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## Characterization of *Pleurotus florida* Mycelia as a Functional Food

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**Purpose:** Functional foods are food products that can provide beneficial physiological effects beyond basic nutrition. As functional foods, mushrooms are promising sources of several nutritional and health-beneficial compounds, including proteins, minerals, dietary fibers, and myconutrients. *Pleurotus florida* as the most widely cultivated mushroom, has a large-scale market for human consumption particularly its fruiting bodies, however, studies on its mycelia are scarce. The study aimed to characterize the mycelia of this species as a functional food.

**Methods:** The nutrient composition; dietary fiber and its fermentability in vitro, myconutrients, and antioxidant activity of the mycelia were analyzed using standard methods.

**Results:** Findings showed that its mycelial powder (MP) had a moisture content of  $18.13 \pm 0.03$  g/100g; ash of  $12.2 \pm 0.06$  g/100g; protein of  $5.03 \pm 0.09$  g/100g; fat of  $0.1 \pm 0.00$  g/100g, and carbohydrates of  $61.4 \pm 0.12$  g/100g. Results also revealed that MP is an excellent source of dietary fiber ( $54.54 \pm 3.03$  g/100g) and contained high amounts of insoluble ( $21.72 \pm 0.93$  g/100g) and soluble ( $33.14 \pm 1.78$  g/100g) fiber. MP also produced significant amounts of short chain fatty acids after fermentation in vitro simulating conditions in the colon; acetate ( $1.92 \pm 0.05$  mg/g), propionate ( $0.89 \pm 0.03$  mg/g) and butyrate ( $0.31 \pm 0.03$  mg/g). Mycelial powder contained myconutrients such as phenolics ( $1.58 \pm 0.06$  mg GA/g) and flavonoids ( $0.74 \pm 0.00$  mg RHE/g) that exhibited antioxidant activity (DPPH - 33.85%, FRAP -  $1.30 \pm 0.06$  mg Trolox/g, ABTS -  $0.75 \pm 0.00$  mg Trolox/g sample).

**Conclusions:** In conclusion, mycelia may be considered as a potential functional food/ingredient and may be utilized by the food industry, thus contribute in the prevention for risk of chronic diseases and in the maintenance of human health.