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POTENCY OF A MARINE SPONGE FROM THE GENUS *Stylissa*

AS ANTI HEPATITIS C AGENT

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ABSTRACT

Marine sponges have shown potential as a source of many bioactive metabolites. Our previous

study on Indonesian marine sponges indicated that this organism possessed promising antiviral activity. The aim of this study was to screen antiviral activity of marine sponge extract from the genus *Stylissa* and its fractions against hepatitis C virus (HCV).

Identification of

metabolites in the active fractions was also carried out as well as investigation of the mode of action of the extract. The

results showed that the extract inhibited the growth of HCV at IC

50

of 4.4 µg/mL. The time of addition experiment revealed

that the extract act at the post entry step. Bioassay-guided fractionations revealed two active fractions, namely fractions SF7

and SF8 which gave 99.3% and 86.4% inhibition, respectively, at a concentration of 50 µg/mL.

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¹H NMR and GC-MS

analyses indicated the presence of a mixture of saturated and unsaturated fatty acids in the active fractions.

Key words: Marine sponge, *Stylissa*, hepatitis C virus, fatty acids