

Special Issue

Plant Tissue Culture and Plant Regeneration—2nd Edition

Message from the Guest Editors

Plant tissue culture and plant regeneration constitute crucial facets of plant biotechnology, spanning several scientific and industrial domains. In recent years, we have witnessed significant advancements in understanding the underlying mechanisms controlling in vitro plant regeneration, accompanied by the rapid evolution of specialized equipment and strategies for enhancing this process. This development has garnered the attention of both plant scientists and industries. Nonetheless, an ongoing demand exists to develop further strategies to aid the selection and regeneration of superior genotypes, thereby refining protocols for enhanced reproducibility. As such, the creation of a meticulous fine-tuning process is imperative.

Considering these developments, we are announcing a Special Issue covering all aspects of plant tissue culture and biotechnological processes, including the use of algorithms to improve protocols, aspects of somatic embryogenesis and organogenesis, cryopreservation, the use of temporary immersion bioreactors, and new gene-editing technology to enhance shoot proliferation.

Guest Editors

Dr. Douglas A. Steinmacher

Viveteck Agrociências, Marechal Cândido Rondon 85960-000, Brazil

Dr. Taras Pasternak

Instituto de Bioingeniería, Universidad Miguel Hernández, 03202 Elche, Spain

Deadline for manuscript submissions

30 May 2026



Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



mdpi.com/si/246338

Plants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

[mdpi.com/journal/
plants](https://mdpi.com/journal/plants)





Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



[mdpi.com/journal/
plants](https://mdpi.com/journal/plants)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)