The Scientific World Journal

Special Issue on

Phytohormone Signaling Networks in Response to Abiotic Stress

CALL FOR PAPERS

Abiotic stresses such as water deficit, soil salination, low temperature, and other environmental stress factors place major constraints on not only vegetative growth but also the reproductive development in crops, ultimately leading to the reduction in crop productivity. During the past two decades, considerable progress has been achieved in understanding how stress signals are triggered and transduced and how they finally activate the "functional" genes to help plants defend against environmental perturbations.

Phytohormones like abscisic acid, jasmonate, ethylene, and so forth are small signal molecules produced within the plant, and they mobilize the genome-wide gene expression and plant adaptive physiological responses. Therefore, phytohormones play vital roles in plant adaption to adverse environment. Genes involved in phytohormone signaling pathways under abiotic stress have been identified through forward and reverse genetics, transcriptomic/proteomic analysis, or other approaches. Moreover, the molecular mechanism of perception and individual signal cascade has been documented extensively. However, to survive the adverse conditions, plants need activating multiple phytohormone signaling pathways which cooperate closely to fine-tune plant responses to environmental stimuli. Hence, the knowledge of the interplays between diverse phytohormones signaling pathways becomes a hot topic in the fields of phytohormone biology. To understand how these phytohormones signaling pathways are coordinated by different abiotic stresses is a fundamental question for plant researchers, which will contribute to a better understanding of stress and acclimation responses and will also benefit the applied approaches of increasing crop yield under stress conditions.

We invite authors to submit original and review articles that help to understand the molecular mechanisms of phytohormones signaling pathways and how these signaling pathways interact under various abiotic stress conditions.

Potential topics include, but are not limited to:

- Phytohormone signaling
- Cross talks between different stresses signaling pathways
- Abiotic stress perception and response
- Molecular mechanism of abiotic stress adaption

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/tswj/botany/psn/.

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