



## Cellular and Molecular Mechanisms of Heart Development: Implications for Heart Disease and Regeneration

Guest Editor:

**Dr. Chris Jopling**

IGF, CNRS, INSERM, Université de Montpellier, Labex ICST, F-34094 Montpellier, France

Deadline for manuscript submissions:  
**closed (31 March 2024)**

### Message from the Guest Editor

Heart development is an intricate process that commences when clusters of cells form the primitive heart tube, which subsequently undergoes dynamic changes in morphology and cellular composition before finally establishing a fully functional and mature heart. The cellular and molecular processes that drive cardiac development are finely balanced, and any disruption can lead to a variety of cardiac diseases.

This Special Issue aims to highlight the recent advances in understanding the cellular and molecular mechanisms of cardiac development and their implications in heart disease and regeneration. The topics may include (but are not limited to):

- Myocardium/endocardium/epicardium;
- Neural crest cells;
- Second heart field;
- Cardiac fibroblasts;
- Cardiac valves;
- Cardiomyopathies;
- Congenital heart defects;
- Arrhythmias;
- Inflammation;
- iPS-derived models;
- Animal models;
- Transcriptomics, e.g., single cell/nuclei.





an Open Access Journal by MDPI

## 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

## 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.

## 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)

## Contact Us

---

*International Journal of Molecular  
Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/ijms  
ijms@mdpi.com  
X@IJMS\_MDPI