ABSTRACT

Activity of *Vitex trifolia* Leaves Extract as Antiviral for H5N1 (Avian Influenza)

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Since 2003 until May 2015, it is reported 840 influenza A (H5N1) cases in humans which caused 447 deaths worldwide. Due to the resistance of current antiviral drugs used to treat H5N1 infection, new antiviral is strongly needed. Many studies have reported antiviral activity of some bioactive compound from plants against several viruses. This raised a concern to utilized plants as a source of new antiviral agents. *Vitex trifolia* is one of Indonesia medicinal plants which have been reported to have several biological activities. In this study, the inhibitory activity of *Vitex trifolia* leaves extract against the H5N1 viruses was tested using two methods, hemagglutination (HA) assay and neuraminidase (NA) inhibition assay. Neuraminidase activity was conducted using MUNANA assay. In HA assay, it is found that at concentration 1000 µg/mL, the extract showed 60.67% of titer reduction. From the NA inhibition assay, it is found the IC_{50} value is 82.62 µg/mL. Results concluded that *Vitex trifolia* leaves extract could inhibit the H5N1 viruses with the mechanism as neuraminidase enzyme inhibitor. Thus, *Vitex trifolia* expected to be a source of new antiviral agents.

Keywords: *Vitex trifolia,* H5N1, antiviral, neuraminidase inhibition