Special Issue

Gene Regulation Mechanisms in Plants under Abiotic Stress

Message from the Guest Editors

Rapid responses of the plant cell metabolism and adaptation to gene regulation machinery are key factors for the survival of plants in a fluctuating environment. Especially, holistic and global approaches using omics can help to obtain a deeper understanding of gene regulatory mechanisms at the molecular level. Related to abiotic stressors such as heat and drought or even anthropogenic abiotic stressors such as microgravity, plants have to overcome dynamically changing environmental conditions based on their sessile lifestyle. In addition to the importance of specific single-level regulatory mechanisms, multilevel regulation responses and their interconnection are especially important to obtain insights into differing gene regulation related to stress regimes. This can lead to cross-stress tolerance or be used for the priming of plants. Based on such datasets, signaling and regulatory networks can be created, leading to key player identification in specific abiotic stressors as well as general stress responses. Furthermore, single omics analyses are useful to understand adaptation of the plant at a spatial and temporal level.

Guest Editors

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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