

Special Issue

Advances in Stem Cell-Based Gene Therapy

Message from the Guest Editor

Despite significant advancements in identifying genes responsible for genetic diseases, therapeutic options remain limited for many conditions. Chromosomal aberrations, such as aneuploidies and large deletions, present challenges for traditional gene therapy and editing methods. This Special Issue of the *International Journal of Molecular Sciences* will focus on chromosome therapy, particularly the technique of chromosome transfer in pluripotent cells. Chromosome transfer, involving the introduction of an exogenous chromosome into stem cells, offers potential for correcting large-scale genomic mutations. Historically, chromosome transfer has progressed from hybrid cell construction to Microcell-Mediated Chromosome Transfer (MMCT). Recent innovations utilizing embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs) have opened new avenues for integrating exogenous chromosomes into normal euploid cells. We invite submissions exploring these advancements, including studies on the precision, stability, and safety of chromosome transfer techniques.

Guest Editor

Dr. Marianna Paulis

CNR Istituto di Ricerca Genetica e Biomedica, Monserrato, Italy

Deadline for manuscript submissions

20 April 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 8.1
Indexed in PubMed



mdpi.com/si/206560

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

mdpi.com/journal/

[ijms](https://www.mdpi.com/ijms)





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 8.1
Indexed in PubMed



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

ijms



About the Journal

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 (Inorganic Chemistry)