Special Issue

Hormonal Regulation of Flower and Fruit Development: A Molecular Perspective

Message from the Guest Editors

The reproductive phase transition in plants consists of three major developmental stages: flower bud development, flower opening, and fruit development. Plant growth regulators or phytohormones affect plant development and reduce the impacts of abiotic stresses. The use of these PGRs to induce early flowering, fruit setting, and development helps to optimize crop yield. Much scientific research has been conducted to better understand the hormonal signaling pathways and multiple regulatory mechanisms of plant development. However, it is not well understood how these phytohormones integrate internal and external signals and regulate flowering and fruit development, which involve various genes and transcription factors. This Special Issue will emphasize recent advanced original research articles, reviews, and opinions related to the hormone perception, response, synthesis, and regulation of the gene regulatory mechanisms driving flower and fruit development in plants. Exploring the mechanism underlying hormonal signaling pathways in plants has exciting prospects for crop cultivation and improving food production.

Guest Editors

Prof. Dr. Hongna Zhang

Hainan Provincial Key Laboratory of Quality Control of Tropical Horticultural Crops, School of Tropical Agriculture and Forestry, Hainan University, Danzhou, China

Prof. Dr. Minjie Qian

Hainan Provincial Key Laboratory of Quality Control of Tropical Horticultural Crops, School of Tropical Agriculture and Forestry, Hainan University, Danzhou 571737, China

Deadline for manuscript submissions

31 December 2025



Plants

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



mdpi.com/si/226237

Plants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

mdpi.com/journal/ plants





Plants

an Open Access Journal by MDPI

Impact Factor 4.1 CiteScore 7.6 Indexed in PubMed



About the Journal

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

Prof. Dr. Dilantha Fernando

Department of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)

