Special Issue

Plant Floral Induction Mechanisms and Molecular Genetics with Developmental Plasticity

Message from the Guest Editors

Flowering time (also known as floral induction) is one of the most important developmental changes in plants. After floral induction in the shoot apical meristem (SAM), the vegetative phase containing leaf primordia as lateral organs is transited into the reproductive phase containing floral meristems to produce the next generation seeds. Numerous genetic and physiological studies using model plants such as Arabidopsis and rice have revealed that optimized flowering time is determined through complicated genetic regulatory networks in which diverse internal and external signaling pathways such as photoperiod, vernalization, ambient temperature, phytohormones, and developmental age are integrated. In addition, as plants are sessile organisms and constantly encounter environmental stresses, flowering time as one of ecologically important traits must be controlled precisely for plastic development and adaptation. Therefore, investigating the underlying molecular genetic mechanisms of floral induction and the regulation of flowering time against unfavorable conditions has a significant impact on this field.

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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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