

## Special Issue

# Reactive Oxygen Species and Antioxidant Networks in Plant–Pathogen Interactions

### Message from the Guest Editors

Reactive oxygen species (ROS) and antioxidants have diverse and complex roles in plant–pathogen interactions (including plant interactions with pathogenic viruses, bacteria, phytoplasmas, oomycetes, and fungi). In this Special Issue, we focus on the diverse roles of ROS and antioxidants during plant defense to pathogens, which may be influenced, among other factors, by environmental factors (temperature, pH), ROS concentration changes during pathogenesis, and the lifestyle of the invading pathogen (biotrophic vs. necrotrophic). Recently, the pivotal role of the ROS–antioxidant balance in plant organelles (chloroplast, peroxisome, etc.) has been appreciated, since it is a driving force of retrograde signaling within plant cells exposed to pathogens. Furthermore, certain antioxidants such as glutathione seem to directly enhance plant defense against pathogens independently of their antioxidant functions. Novel approaches for enhancing plant defenses (especially those of crops) to pathogens by manipulating in planta ROS and antioxidant production via molecular genetic (e.g., gene editing) approaches are also welcome.

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## Plants

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