

ABSTRACT

Hepatitis C virus (HCV) is a global health concern which is responsible for most of the liver diseases. According to WHO (2014), patients with hepatitis C is estimated that more than 185 million people, every year there are 350,000 people died. Most (80%) of patients experiencing acute hepatitis C will develop into chronic hepatitis C who are also generally asymptomatic. Currently the standard treatment for chronic hepatitis C was performed using pegylated interferon alpha and ribavirin. Several studied of the *Ficus* plant leaves known have the ability pharmacology namely: antiinflamatsi, anti-tumor, anti-herpes simplex virus (HSV-1). A research was shown that the ethanol extract of *Ficus fistulosa* leaves have HCV inhibitory on entry phase. However, the identification of antiviral activity of ethanol extract of leaves of *Ficus fistulosa* in the entry phase of HCV has not been done. This study used a virus strain of genotype 2a JFH1 and cell line Huh7it. HCV entry mechanisms to hepatocyte by several steps: binding, post-binding and endocytosis. HCV entry phase mechanisms is a complex process involving many factors. It showed that the ethanol extract of leaves of *Ficus fistulosa* have IC₉₀ values of 57 µg/ml. At binding step the percent of inhibition extract is (23.50 ± 6.22)%. While at the post-binding is (89.58 ± 0.8)% and the phase endocytosis is (67.66 ± 2.95)%. The data showed that ethanol extract of leaves of *Ficus fistulosa* have inhibition activity on binding step, post-binding step and endocytosis. The highest inhibition is happened on post-binding step and the lowest inhibition is on binding step. The information of ethanol extract of *Ficus fistulosa* leaves at every stage of the entry phase would greatly help further study on the molecular to identify active compounds that involved in those stages.

Key words : *Ficus fistulosa* extract, HCV, Inhibition, binding, post-binding, endocytosis