Special Issue

The Metabolism of Bioactive Compounds in Plants: Environmental Factors and Strategies for Useful Modifications

Message from the Guest Editors

The bioactive compounds of horticultural plants, such as flavonoids, carotenoids, glycosides, and alkaloids, play crucial roles in plant physiology, and the biosynthesis of bioactive compounds occurs primarily through secondary metabolism, which is not essential for the plant's immediate survival but is essential for its defense and adaptation to the environment. Environmental factors such as light, temperature, and biotic and abiotic stress (pests, diseases, drought, and salinity, among other stressors) influence the production of bioactive components, and stress can increase the synthesis of these compounds.

The purpose of this Special Issue is to present the most recent advances in the accumulation and modification of biosynthesis and overall metabolism of bioactive compounds in fruits and horticultural plants by researchers from around the world. Innovative articles on the physiological effects and metabolism of bioactive components in horticultural plants and the enhanced production of valuable secondary metabolites from any fruit or vegetable species are welcome.

Guest Editors

Dr. Cesar Leobardo Aguirre-Mancilla

Tecnologico Nacional de México/IT de Roque, Carretera Celaya-Juventino Rosas km 8, Celaya 38110, Mexico

Dr. Fernando Diánez-Martínez

Departamento de Agronomía, Escuela Superior de Ingeniería, Universidad de Almería, 04120 Almería, Spain

Deadline for manuscript submissions

20 October 2025

Horticulturae

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 5.1

mdpi.com/si/235009

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

mdpi.com/journal/horticulturae

Horticulturae

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 5.1

mdpi.com/journal/horticulturae

About the Journal

Message from the Editor-in-Chief

Horticultural plants and their products provide sustenance, health, and beauty. A confluence of factors is putting increasing pressure on horticultural production to evolve, and innovative research is addressing these challenges. *Horticulturae* provides a venue to communicate research results in a rapid manner with open access, allowing everyone the opportunity to stay abreast of leading research addressing horticulture. I invite you to consider publishing the results of your research in this high quality, peer-reviewed journal.

Editor-in-Chief

Prof. Dr. Luigi De Bellis
Department of Biological and Environmental Sciences and Technologies (DiSTeBA), Salento University, Lecce, Italy

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), PubAg, AGRIS, FSTA, and other databases.

Journal Rank:

JCR - Q1 (Horticulture) / CiteScore - Q1 (Horticulture)

MDPI