

Special Issue

Exploring Molecular Interactions Between Pathogenic Fungi and Crop Host Plants

Message from the Guest Editors

Pathogenic fungi pose a significant threat to global agriculture by infecting a wide range of crop plants and causing substantial yield losses. In this view, it is essential to find effective methods to limit or combat this problem. Therefore, a deeper and more comprehensive understanding of the mechanisms of action—from both the pathogen's and the plant's perspectives—can provide important insights on this topic. Fungal pathogens utilize a variety of virulence factors to suppress immune responses, invade host tissues, and manipulate host cellular functions for their benefit. Conversely, plants have evolved a range of defense strategies to detect and respond to fungal invasion. This Special Issue focuses on exploring the molecular interactions between pathogenic fungi and their host plants. We wish to highlight the dynamic processes that determine infection outcomes. We welcome articles shedding light on molecular events involved in fungal infection, such as host penetration, cell wall degradation, and nutrient acquisition, alongside plant defense responses like oxidative bursts, hormone signaling, and transcriptional reprogramming.

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