

SUMMARY

Rheumatoid Arthritis (RA) is a chronic inflammatory syndrome that causes damage to the articular joints. The treatment of rheumatoid arthritis with non-steroidal anti-inflammatory drugs (NSAIDs) often results in severe side effects, one of which is gastrointestinal disturbances such as nausea, vomiting, and stomach ulcers. *Ganoderma lucidum* is a type of mushroom that has medicinal properties. *G. lucidum* has been proven to have great potential for the treatment of inflammatory diseases. The main group of bioactive compounds isolated from *G. lucidum* is triterpenoids. Bioactive compounds in *G. lucidum* can be extracted using the maceration method. Research related to disease and the feasibility or safety testing of a medicinal substance is conducted using experimental animals in the form of male Wistar white rats. The animal model developed for RA testing is animals induced with Complete Freund's Adjuvant (CFA). CFA induction will cause the formation of an inflammatory condition.

This study aims to observe and determine the most effective dose of ethanol extract of *G. lucidum* on IL-1 β and monocytes in male Wistar white rats. The benefit of this research is to observe the anti-inflammatory potential of *G. lucidum* so that it can be developed into a natural anti-inflammatory drug. This study uses two variables, namely the independent variable and the dependent variable. The independent variable in this study is the variation in doses of *G. lucidum* extract. The dependent variable in this study is the levels of IL-1 β and monocytes in rat samples. The main parameters in this study are the levels of IL-1 β and monocytes in rats. The supporting parameter is the weight of the rats. The research was conducted using a completely randomized design consisting of 6 treatments. Healthy Control (only given aquadest), Negative Control (induced with CFA 0.1 mL and given aquadest), Positive Control (induced with CFA 0.1 mL and given Sodium Diclofenac solution 0.012g.200gBB⁻¹+ CMC 0.5%), Treatment 1 (induced with CFA 0.1 mL and given *G. lucidum* extract solution 250mg.kg⁻¹BB+DMSO 0.5%), Treatment 2 (induced with CFA 0.1 mL and given *G. lucidum* extract solution 500mg.kg⁻¹BB+DMSO 0.5%), Treatment 3 (induced with CFA 0.1 mL and given *G. lucidum* extract solution 750mg.kg⁻¹BB+DMSO 0.5%). Data analysis was performed using ANOVA at a 5% error rate, and the results were significant. Further testing was conducted using post hoc DUNCAN at a 95% confidence level. The result shows that the administration of *G. Lucidum* ethanol extract has a significant effect on IL-1 β and monocyte levels. The most effective dose to decrease the monocyte levels is 500mg.kg⁻¹BB. The most effective dose to decrease the IL-1 β levels is 250mg.kg⁻¹BB.

Keyword: *antiinflammation, Complete Freund Adjuvant, Ganoderma lucidum, IL-1 β , Monocyte.*