

Plant Hormones: a broader understanding of plant development processes for better adapted agriculture

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Plant hormones, also known as phytohormones, are chemical signaling molecules that play pivotal roles in regulating plant growth, development, and environmental adaptation. Over recent decades, significant advances have been made in understanding their biosynthesis, metabolism, signal transduction pathways, and interactions with environmental factors. Major classes of plant hormones include auxins, cytokinins, gibberellins, abscisic acid, ethylene, brassinosteroids, and strigolactones, among others. These hormones are central to both normal and abnormal developmental processes, underpinning critical physiological events essential for plant growth, productivity, and adaptation. Typically, plant hormones act through intricate and dynamic interactions, coordinating various physiological processes to optimize plant responses to internal and external cues.

The practical applications of plant hormones are vast, encompassing responses to environmental stresses, pest and disease management, and improvements in crop yield. Recent advancements in modern technologies, innovative methodologies, and emerging concepts—particularly in functional genomics and reverse genetics—are poised to drive plant hormone research to new frontiers. These developments are expected to yield profound insights into the mechanisms through which plant hormones mediate adaptation, with implications for addressing global challenges such as climate change, stress resilience, and agricultural productivity. Ultimately, these insights will enable the design of novel breeding strategies and innovative agricultural practices.

Plant Hormones is an international, open-access, online-only journal dedicated to publishing rigorously peer-reviewed original research papers, review articles, and breakthrough methodologies. The journal encompasses a wide array of topics related to plant hormones, including their biosynthesis, signal transduction, and crosstalk. More types of plant hormones, including plant peptides, polyamines, nitric oxide, karrikins, bioactive metabolites, etc. are also of concern. It seeks to advance our understanding of the roles of plant hormones in growth, development, aging, and agricultural applications, with a focus on horticulture, forestry, and crop improvement. Recognizing the critical and expanding role of phytohormones in plant biology, this journal addresses a growing need for a dedicated platform to explore the intricate connections between hormonal homeostasis and adaptive growth in plants.


Plant Hormones aims to foster international academic exchange and the dissemination of cutting-edge research, offering a specialized platform for advancing the latest perspectives and discoveries in the field. Its scope spans diverse topics, including the biosynthesis and signaling pathways of plant hormones, their roles in growth, development, and senescence, and their interactions in immunity and stress responses. Furthermore, the journal highlights research on hormonal crosstalk, the genetics of phytohormonal regulation,

and the development of innovative breeding strategies targeting relevant genes and loci. By encouraging submissions of original and groundbreaking research, the journal seeks to deepen our understanding of the molecular and genetic mechanisms underlying phytohormonal functions and their technological applications.

We are proud to launch *Plant Hormones* in collaboration with Chongqing University (www.cqu.edu.cn) and Maximum Academic Press (www.maxapress.com). As founding co-editors-in-chief (EIC), we are honored to lead this initiative alongside an esteemed editorial board composed of distinguished researchers from premier institutions specializing in plant science, molecular biology, and biotechnology. With a strong international representation and professional expertise, our editorial team is committed to maintaining the highest standards of scientific rigor and impartiality through a transparent and thorough peer-review process. Moreover, we are dedicated to providing exceptional support to authors, ensuring a seamless and efficient submission experience.

For readers, *Plant Hormones* upholds the principles of open-access academia, offering a global platform for the free exchange and discussion of the latest research findings. Our mission is to advance academic collaboration and foster innovation in plant hormone research, contributing to the broader development of global plant science.

We warmly invite researchers, scholars, and experts worldwide to join us in this exciting endeavor. Together, we can build a comprehensive and impactful knowledge base that will propel the field of plant hormone research toward new horizons.



Conflict of interest

The authors declare that they have no conflict of interest.

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