

Special Issue

Molecular Biology of 3D Cell and Tissue Culture Systems: Benefits to Research and Disease Diagnostics

Message from the Guest Editor

Three-dimensional (3D) biology dates back over 110 years to the pioneering work of the French surgeon and researcher Alexis Carrel, who won the Nobel Prize in Physiology in 1912. His work encompassed unique and innovative applications in tissue and cell culturing directed toward anatomosis and revolutionary suturing techniques. To date, this field has rapidly metamorphosized, encompassing a wide variety of applications. This Special Issue will welcome manuscripts that explore the many evolving benefits of 3D physiological systems biology as compared to standard 2D culture systems in the research and preclinical arenas. These include, but are not limited to, microgravity-related applications, cellular and molecular outcomes (omics), cellular and tissue toxicity, drug discovery applications, 3D tissues as viral research and discovery targets, and 3D tissue engineering in the context of potential transplantation, regenerative medical, and bioprinting applications. Manuscripts addressing the challenges of developing authentic tissue “mimics” with regard to functional accuracy and structural recapitulation will also be considered.

Guest Editor

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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

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