

Special Issue

Functional Genomics of Toxigenic Fungi and Regulatory Mechanism in the Biosynthesis of Mycotoxins 2.0

Message from the Guest Editors

The occurrence of fungal species that can produce toxic metabolites in agro-food products has received increasing attention over the last few decades. These metabolites, known as mycotoxins, may have toxic activity toward plants, and represent a serious risk for human and animal health. In the 1990s, fungal secondary metabolites (SMs), such as antibiotics and mycotoxins, started to be genetically characterized. The breakthrough of next-generation sequencing (NGS) technologies and the advent of bioinformatics and genomics have revolutionized research on SM biosynthesis pathways. More recently, genomic, transcriptomic, proteomic, and metabolomic tools, applied to fungal biology, have provided new data for understanding the ecology of toxigenic fungi, and the process of mycotoxin production and contamination under various environmental conditions. This Special Issue will present the most recent data on the main aspects of functional genomics of toxigenic fungi and regulatory mechanisms in the biosynthesis of mycotoxins.

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