

Special Issue

Applications of Plant Tissue Culture: New Insight into Plant Improvement Research Using Plant Tissue Culture and Plant Modification Techniques

Message from the Guest Editors

The classical plant breeding procedure is time-consuming, relying on limited natural genetic resources, and labour-intensive. Plant biotechnology has emerged as a reliable set of tools that empowers plant breeders to use genes of beneficial traits from diverse sources and insert them into plant genomes for genetic modifications. In addition, plant tissue culture (PTC) is a core biotechnology for maintaining or growing plant cells, tissues or organs under aseptic conditions. There have been remarkable advances in PTC research on multiple fronts including the regulation of plant developmental processes in vitro, discoveries of biologically active compounds, gene transfer and production of secondary metabolites of medicinal significance. Most recently, the integration of PTC with novel techniques such as genome editing has opened a new window to improve the desirable traits in plants. Therefore, this Special Issue aims to attract contributions for new advances in PTC focusing on plant growth regulators, gene transformation, genome editing, molecular farming and other applications of plant culture research in vitro.

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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, and 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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