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Special Issue Reprint

Fungal Biotechnology and Application 3.0

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This Special Issue, entitled “Fungal Biotechnology and Application 3.0”, in the Section of “Fungi in Agriculture and Biotechnology” published in the *Journal of Fungi* continues the successful series of Fungal Biotechnology and Application 1.0 and 2.0, aiming to present frontier advances in fungal biology, biotechnology, and translational applications. It collects original research and comprehensive reviews covering beneficial and pathogenic fungi, with a focus on industrial utilization, secondary metabolism, novel strain prospecting, pathogenic mechanisms, fungal ecology, and the cultivation of edible and medicinal mushrooms. After rigorous peer review, this Special Issue has published 13 high-quality papers, including original research and review articles, reflecting the latest progress and trends in fungal biotechnology.

The 13 publications in this Special Issue cover a broad spectrum of topics, including fungal biocontrol and plant growth promotion, the discovery of bioactive secondary metabolites, the development and functional regulation of edible mushrooms, biodegradation of environmental pollutants, mycelium-based composite materials, lignin degradation and lignocellulose utilization, multi-omics applications, and the health-promoting functions of edible mushrooms. Collectively, the 13 papers in this Special Issue illustrate the vitality and interdisciplinary nature of modern fungal biotechnology. Fungi not only serves as cell factories for food, medicines, and materials, but also provides eco-friendly solutions for disease control, pollution remediation, and carbon neutrality.



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