Special Issue

The Plant Two-Component System

Message from the Guest Editors

The plant two-component system (TCS) is a perception-response system that was derived from the ancestral cyanobacterial endosymbiotic plastid. In comparison with the majority of bacterial TCS, the canonical TCS of plants consists of three components: the histidine kinases (HKs), the histidine phosphotransfer proteins (HPs) and the response regulators (RRs). Although many facets of TCS signaling have been elucidated in the past years, many aspects of the TCS remain to be discovered or explained. For instance, what are the input signals and defined functions of those HKs that are not involved in hormonal perception, what determines the speed and direction of the phosphoryl flow through the TCS, how and at which level (HK, HP or RR) are signal integration and specificity achieved, are there discernible sub-TCS networks, as well as how and to which extent does TCS cross-talk into other signal transduction pathways? This Special Issue of *Plants* aims to address these questions and will thereby help to clarify the role of the TCS in the control of plant development and interaction with the environment.

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.

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