ABSTRACT

Inhibition Activity of Methanolic Extract of *Brucea Javanica* (L.) Merr. Fruit Against Influenza A Virus H5N1 (Avian Influenza)

Avian influenza A H5N1 known as highly pathogenic avian influenza (HPAI) which continues to cause human disease with high mortality and become the threat of a pandemic. Recent investigation has been found some resistance of antiviral agent used against H5N1. This has raised concern to found new antiviral agents to fight and decrease the number of death caused by this virus. Natural products has been discovered as a potential resources of novel antiviral agents. *Brucea Javanica* (L.) Merr., is a medicinal plant which has been reported to have an antiviral activity against some viruses. This research has been done to investigate the activity of methanolic extract of *Brucea javanica* (L.) Merr. fruit against the H5N1 virus which inoculated in embryonated chicken egg. In this model, the virus and extract were mixed and injected into the allantoic cavity of embryonated chicken egg. The concentration of extract used in this research are 62.5 µg/ml, 125 µg/ml and 250 µg/ml. The virus titer in the allantoic fluid was titrated by the hemagglutination assay after incubation for 72 h at 37°C and 12 h at 4 °C. It has been found that extract with the concentration 62.5 µg/ml, 125 µg/ml and 250 µg/ml decreased the hemagglutination titers as compared to non treated group and shown inhibition about 6.1%, 42.4%, and 78.8% respectively. This study showed that methanolic extract of *Brucea javanica* (L.) Merr. fruit has antiviral activity against avian influenza H5N1 virus in this models.

Keywords : Influenza A virus, H5N1, Avian influenza, antiviral, *Brucea javanica* (L.) Merr.