

Special Issue on
Mesenchymal Stem Cells as Promoters, Enhancers, and Playmakers of Dental Translational Research

CALL FOR PAPERS

Mesenchymal stem cells (MSCs) are currently being tested in preclinical and clinical trials for their ability to foster wound healing and tissue regeneration.

Dental-derived mesenchymal stem cells (D-dMSCs) are an intriguing milestone of the regenerative medicine, with regard to their potential of differentiating into osteogenic, adipogenic, and chondrogenic lineages.

Despite the multiple barriers to their clinical use, D-dMSCs or MSCs have shown sufficient promise to garner a primary place in the field of translational medicine. In fact, MSCs and D-dMSCs cell therapies have significant implications for human health: clinical studies are greatly needed to confirm or stimulate the basic and translational researches aimed at reaching cutting-edge results.

In this special issue, we invite worldwide researchers as well as the clinicians confident in the regenerative medicine to submit their most interesting original review articles describing the good, the bad, and the ugly of D-dMSCs and MSCs in translational medicine and dentistry. Innovative aspects of D-dMSCs and MSCs and/or their biology and other regenerative concepts, within the context of isolation, derivation, reprogramming, self-renewal, quality control, differentiation, transplantation, good manufacturing practice (GMP), new sources of D-dMSCs or MSCs, and other similar studies, are warmly welcome topics.

Potential topics include but are not limited to the following:

- ▶ New sources of D-dMSCs, MSCs, and/or Induced Pluripotent Stem Cells (iPSCs) in translational research and therapeutic strategies, including their secretome or its components towards tissue regeneration and wound healing
- ▶ Computational models investigating the mechanobiology of D-dMSCs/MSCs and their interactions with scaffolds for tissue engineering
- ▶ Bioinformatics and/or novel applications for biomaterials, scaffolds, and three-dimensional cell culture models to better understand mesenchymal stem cells biology
- ▶ Growth factors effects on mesenchymal stem cells
- ▶ Clinical research on application of D-dMSCs or MSCs and their cross-talk with engineered peptide and protein materials, including bioengineered/biomimetic scaffolds, secretome, feasibility, and “proof-of-concept” studies, new methodological paradigms that challenge current thinking in clinical research, and development of clinical-grade MSCs/D-dMSCs in matrix remodeling under good manufacturing practice (GMP) protocols/conditions as an essential step towards clinical application and other similar studies are warmly welcome topics

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/sci/mic/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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