



Plant Developmental Pathways: Haploid, Zygotic and Somatic Embryos

Guest Editors:

Prof. Dr. Edyta Skrzypek

Department of Biotechnology,
The F. Górski Institute of Plant
Physiology, Polish Academy of
Sciences, Niezapominajek 21, 30-
239 Kraków, Poland

Dr. Marzena Warchol

Department of Biotechnology,
The F. Górski Institute of Plant
Physiology, Polish Academy of
Sciences, Niezapominajek 21, 30-
239 Kraków, Poland

Dr. Dragana Z. Jakovljević

Department of Biology and
Ecology, Faculty of Science,
University of Kragujevac, Radoja
Domanovića 12, 34000
Kragujevac, Serbia

Deadline for manuscript
submissions:

closed (31 March 2024)

Message from the Guest Editors

The concept of tissue culture, proposed over one hundred and twenty years ago by Haberlandt, was based on the phenomenon of totipotency and predicted the regeneration of whole plants from single cells in in vitro cultures. One of the most interesting types of cells are gametes, containing half the chromosomes found in somatic cells and heterogeneous populations of specialized cells developed from a single fertilized egg. Haploids are a potent and vital tool for basic research and breeding programs of crop and ornamental plant enhancement. As a result of doubling the number of haploids' chromosomes, we obtain completely homozygous and fertile plants. The current Special Issue will present an overview of major methods for producing haploid/doubled haploid embryos and plants, including androgenesis, gynogenesis, wide crossing, and in vitro cultures of male or female gametes. For plenty of species, somatic embryogenesis and doubled haploid techniques have been established, and detailed information regarding the commercial cultivars produced in that way is of great importance.





plants



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Dilantha Fernando

Department of Plant Science,
University of Manitoba, Winnipeg,
MB R3T 2N2, Canada

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.

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](#), [CAPus / SciFinder](#), and [other databases](#).

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

Contact Us

Plants Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/plants
plants@mdpi.com
[X@Plants_MDPI](https://twitter.com/Plants_MDPI)