

Special Issue

Advances in piRNA Biology and Processing: Mechanisms and Applications

Message from the Guest Editor

The role of Piwi-interacting RNAs (piRNAs) in the regulation of transposable elements (TEs) has garnered significant scientific interest over the past decade. In particular, piRNAs are crucial for safeguarding genomic integrity in animal gonads, where the loss of the piRNA pathway can lead to severe defects in germline development, ultimately resulting in sterility. Recent research has also highlighted the pivotal roles of piRNAs in somatic cell and stem cell development, as well as their potential as biomarkers in cancer diagnosis. These findings underscore the importance of piRNAs across various biological systems and open up new avenues for research. We invite you to submit your work to this Special Issue, where we aim to further explore the mechanisms of piRNA biogenesis and TE control, uncover novel functions of piRNAs in diverse systems, and investigate their potential applications in translational science. We look forward to receiving valuable contributions. Your work will play a crucial role in advancing the impact of our journal.

Guest Editor

Dr. Yicheng Luo

Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, CA 91125, USA

Deadline for manuscript submissions

31 December 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/216218

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 Biomedical Science, University of Otago,
Christchurch, 2 Riccarton Avenue, P.O. Box 4345, Christchurch 8140,
New Zealand

Author Benefits

High Visibility:

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

Rapid Publication:

manuscripts are peer-reviewed and a first decision is
provided to authors approximately 17.8 days after
submission; acceptance to publication is undertaken in 2.7
days (median values for papers published in this journal in
the first half of 2025).

Recognition of Reviewers:

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