Special Issue

Transcriptomic and Metabolomic Reprogramming of Crops in Response to Changing Environmental Conditions

Message from the Guest Editors

Climate change is going to lead to an increase of atmospheric CO2 and temperatures as well as a change in rainfall patterns, leading to more extreme weather scenarios that will dramatically hamper crop plant productivity. This will create new challenges for agriculture to ensure future food security. Moreover, the rise in atmospheric CO2 will also impact C and N metabolism, and the capacity of the plants to overcome adverse environmental conditions. Thus, abiotic stresses such as extreme temperatures, salinity, drought, nutrient starvation, mineral deficiency and heavy metal polluted soils are called to be the major threatens to plant development in the near future. In this context, transcriptomic and metabolic reprogramming have been proven to play an essential role in plant response to changing environments. This special issue aims to gather scientific contributions (original research, reviews and mini-reviews) covering those transcriptomic and/or metabolomic readjustments which are crucial for plant performance and survival under stressful conditions. Studies carried out with cultivated species or model species are both eligible for publication in this special issue.

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