



Plant Secondary Metabolites in Plant Defence against Abiotic and Biotic Stresses

Guest Editor:

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Message from the Guest Editor

Dear colleagues,

Being sessile organisms, plants are continuously exposed to stressful conditions that can hamper processes of ‘primary’ carbon metabolism, such as photosynthesis and respiration. Therefore, plants evolved multiple biosynthetic pathways that can produce a plethora of ‘secondary’ metabolites (e.g., volatile organic compounds, anthocyanins, carotenoids) with key physiological and ecological roles. Plant secondary metabolites can act as antioxidants and directly defend plants by quenching and modulating the production of reactive oxygen species (ROS), or indirectly induce physiological mechanisms to enhance tolerance/resistance to stresses. Moreover, secondary metabolites can modify insect behavior and plant-associated microorganisms (bacteria, fungi, viruses), thus further orchestrating the interaction between plants and the surrounding environment.

This Special Issue will collect research results focusing on different aspects of plant secondary metabolites, from their biosynthesis in both the above- and belowground plant parts, to their involvement in signaling, immunization, priming, and cross-tolerance against (abiotic and biotic) stresses.





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