# **Special Issue**

# Research in iPSC-Based Disease Models

### Message from the Guest Editor

Induced pluripotent stem cells (iPSCs) represent a new disease model and drug discovery tool, challenging the current limitations of animal models. Patient-specific iPSCs provide unlimited access to disease-relevant cells that are difficult to harvest, such as brain neurons and cardiomyocytes. Phenotypes associated with various diseases can be monitored and tested by using diverse cell types differentiated from iPSCs in culture. Moreover, the emergent gene editing fields provide the capacity to introduce or correct disease mutations in iPSCs to assess their contributions. Editing disease mutations in iPSCs to generate isogenic controls can shed light onto the causal relationship between genotypes and phenotypes; therefore, iPSCs have emerged as a wonderful model to facilitate new drug discovery and drug repositioning in human health. This Special Issue will include recent advances in iPSCbased models of various diseases, in which gene editing is leveraged to highlight the impact of risk mutations.

### Guest Editor

Dr. Eric Deneault Regulatory Research Division, Centre for Oncology, Radiopharmaceuticals and Research, Biologic and Radiopharmaceutical Drugs Directorate, Health Products and Food Branch, Health Canada, Ottawa, ON K1A 0K9, Canada

### Deadline for manuscript submissions

20 December 2024



# International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 8.1 Indexed in PubMed



mdpi.com/si/192650

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

mdpi.com/journal/ ijms





# International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 8.1 Indexed in PubMed





# 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)