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CP096
AGARICUS BLAZEI MURRIL- A POTENTIAL INGREDIENT FOR NUTRACEUTICAL OUTCOMES

Oludemi Taofiq[1,2,3], Francisca Rodrigues[4], Lillian Barros[1], Ricardo C. Calhelha[1], Ana M. González-Paramás[3], Maria F. Barreiro[1,2], M. Beatriz P.P. Oliveira[4], Isabel C.F.R. Ferreira[1]

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The concept of bio-economy has emerged to overcome some sustainability challenges, and this involves conversion of agricultural residues and waste streams into high value-added products that can be utilized as ingredients for several bio-based industrial processes, delivering both economic growth, scientific interest and a better environment. The present work was carried out to re-utilize discarded *Agaricus blazei* Murill. Its nutritional composition was evaluated and ethanolic extracts were prepared by Soxhlet extraction to be further evaluated for their anti-inflammatory, anti-tyrosinase and cytotoxic properties against different tumor cell lines (SRB assay). MTT and LDH assays were also used to determine cell viability and cell death respectively in Caco-2 and HT29 cells lines. Essential nutrients such as carbohydrates, proteins and fat, were found; twenty fatty acids were detected, sugars (mannitol and trehalose), α-tocopherol and oxalic acid were also present. The extracts, up to 100 µg/mL, were able to maintain viability of Caco-2 and HT29 cells. The extracts also presented anti-tyrosinase activity (EC_{50} 1.33±0.02 mg/mL) and with no toxicity in tumor cells. The results obtained suggested that the extracts obtained from *Agaricus blazei* Murill residues can be utilized as an inexpensive and sustainable source of nutraceutical and functional food ingredients.

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[1] Heleno, S.A.; Prieto, M.A.; Barros, L.; Rodrigues, A.A.; Barreiro, M.F.; Ferreira, I.C.F.R. *Food Chemistry* **2016**, *197*, 1054-1063.