Special Issue

Advances in Plant Regeneration

Message from the Guest Editors

It is well known that some plant cells are able to regenerate new organs after tissue damage or in response to specific stress treatments and/or exogenous hormone applications. Whole plants can be regenerated even from single protoplasts through de novo organogenesis or somatic embryogenesis. Recent findings have improved our understanding about the molecular mechanisms required for cell reprogramming during plant regeneration. Genetic studies also suggest the involvement of epigenetic regulation during de novo organogenesis. However, there are still some unidentified developmental mechanisms in non-model and crop plants that allow this striking plasticity to be maintained. A better understanding of plant regeneration would help us advance in the optimization of tissue culture, with endless applications in plant micropropagation and biotechnology. This Special Issue of Plants will provide additional insights into the physiological and molecular framework of plant regeneration, the evolutionary conservation of some key regulators, and how developmental and environmental constraints influence these regulatory mechanisms.

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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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