

Special Issue

Mechanism of Mesenchymal Stromal Cells and Their Derivatives in Regenerative Medicine

Message from the Guest Editors

Mesenchymal stromal cells (MSCs) and their derivatives have garnered considerable attention for their therapeutic potential in regenerative medicine. Beyond their multipotent differentiation capacity, MSCs exhibit profound immunomodulatory, anti-inflammatory, and trophic effects that contribute to tissue repair and regeneration. Increasing evidence is highlighting the significance of MSC-derived extracellular vesicles (EVs), including exosomes and microvesicles. This Special Issue will explore the cellular and molecular underpinnings of MSC-based therapies, encompassing paracrine signalling pathways, immunomodulation, homing and engraftment behaviours, and the bioactive cargo carried by EVs. By shedding light on these mechanisms, we will bridge current knowledge gaps, optimise therapeutic strategies, and enhance the translation of MSC-based approaches into clinical applications. We welcome original research articles, reviews, and perspectives that provide mechanistic insights or novel methodological approaches to studying MSCs and their derivatives in the context of tissue repair, immune regulation, and disease modulation.

Guest Editors

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Message from the Editor-in-Chief

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

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