

# Fermented Plant-Based Milk as Halal Functional Food: Bacterial Profile and Health Potential

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**Abstract.** The research on functional food development is driven by consumers' increasing preference for functional food. Fermented milk products, dominated by dairy milk, are starting to switch to plant-based milk. The issue of lactose intolerance in dairy products still matters among Indonesian consumers, which is one of the reasons for the development of plant-based milk. Apart from that, the issue of halal is one of the considerations of the Indonesian people, mainly Muslim consumers. The obligation to consume halal food in Muslim communities encourages the development of halal food research. This literature review aims to review fermented vegetable milk, namely kefir and yogurt, and the bacterial profile and health potential they produce. The most frequently used plant-based milks are soy and corn, with and without adding other ingredients. The bacteria most commonly found in fermented milk are *Lactobacillus* sp. Plant-based fermented milk has the potential to be a functional food because it can stimulate the immune response, increase mucosal immunity activity, and reduce cholesterol, obesity, and hypertension. In addition, adding other ingredients to manufacture plant-based fermented milk also has a positive impact, especially in maintaining milk quality. Plant-based fermented milk has the potential to be developed on a broader scale because it is free from the issue of lactose intolerance, which many people avoid. Apart from that, there are still opportunities to use other ingredients to improve the quality and physiologic function.

**Keywords:** vegetable milk, fermentation, yogurt, kefir, plants