Special Issue

Soil-Transmitted Pathogens and Root Diseases of Crop Plants

Message from the Guest Editor

Microbial pathogens, particularly fungi and oomycetes, are difficult to diagnose and treat. Soil fumigation with toxic chemicals can sometimes prevent root diseases; however, it can be ecologically unacceptable if applied to large swaths of land. An alternative to treat and prevent root diseases, biocontrols, can be applied to the soil or the seed/plant and take the form of microbial inoculants that can directly antagonize the pathogen, or prebiotics/amendments that alter the soil microbiome and indirectly interfere with disease development (i.e., disease-suppressive soils). Rhizosphere microbes can competitively exclude pathogens and physically block access to the root, secrete antibiotics, parasitize pathogens, attract predators, or induce plant systemic resistance. To be effective, the biocontrols need to be formulated/delivered properly, colonize the roots, rhizosphere, and soil, and be active under real-world conditions. In this Special Issue, we welcome manuscripts that showcase effective methods of root disease biocontrol, either as proof-of-concept experiments in controlled conditions or as real-world examples of biocontrol applied to working farms.

Guest Editor

Dr. David Johnston-Monje

1. Max Planck Tandem Group in Plant Microbial Ecology, Universidad del Valle, Cali, Valle del Cauca, Colombia
2. Max Planck Institute for Plant Breeding Research, Cologne, Germany

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Pathogens
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
pathogens@mdpi.com

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About the Journal

Message from the Editor-in-Chief

The worldwide impact of infectious disease is incalculable. The consequences for human health in terms of morbidity and mortality are obvious and vast but, when infections of animals and plants are also taken into account, it is hard to imagine any other disease that has such a significant impact on our lives—on healthcare systems, on agriculture and on world economics. *Pathogens* is proud to continue to serve the international community by publishing high quality studies that further our understanding of infection and have meaningful consequences for disease intervention.

Editor-in-Chief

Prof. Dr. Hinh Ly
Department of Veterinary & Biomedical Sciences, University of Minnesota, Twin Cities, MN, USA

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