

POSTER 189

Production and extraction of psilocybin and psilocin from *Psilocybe* spp. mushrooms

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Resumo

Introduction: Psychedelic mushrooms refer to a wide range of fungi from *Psilocybe* genus, which contain compounds such as psilocybin (4-phosphoryloxy-N, N-dimethyltryptamine) and psilocin [1]. Despite their use as recreational drugs [2], these mushrooms have increased special attention by the scientific community due to their therapeutic relevance for mental health [3]. In this context, Albert Labs is at the forefront of psychedelic paths, based on Real-World Evidence (RWE) studies to provide rapid access to the treatment of mental disorders. **Objectives:** This work aims to produce and extract natural bioactive compounds from different strains of *Psilocybe* mushrooms. **Material and Methods:** In this work, spores of different mushrooms strains from

Psilocybe genus were firstly plated on potato dextrose agar (PDA) until mycelium germination and growth, and then they were subcultured onto the rich nutrient medium. Bioactive natural compounds were extracted from fresh and dried mycelium using different alcoholic solvents and were qualitatively analyzed by high-performance liquid chromatography (HPLC). **Results:** The spores were successfully germinated on PDA plates and the grown mycelia on a rich nutrient medium successfully produced the interest bioactive compounds, which were successfully identified by HPLC analysis. **Conclusions:** Our results show that alcoholic solutions are good solvents to extract bioactive compounds, such as psilocybin and psilocin, from mushrooms.

Keywords: mushrooms extracts; bioactive compounds; psilocybin; psilocin

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