

## ABSTRACT

### **Anti-Hepatitis C Virus Activity of *Sida rhombifolia* L. Leaf Extract**

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*Sida rhombifolia* L. is a plant of the Malvaceae family which has been used as a traditional medicine for curing jaundice. Previous research reported that *S. rhombifolia* L. seed extract possessed hepatoprotective. This study aimed to determine the antiviral activity of *S. rhombifolia* against hepatitis C virus. In vitro anti-viral activity was conducted to ethanol, n-hexane, dichloromethane, and methanol extracts of *S. rhombifolia* L. leaves. Various concentrations of extracts were inoculated onto the Huh7it infected cells. Cytotoxicity analysis was evaluated by MTT (3-[4,5-dimethylthiazol-2-yl]-5-[3carboxymethoxyphenyl]-2-[4-sulfophenyl]-2H-tetrazolium) assay. The result was obtained that extracts of ethanol, n-hexane, dichloromethane, and methanol of *S. rhombifolia* L. possessed strong activity against HCV with IC<sub>50</sub> value of  $2.0 \pm 0.6$  µg/ml;  $1.5 \pm 0.2$  µg/ml;  $0.5 \pm 0.1$  µg/ml;  $0.8 \pm 0.8$  µg/ml, respectively. The cytotoxicity test showed no toxic effect with CC<sub>50</sub> value of ethanol extract was  $387,9 \pm 8,6$  µg/ml. Those results suggest that ethanol extract, n-hexane, dichloromethane, and methanol of *S. rhombifolia* L. leaves are active as anti-hepatitis C virus.

**Keywords:** *Sida rhombifolia* L., hepatitis C virus, cell culture