

ABSTRACT

Thrombolytic Activity of *Centella asiatica* Leaves Fermented by *Acetobacter aceti* FNCC 0016 using In-Vitro Clot Lysis Method

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Background: Thrombolytic agents are plasminogen activators that dissolve blood clot that caused cardiovascular disease (CVD). Thrombolytic agents can be obtained from microorganism such as *Acetobacter aceti* FNCC 0016 and from plants such as *Centella asiatica*, these thrombolytic agents are combined using the fermentation method. Fermentation can improve the pharmacological properties of plants through modification of their metabolites. Fermentation mediated by microorganism has been shown to enhance the therapeutic efficacies of some plants. **Objectives:** This research aimed to determine the increase of thrombolytic activity from the fermentation product of *Centella asiatica* by *Acetobacter aceti* FNCC 0016. **Methods:** Fermentation was carried out at various times (0 h, 24 h, 48 h, 72 h) at a temperature of $30\pm 1^{\circ}\text{C}$. The thrombolytic activity was determined using in-vitro clot lysis method. **Result:** The results showed a significant increase in thrombolytic activity after 72 hours of fermentation with thrombolytic index of 91,49 compared to *Centella asiatica* extract (42.93) and *Acetobacter aceti* FNCC 0016 (19.99). **Conclusion:** Thus, *Centella asiatica* that has undergone a fermentation process with *Acetobacter aceti* FNCC 0016 can increase the thrombolytic activity.

Keywords : Thrombolytic Agent, *Acetobacter aceti*, *Centella asiatica*, Fermentation, Clot Lysis