Special Issue

Fungal–Plant Interactions: From Symbiosis to Pathogenesis

Message from the Guest Editors

Fungal–plant interactions span a continuum from mutualism to disease. Symbiotic fungi, such as mycorrhizae and endophytes, enhance nutrient uptake, stress tolerance, and immunity. In contrast, pathogenic fungi deploy effectors and suppress host defenses to colonize and damage plants. Some fungi exhibit lifestyle plasticity, shifting between symbiosis and pathogenesis depending on environmental and host cues. Advances in omics technologies have deepened our understanding of the molecular mechanisms driving these interactions. Exploring this dynamic relationship is vital for improving crop resilience, managing plant diseases, and leveraging beneficial fungi for sustainable agriculture in changing environments. This Special Issue, title "Fungal–Plant Interactions: From Symbiosis to Pathogenesis", seeks to advance knowledge of fungal–plant associations through original studies addressing the full spectrum of mutualistic to parasitic dynamics.

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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