Special Issue

Genetic, Epigenetic and Metabolic Regulation in Plant Responses to the Environment

Message from the Guest Editors

Plants are sessile organisms characterized by a high degree of metabolic and phenotypic plasticity. Because they are unable to escape their surroundings, plants must cope with variable and sometimes challenging growth conditions that influence their development, reproduction, fitness, and productivity. In response to environmental stimuli, the regulation of gene expression relies on a variety of molecular mechanisms that affect different stages in the flow of genetic information, inducing changes in mRNA transcription, processing, transport, translation, and decay. Gene expression can also be finely tuned by epigenetic regulatory mechanisms, including DNA methylation, histone modification, the exchange of histone variants, interactions between non-coding RNAs, ATP-dependent nucleosome remodeling and noncoding RNAs, that can change the activity and expression patterns of genes. Accordingly, this Special Issue primarily focuses on understanding the genetic, epigenetic and metabolic regulation of plant responses to various environmental stresses (such as heat, drought, and light stress), and the epigenetic mechanisms of stress memory.

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.

Editor-in-Chief

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