



Molecular Approaches for Plant Resistance to Rust Diseases

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Message from the Guest Editors

Dear Colleagues,

Rust diseases, caused by various fungal pathogens, can cause substantial yield losses in many crops such as wheat, barley, maize, oat, rye, cotton, soybeans. Rust diseases are particularly destructive to winter cereal crops and are considered to be the most feared plant diseases by the growers.

Plant resistance to rust diseases is crucial for agricultural productivity and sustainability. Molecular approaches, including genetic analysis of resistance and marker development, cloning and marker assisted selections, etc., provide powerful tools to dissect the genetic basis of rust resistance, accelerate breeding efforts, and develop sustainable strategies for managing rust diseases in agriculture. Moreover, in the absence of genetic resistance, increased chemical control of rust diseases can lead to environmental contamination, potential harm to non-target organisms, and the development of pathogen isolates with resistance to fungicides. Thus, considering the high interest in plant resistance to rust diseases, this Special Issue will cover a range of molecular approaches conducted by scientists for achieving genetic resistance

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Message from the Editor-in-Chief

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