Special Issue

Role of Gene and Hormone Regulation in Adventitious Root Formation in Trees

Message from the Guest Editors

De novo root regeneration, a crucial step for clonal propagation of plant species by cuttings, is a complex genotype-dependent trait affected by several inner and outer cues, including the physiological status and age of the plant, phytohormone homeostasis, nutrient availability, carbohydrate dynamics, light conditions, biotic factors, etc. The recalcitrance to root regeneration of many trees is the main hurdle hindering the vegetive propagation of elite genotypes and forest industry development. In general terms, ethylene and jasmonic acid have an early positive role with auxin in the formation of adventitious roots, whereas gibberellins, abscisic acid, and cytokinins are expected to negatively influence the development of the new roots. With this Special Issue, our aim is to provide a platform for the communication of research related to the gene and phytohormone control of adventitious root formation in trees and woody species, allowing for a precise description of the molecular pathways involved in every phase of the process, which may pave the way for an optimized exploitation of the available resources.

Guest Editors

Dr. Conchi Sánchez
Misión Biológica de Galicia (CSIC), Pontevedra, Spain

Dr. Jesús M. Vielba
Plant Production Department, Misión Biológica de Galicia, Avda. de Vigo s/n, 15705 Santiago de Compostela, Spain

Deadline for manuscript submissions

closed (30 April 2023)

Plants

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed

mdpi.com/si/116657

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

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

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)

MDPI