

## Special Issue

# Novel Platforms for Studying Mechanisms and Therapies for Cardiotoxicity

### Message from the Guest Editor

Heart failure is the number one killer, and drug-induced cardiotoxicity is a major cause of market withdrawal. Currently, cardiac cells (human induced pluripotent stem cell-derived cardiomyocytes (hiPSC-CMs)) are used to test therapeutic efficiency and drug toxicity, as they are the only human cardiac cells that can be cultured for prolonged periods required to test drug efficacy and toxicity. However, a single cell type cannot replicate the phenotype of complicated 3D heart tissue which is formed by multiple cell types. Importantly, the effect of drugs needs to be tested on adult cardiomyocytes, which have different characteristics and toxicity responses compared to immature hiPSC-CMs. In this Special Issue, we aim to cover some of the recent developments in various human-based platforms that allow cardiac toxicity and pharmacological efficacy testing.

---

### Guest Editor

Dr. Tamer Mohamed

Institute of Molecular Cardiology, University of Louisville, Louisville, KY 40292, USA

---

### Deadline for manuscript submissions

closed (31 August 2020)



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/40172](https://mdpi.com/si/40172)

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

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



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