RICE-JUICE IS A PROMISING VEHICLE TO DELIVER PROBIOTIC *LACTOBACILLUS* SP. F213 FOR HUMAN HEALTH

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ABSTRACT

Lactobacillus sp F213 is a promising probiotic strain, which has been intensively studied in our laboratory recently. Varies types of plant based foods are common foods consumed by the people in the tropic region, especially in Indonesia. This circumstance offers opportunity to generate a novel plant-based foods as a vehicle in delivering the probiotic for human. This research was aimed to develop a suitable food for delivering probiotic *Lactobacillus* sp. F213 to improve human health. To this end, a fermented rice (*tape*-like) was selected based upon its acceptance by Indonesian. *Amylomyces rouxii,* a specific fungus isolated from tape, was able to saccharify, liquify steamed rice to produce a moist *tape*-like fermented rice. Simultaneously, the fungus also produces lactic acid, resulting a fermented rice characterized by the sweet and sour taste mostly similar to traditional Indonesian *tape ketan* but without containing alcohol. The *A. rouxii* NS7 was co-cultured with *Lactobacillus* sp. F213 to produced probiotic containing fermented rice. The *tape-like* fermented rice contained 10^9 cfu/g of lactic acid bacteria after completion the fermentation and a number of 10^8 cfu/g was maintained after stored at 5°C for 10 days. The combination of *A. rouxii* NS7 and *Lactobacillus* sp. F213 produced an acceptable rice-juice, therefore this novel product is promising vehicle to deliver probitic *Lactobacillus* sp F213 for human application.

Keyword: rice juice, probiotic, *Lactobacillus* sp. F213, *A. rouxii* NS7

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