

## ABSTRACT

### **In Vitro Antiviral Activity of 96% Ethanolic Extract, *N*-hexane Extract and Fractions from Kemuning Leaves (*Murraya paniculata* (L.) Jack) against Hepatitis C Virus**

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*Murraya paniculata* (L.) Jack is a plant of Rutaceae's family which is commonly called kemuning. Previous preclinical and clinical studies showed that *M. paniculata* (L.) Jack leaf extract possess hepatoprotective activity because it can reduce levels of SGOT and SGPT. In the present study, ethanolic extract, *n*-hexane extract and fractions (dichloromethane and methanolic) of *M. paniculata* (L.) Jack were tested in vitro study using Huh7it cells against hepatitis C virus. The results indicated that ethanolic extract, *n*-hexane extract, dichloromethane fraction and methanolic fraction of this plant mediated antihepatitis C virus activity with the IC<sub>50</sub> value of as  $42.29 \pm 4.53 \mu\text{g/mL}$ ;  $11.44 \pm 4.42 \mu\text{g/mL}$ ;  $1.91 \pm 0.42 \mu\text{g/mL}$ ; and  $2.26 \pm 0.43 \mu\text{g/mL}$ , respectively. A cytotoxicity test was conducted and the results showed the CC<sub>50</sub> of the ethanolic extract was  $76.35 \pm 6.67 \mu\text{g/mL}$ . It indicated a moderate toxic of ethanolic extract. Further study were needed to evaluate the active compounds of *n*-hexane extract and fractions (dichloromethane and methanolic) which possessed antiviral activity.

**Keywords:** *Murraya paniculata* (L.) Jack, kemuning leaf extract, antiviral, hepatitis C