Abstract

Influenza A virus causes influenza, which is an acute respiratory disease that affects people worldwide. One of the challenges of current influenza treatment is the distribution into isolated areas. Therefore, alternative methods that are widely available such as herbal medication are researched. *Curcuma heyneana* (Temu giring) is known to contain curcuminoids, such as demethoxycurcumin, and heyneanone which exhibit potential antiviral properties. Therefore, this study aims to investigate the antiviral effect of *C. heyneana* on IAV-infected A549 cells. Standardization of phenolic content utilizes gallic acid assay. Cytopathic effect analysis is performed through observation of host cell morphological changes. Gene expressions of *M*, *IL6*, and *TNF* are quantified using qRT-PCR after 72 hpi. Results show that samples treated with *C. heyneana* show a downregulation trend of the expression of all three genes. These findings contribute to current understanding to provide *C. heyneana* as a key ingredient for influenza treatment. Further research is recommended to explore the effects of specific compounds such as heyneanone in regulating viral and inflammatory pathways during IAV infection.

Keywords: Influenza, *Curcuma heyneana*, curcuminoid, demethoxycurcumin, heyneanone