Special Issue

Fungal Secondary Metabolism: Discovery and Characterization of Biologically Active Compounds

Message from the Guest Editors

Fungi are biodiverse, with more than 97,000 fungal species described, accounting for only about 6% of the total. About 50% of biologically active microbial secondary metabolites are produced by filamentous fungi. These secondary metabolites have broad applications in the medical, agricultural, and food fields. At present, most of the antibiotics, immunomodulators, hypolipidemic, and cholesterol drugs with important clinical application value are derived from secondary metabolites of fungi. Due to the important application value of fungal secondary metabolites, the study of fungal secondary metabolism has always been a research hotspot. However, the yield of fungal secondary metabolites is low enough for large-scale extraction and purification. To address this limitation, the biosynthesis of these compounds is often enhanced through methods and strategies such as fermentation media optimization, gene-level modification, and exogenous stimulation. We mainly focus on the isolation and purification, structure identification, activity analysis, fermentation process optimization, metabolic pathway analysis, and other aspects of fungal secondary metabolites in the Special Issue.

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