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MYCOCHEMICAL SCREENING, PROXIMATE ANALYSIS AND ANTIMICROBIAL ACTIVITY OF *Pleurotus pulmonarius* (Fr.) Quel

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ABSTRACT

Mushroom had long been used for medical and food purposes. It is now recognized due to its contribution of the beneficial health effects to humans, in the form of vitamins, minerals, food and drugs, and medicines. This study was conducted to screen *Pleurotus pulmonarius* (Fr.) Quel for the presence of different mycochemicals: determine its nutritional content based and proximate analysis, and evaluate its antimicrobial activity. For the mycochemical screening, aqueous extract of the mushroom was used to determine the presence of alkaloids, cardiac glycosides, flavonoids, saponins, steroids, tannins and terpenoids. To determine the nutritional content, dried fruiting bodies of *P. pulmonarius* were analyzed based on the guidelines of the Association of Official Analytical Chemist (AOAC, 2002). Crude protein, crude carbohydrate, crude fat, crude fiber, ash and moisture content were evaluated. Mycelial disc of *P. pulmonarius* were used to evaluate its antimicrobial property against three microbial pathogens: *Escherichia coli*, *Staphylococcus aureus* and *Candida albicans*. Mycochemical screening results showed that aqueous extract of *P. pulmonarius* contains alkaloids, saponins, cardiac glycosides and terpenoids. However, tannins, steroids and flavonoids were not detected in the extract. The immobilized mycelial disc of *P. pulmonarius* has no antimicrobial property against the three microbial pathogens (*E. coli*, *S. aureus* and *C. albicans*). Results from proximate analysis showed that *P. pulmonarius* contains different amounts of crude protein, crude carbohydrates, crude fat, crude fiber, ash and moisture showing that *P. pulmonarius* is a nutritious mushroom that can be beneficial to humankind.

Keywords: *Pleurotus pulmonarius*, Mycelial disc, Mycochemical, Proximate Analysis, Antimicrobial