ABSTRACT

THE POTENTIAL OF YELLOW BAMBOO SPROUT *(BAMBUSA VULGARIS)* AS ANTI HEPATITIS C VIRUS

Background: More than 350.000 peoples per years dead because of Hepatocellular Carcinoma caused by Hepatitic C Virus. Until now, there was still no vaccine to prevent the disease, Ribavirin and PEG-IFNα combination treatment show resistance if it was used in a long period and also expensive. Indonesia had many kind of plants, and Indonesian people used that's plants for medicine.

Objective: This study aimed to evaluate the potential of *Bambusa vulgaris* as anti Hepatitis C virus

Method: The species of *Bambusa vulgaris* was identified in Purwodadi Botanical Garden. The sprouts were collected to be extracted using ethanol 96%. The extract was then diluted with solvent at 100, 30, 10, 3 ug/ml concentration twice (duplo). The antivirus activity was determined by transfection of JFH1a virus and extract mixture into Huh7 cell culture. The infected cells were counted using kati-kati App. The result were analyzed with SPSS to determine antivirus activity.

Result: From 50 g of dry powder, 20.66 g of dry extract was obtained, so the yield was 41.32%. Than cells Huh7 were cultured, beside that viruses JFH1a diluted with extract in each concentration. Than extract and viruses mixture put into the ready cells culture. The infected cells were seen as brown dots on inverted microscope enlarged with digital camera. The infected cells were counted using kati-kati App, and the inhibitory concentrations were measured. The inhibitory concentration at 100 µg/ml concentration was 57.44%, at 30 µg/ml concentration was 40.07%, at 10 µg/ml concentration was 33.40% , at 3 µg/ml concentration was 29.77%. The antivirus activity (IC50) was measured using SPSS, and IC50 result for *Bambusa vulgaris* extract with ethanol 96% solvent was 63.103 µg/ml. its means at 63.103 µg/ml concentration, 50% virus were inhibited.

Conclution: the extract yield was 41.32%. at 100 µg/ml concentration, the inhibition percentage was 57.44%. at 30 µg/ml concentration, the inhibition percentage was 40.07%, at 10 µg/ml concentration, the inhibition percentage was 33.40% In this experiment, the at 3 µg/ml concentration, the inhibition percentage was 29.77%. the IC50 of *Bambusa vulgaris* extract using ethanol 96% solvent was 63.103 µg/ml.

Keyword: Hepatitis C virus, JFH1a, Huh7 cell, *Bambusa vulgaris*, Extraction.