PROXIMATE COMPOSITION AND FUNCTIONAL ACTIVITIES OF *Polyporus grammocephalus* MYCELIA

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ABSTRACT

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Polyporus grammocephalus is a mushroom that is commonly found on fallen logs. This study determined the proximate and mycochemical compositions and functional activities such as antioxidant, antibacterial, embryotoxic, teratogenic and cytotoxic effects of *P. grammocephalus* mycelia. Mycelia of *P. grammocephalus* contain 9 mycochemicals (essential oils, alkaloids, coumarines, anthraquinones, phenols, flavonoids, steroids, tannins and terpenoids), 11.75 % ash, 10.59% crude protein and 6.79% crude fiber. Ethanol extract exhibited radical scavenging activity with a mean of 64.57% and had a total phenolic content of 42.13 mg GAE/g. However no inhibitory activity against two bacterial pathogens was recorded. The mycelia extract showed embryotoxic and teratogenic effects in zebrafish. Aside from delayed growth, morphological abnormalities were also observed like C-shaped larvae with pericardial edema, C- shaped larvae with deformed yolk and bent tail as teratogenic effect. Based on the brine shrimp lethality assay, *P. grammocephalus* mycelia extract was non-toxic (LC50 value of 6569.328).

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