



an Open Access Journal by MDPI

# **Effects of Abiotic Stress on Crop-Fungal Pathogen Interactions**

Guest Editors:

# Dr. Martha M Vaughan

USDA ARS National Center for Agricultural Utilization Research, Peoria, USA

#### Dr. William Hay

USDA-ARS National Center for Agricultural Utilization Research, Peoria, IL 61604, USA

Deadline for manuscript submissions: closed (31 October 2021)

#### **Message from the Guest Editors**

Dear Colleagues,

Fungal pathogens destroy approximately one third of all food crops annually. Climate change threatens to intensify these losses and jeopardize global food security because plant pathogenic fungi and oomvcetes comprise the largest faction of rapidly spreading agricultural pests. Abiotic factors drive plant-pathogen interactions, and the individual and combined abiotic stress factors associated with climate change, including rising atmospheric CO2, temperature, and extreme precipitation events, can all influence crop susceptibility and disease severity. The impact of abiotic stress can have positive, neutral or negative effects on disease development, and each disease may respond differently to the stress depending on the pathosystem. To fully understand the dynamic plantfungal pathogen-environment interactions that occur in nature and develop climate-resilient and disease-resistant crops, a combined interdisciplinary research effort is needed. This Special Issue of Plants will highlight emerging agricultural threats, knowledge gaps, and potential control strategies.









an Open Access Journal by MDPI

### **Editor-in-Chief**

**Prof. Dr. Dilantha Fernando** Department of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2. Canada

#### 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 community.

## **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)

#### **Contact Us**

*Plants* Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/plants plants@mdpi.com X@Plants\_MDPl