ABSTRACT

Effect of Wood Mushroom (*Coriolus versicolor*) on Phagocytosis Response Cause by *Staphylococcus aureus*

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Indonesia as a tropical country is a suitable place for the growth of bacteria that cause some infectious diseases, such as *Staphylococcus aureus*. Bacterial growth should be followed by the improvement of the human immune system so that the morbidity can be avoided. Currently, several studies have found a polysaccharide in wood fungus named *Coriolus versicolor* which can boost the immune response by its phagocytic activity. This study aimed to determine the effect of *C. versicolor*'s extract on phagocytosis response due to *Staphylococcus aureus*. This study was an experimental study to test the response of phagocytosis against Staphylococcus aureus infection in vivo in mice (Mus musculus) by observing the phagocytic cells in the intraperitoneal fluid. The samples were divided into 8 groups; five control group (K0, KP1, KP2, KP3, K) and three treatment groups (P1, P2, P3). K0 not given treatment. In KP1, KP2, and KP3 is given only the extract, while the P1, P2, and P3 given the extract and also bacteria. K- only given bacterial infection. The number of bacteria *Staphylococcus aureus* is provided $2x10^5$ cfu / ml 0.2 ml and dose of extract given was at 25, 50, and 100 mg / kg BB. Response phagocytosis is the number of active phagocyte cels that eat bacterial cells in 100 phagocytes are expressed in percent. In one way ANOVA test, the results obtained was 0.000 ($p < 0.05$) means that there is a significant difference in mean response phagocytosis. While at the Duncan test results obtained are the average value of the phagocytic response K0 is above K-, KP1, KP2, and KP3, but under group P3, while P1 and P2 have equivalent results or insignificant In the study proves that the higher the dose of extract of *C. versicolor* is used, the higher the phagocytic response in infected mice (P1, P2 and P3), whereas uninfected mice (KP1, KP2, and KP3) the extract lowers phagocytic response

Keywords: *Coriolus versicolor*, Phagocytosis Response, *Staphylococcus aureus*