

ABSTRACT

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Identification, Characterization, dan Molecular Identification of Antimicrobial Producing *Lactobacillus kunkeei* from Honey Bee *Apis mellifera*'s Intestinal Tract

(xiii + 55 pages: 6 Figures; 7 Tables; 8 appendices)

Honey is one of natural products that has been known for a long time for its antimicrobial activities. The synbiotics of lactic acid bacteria in the honey bee's intestinal tract was eventually discovered to be responsible of its antimicrobial activities. Endogenous lactic acid bacteria in honey bees stomach usually made up from *Lactobacillus* and *Bifidobacterium*. In Indonesia, the informations about *Lactobacillus* sp. from *Apis mellifera* honey bee are still severely limited. Therefore, this research aims for the isolation of antimicrobial-producing *Lactobacillus* sp. from Indonesian *Apis mellifera*'s intestinal tract. *Lactobacillus kunkeei* was discovered to be one of predominant strain isolated from honey bee *Apis mellifera*'s intestinal tract. The isolate shows to be able to acidify the medium pH up to 4,3. Furthermore, when *E. coli* and *S. aureus* were plated before the introduction of *L. kunkeei*, inhibition zone was markedly observed. This indicates the *Lactobacillus* role on honey's antimicrobial activities.

References: 40 (1991-2015)

Keyword: Honey bee, *Apis mellifera*, identification, characterization, *Lactobacillus kunkeei*, *E. coli*, *S. aureus*