Special Issue

Advanced Research in Crops: From Physiology to Breeding

Message from the Guest Editors

Food crops and industrial crops are an important part of agriculture and are of great significance to the agricultural economy and rural development. Biotic stress factors (viruses, bacteria, fungi, insects, weeds, etc.) and abiotic stress factors (drought, salinity, extreme temperatures, shortage of macro- or micronutrients, heavy metals, and other pollutants, etc.) lead to changes in the morphology (plant height, root length, leaf color, leaf structure, etc.), physiology (osmotic pressure, transpiration rate, photosynthesis, oxygen balance, etc.), biochemistry (metabolism of proteins, carbohydrates, and other biomolecules), and molecular mechanisms (gene expression, signaling pathways, DNA and RNA modifications, etc.) of crops during growth, ultimately reducing yield and quality.

Based on this, this Special Issue focuses on whole chain factors affecting crop yield and quality, including varieties, stresses, and cultivation measures and analyzes the phenotypic, physiological, and biochemical processes and genetic regulatory pathways of crop response to stress.

Guest Editors

Dr. Guang Chen

Institute of Quality Standard and Monitoring Technology for Agro-Products of Guangdong Academy of Agricultural Sciences, Guangzhou 510640, China

Dr. Edvta Zdunek-Zastocka

Department of Biochemistry and Microbiology, Warsaw University of Life Sciences—SGGW, Nowoursynowska 159, 02-776 Warsaw, Poland

Deadline for manuscript submissions

31 March 2026



International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/249949

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, 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), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

