

# Halal Status of Medicinal Mushrooms: Upcomming Challenges

Sadik Menkovic<sup>1</sup>, Emil Lagumdžic<sup>2</sup>, Edin Ibrisimovic<sup>3</sup>

<sup>1,3</sup> Fungiverse, Mykotheke, Mushroom Research Center Austria, MycoVerse

<sup>2</sup> Institute of Immunology, Department of Pathobiology, University of Veterinary Medicine Vienna, Austria

## 1 Introduction

Fungi, the second largest kingdom of organisms on Earth, possess a staggering global diversity with an estimated 2.2 to 3.8 million species. Notably, only a fraction of this diversity is scientifically known, with approximately 120,000 mushroom species currently described. While mushrooms exhibit characteristics found in both animals and plants, they are more closely related to animals based on current knowledge.

## 2 Medicinal Mushrooms: Harnessing Nature's Healing Power

Opportunity for targeted therapeutic interventions against specific diseases and health conditions, such as:

- *Hericium erinaceus* (Fig. A) and *Grifola frondosa* (Fig. B), exhibit promising neuroprotective properties, potentially aiding in the treatment of neurodegenerative disorders
- *Cordyceps sinensis* (Fig. C), *Lentinula edodes* (Fig. D) and *Ganoderma lucidum* (Fig. E), have shown potential in supporting immune function and combating chronic illnesses
- *Agaricus blazei* murrill (Fig. F) and *Trametes versicolor* (Fig. G) have demonstrated anti-cancer properties, opening new avenues in oncology research



## 3 The Grey Zone: Unravelling the Halal Status

While edible mushrooms are generally considered halal, the incorporation of auxiliary substances (additives, flavor enhancers, preservatives) during their preparation may impact their status. Medicinal mushrooms, utilized for specific health treatments, blur the boundaries between food and medicine, necessitating a nuanced examination of their halal suitability. Unveiling the potential side effects of medicinal mushrooms further complicates the determination of their halal status. Certain species, such as magic mushrooms and their derivatives, possess pronounced healing potential in psychiatry but at the same time psychoactive properties that can be abused depending on the dose.



Particularly interesting in this regard is the use of microdosing preparations made, which are made from psychoactive substances but show no psychoactive effect themselves.

## 6 Conclusion

The ever-growing number of newly discovered fungi and their wide range of uses in medicine and the food industry, make them a hot topic of research. In particular, they are gaining more and more importance in the food industry and medicine. Accordingly, joint work by researchers and scholars will be necessary to meet future challenges in relation to the halal suitability of mushrooms in the food industry and especially in medicine.

## 4 Ensuring Halal Compliance

### Source Verification

- verifying the halal status of the mushrooms themselves, as well as the auxiliary substances used in their preparation
- investigation and documentation are necessary to ensure that all ingredients originate from halal sources
- examining the origin, processing methods, and certification of each component used in the production of medicinal mushroom products

### Halal Certification Standards

- collaborative efforts between religious authorities, scientists, and industry professionals are essential to develop widely accepted guidelines
- determining the halal status of medicinal mushrooms requires considering their intended use and the specific regulations governing medicinal products

### Transparency and Consumer Awareness:

- providing clear and accurate information about the sourcing, processing, and certification of medicinal mushroom products is crucial
- transparent labeling and reliable halal certification systems help build trust and confidence among consumers



## 5 The Role of Research

### Multi-disciplinary Collaboration:

- Challenges ahead demand collaboration among scientists, religious scholars, industry experts, and regulatory authorities across fields like mycology, food science, Islamic studies, and pharmaceuticals for a holistic understanding of halal status and inclusive decision-making

### Standardization and Consensus:

- Establishing standardized protocols, methodologies, and criteria is crucial for determining the halal status of medicinal mushrooms

### Advancing Halal Certification:

- Research contributes to the continuous improvement of halal certification systems by providing scientific evidence and insights

### Continuous Knowledge Expansion:

- Ongoing studies enable the exploration of new species, extraction techniques, and auxiliary substances, while ensuring their halal compliance

