

Special Issue

Molecular Strategies for Improved Crop Performance

Message from the Guest Editor

Increasing crop yield and quality is essential for meeting future food demand and security. Plant breeding aims to genetically enhance crops through the application of Mendelian genetics principles and modern tools and techniques in cellular and molecular biology. Recently discovered advances in molecular genetics have opened new opportunities to speed up plant breeding. Molecular strategies, including genetic engineering, marker-assisted breeding, and genome editing, have emerged as powerful tools for enhancing crop yield and quality by targeting key genes and pathways involved in plant growth, development, and stress responses. Accelerated crop improvement could naturally evolve traits and quality to yield the production systems that are needed to ensure future harvests. This Special Issue would like to bring together the latest molecular strategies, tools, and techniques of molecular genetics in crop improvement performance, focusing on their principles, applications, and recent advances. This could be beneficial for plant breeders to choose the appropriate techniques suited for the needs of their respective breeding programs.

Guest Editor

Dr. Maria Oszvald

Sustainable Soils and Crops, Rothamsted Research, Harpenden, Hertfordshire AL5 2JQ, UK

Deadline for manuscript submissions

closed (10 July 2025)



Current Issues in Molecular Biology

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 3.7
Indexed in PubMed



mdpi.com/si/228377

Current Issues in Molecular Biology
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cimb@mdpi.com

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





Current Issues in Molecular Biology

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 3.7
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Madhav Bhatia

Department of Pathology and Molecular Medicine, University of Otago,
Christchurch 8140, New Zealand

Author Benefits

High Visibility:

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

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).

Recognition of Reviewers:

APC discount vouchers, optional signed peer review, and reviewer names are published annually in the journal.