



## Biotechnology of Plants and Pathogens

Guest Editors:

**Dr. Ying Zhai**

Department of Plant Pathology,  
Washington State University,  
Pullman, WA 99164, USA

**Dr. Chuntao Yin**

Integrated Cropping Systems  
Research Unit, USDA-ARS,  
Brookings, SD 57006, USA

Deadline for manuscript  
submissions:

**closed (20 October 2023)**

### Message from the Guest Editors

Interactions between various pathogens (fungi, bacteria, viruses, nematodes, oomycetes, phytoplasmas, etc.) and their host plants represent an important research field in both fundamental and applied plant sciences. Diverse tools are available for integrated plant disease management, such as pathogen/vector/infected-plant exclusion and/or eradication, cropping system improvement, protection using physical barriers, chemical control using fungicides/bactericides/nematicides, biological control using pathogen-suppressing microbes and other agents, and the development of disease-resistant cultivars. The application of modern biotechnologies provides novel approaches for plant disease control, including, but not limited to, plant disease resistance gene identification, the modification of plants and pathogens using cutting-edge genetic engineering and genome editing techniques, the development of new biocontrol agents for reducing pesticide usage, and microbiomes for improving plant tolerance to biotic/abiotic stress. In this Special Issue, we welcome the submission of original research and review manuscripts which revolve around plant-microbe interaction biotechnologies.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**  
Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## 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), Ei Compendex, Inspec, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](https://twitter.com/AtApplsci)