

Special Issue

Oral Stem Cells: Molecular Characteristics and the Applications in Regenerative Medicine

Message from the Guest Editors

Regenerative medicine is a rapidly growing field that focuses on the use of stem cells to repair, replace, and regenerate damaged tissues and organs. Oral-derived stem cells—including DPSCs, SHEDs, PDLSCs, SCAPs, OMSCs, GMSCs, and OESCs—offer therapeutic advantages due to minimally invasive isolation. Recent studies reveal their cytophysiology, differentiation pathways, gene expression, and epigenetic regulation. DPSCs show promise in spinal cord repair owing to neural crest origins; GMSCs exhibit robust osteogenesis vs. BMSCs. Extracellular vesicles from these cells inherit parental functions like immunomodulation, neuroprotection, and wound healing. Understanding these molecular mechanisms is vital for tissue engineering and therapeutics.

This Special Issue aims to collect original articles, reviews, and perspectives addressing the latest findings in the molecular mechanisms that govern the behavior of oral stem cells, as well as the recent advancements and future directions in their clinical applications. We strongly encourage you, experts in this field, to share your knowledge and views with dentists and scientists around the world.

Guest Editors

Dr. Emi Shimizu

1. Department of Oral Biology, Rutgers School of Dental Medicine, Newark, NJ 07103, USA
2. Department of Endodontics, Rutgers School of Dental Medicine, Newark, NJ 07103, USA

Dr. Motoki Okamoto

Department of Restorative Dentistry and Endodontology, Osaka University Graduate School of Dentistry, Suita, Osaka, 565-0871, Japan

Deadline for manuscript submissions

30 November 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/245703

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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

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