

## ABSTRACT

### STUDY ANTI-HCV ACTIVITY AGAINST JFH1a VIRUS FROM *MELICOPE GLABRA* AND *LUVUNGA SCANDENS* PLANTS GROWN IN BALIKPAPAN BOTANICAL GARDEN, EAST BORNEO

Rosyida Paramitha

Hepatitis C has been reported as a major health problem that cause liver cirrhosis which can lead to hepatocellular carcinoma and death. The combination therapy of pegylated interferon alfa (PEG-IFN $\alpha$ ) with ribavirin has limited benefits due to its significant side effects and high cost. Medicinal plants provide unlimited opportunities as a new drugs for treatment of HCV because of its great substances. In previous study, *Ruta angustifolia* from Rutaceae family showed a potential activity against J6/JFH1 virus on hepatocyte cell Huh7it. *Melicope glabra* and *Luvunga scandens* were chosen by chemotaxonomy method because they are from Rutaceae family. Hexane, dicloromethane, and methanol were used to extract the leaves and stembarks of *Melicope glabra* and *Luvunga scandens*. The result showed that the hexane and dicloromethane extract of *Luvunga scandens* leaves have potential activity in inhibiting the viral infection of cells with IC<sub>50</sub> value 4.08  $\mu$ g/ml and 14.15  $\mu$ g/ml respectively. Phytochemical screening using thin layer chromatography of active extract showed that it contained the compounds known as alkaloids, terpenoids, and flavonoids. Further studies of compounds that have anti-hepatitis C activity are needed.

**Keywords** : *Melicope glabra*, *Luvunga scandens*, Rutaceae, antiviral hepatitis C, JFH1a, *in vitro*, hexane extract, dicloromethane extract, leaves, stembarks.