ABSTRACT

EFFECT OF FERMENTATION PROCESS ON *Centella asiatica* LEAVES BY *Acetobacter tropicalis* InaCC B374 TOWARDS THROMBOLYTIC ACTIVITY

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Background: Thrombolytic agents are plasminogen activators that can be used to break down fibrin into fibrin degradation product in cardiovascular therapy. Thrombolytic agents can be sourced from microorganisms including *Acetobacter tropicalis* InaCC B374 and sourced from plants including *Centella asiatica.* Both sources of thrombolytic agents are combined through a fermentation process to enhance their therapeutic effect. **Objectives:** This research aimed to find out the increase in thrombolytic activity from the fermentation product of *Centella asiatica* by *Acetobacter tropicalis* InaCC B374 in the variation of fermentation time. **Methods:** *Centella asiatica* fermentation process was carried for 24, 48, and 72 hours at 30°±1°C. The thrombolytic activity was determined by the clot lysis method. **Results:** The results of the thrombolytic investigation showed that there was an increase in thrombolytic activity during the fermentation process. *Centella asiatica* fermented for 72 hours showed the highest thrombolytic index (82,03) as compared to exhibited by *Centella asiatica* (37,39) and *Acetobacter tropicalis* InaCC B374 (37,68). **Conclusion:** This study revealed that the fermentation process *of Centella Asiatica* by *Acetobacter tropicalis* InaCC B374 significantly increases thrombolytic activity.

Keywords: thrombolytic activity, *Acetobacter tropicalis*, *Centella asiatica*, clot lysis, fermentation.