients, pathogenic bacterial infections are a cause of malnutrition. The purpose of this study was to determine the effect of consumption of probiotic powder *Lactobacillus plantarum* Dad-13 on the population of *Lactobacillus plantarum*, *Bifidobacterium*, *Enterobacteriaceae* and Short-chain fatty acids. The research design used was *Randomized Double-Blind Placebo-Controlled*. The probiotic consumption of powder *L. plantarum* Dad-13 ( $1.18 \times 10^9$  CFU/g) was done for 60 days in 40 subjects malnourished from elementary school students who were divided into placebo and treatment groups. Results of the study showed that in the group taking probiotic *L. plantarum* Dad-13 had significant increase in the number of *Lactobacillus plantarum*, *Bifidobacterium*, ( $p < 0.05$ ) and decreased *Enterobacteriaceae*. The probiotics are also an increase the concentration of Short-chain fatty acids (acetic, butyric, propionat) and lower the pH significantly ( $p < 0.05$ ). While the placebo group did not occur a significant change ( $p > 0.05$ ). Conclusion of this research is the consumption of *Lactobacillus plantarum* Dad-13 can increase the good bacteria and decreased *Enterobacteriaceae* as well as improving Short-chain fatty acids and pH lowering on the subject of children malnutrition in elementary school Belanting, East Lombok, West Nusa Tenggara.s

**Keywords:** Probiotic indigenous powder, malnutrition, *L. plantarum* Dad-13, *Short-chain fatty acid*