

Antimicrobial Activity and Metabolite Analysis of Ganoderma boninense Fruiting Body

ABSTRACT

Ganoderma, a genus of polypore white rot fungus with some species such as *G. lucidum* and *G. sinense* have been reported with remarkable biological activities and used as traditional medicine for long. On the other hand, *G. boninense* is recognized as an important oil palm pathogen which causes intensive losses in oil palm industry. Hence, this study reveals the potential of antimicrobial properties of *G. boninense* fruiting bodies extract using different solvents. Ethyl acetate extract demonstrated a broad spectrum pathogens inhibition activity, followed by hot water > acetone > methanol > ethanol > chloroform. Ethyl acetate extract also shown the strongest growth inhibition against *Proteus mirabilis* (14.20 ± 0.40 mm). Lowest MIC (0.625 mg/ml) was observed in methanol extract against Coagulase-Negative Staphylococci. LC-MS analysis identified the extracts of *G. boninense* putatively contains natural occurring derivatives of alkaloid, fatty acid, heterocyclic compounds and glycosides. *G. boninense* may potential as the future drug. However, further investigation is required to understand this fungus in depth.