

Special Issue

From Biology to Biomechanics: Molecular Advances in Orthodontic Remodeling and Acceleration

Message from the Guest Editors

Orthodontic tooth movement is a dynamic process involving finely regulated molecular and cellular events that govern the remodeling of the periodontal ligament, alveolar bone, and surrounding soft tissues in response to mechanical loading. Over the past decades, increasing integration of molecular biology, omics technologies, and translational research has provided novel insights into the pathophysiological mechanisms underlying tissue adaptation and remodeling in orthodontic therapy.

This Special Issue aims to bring together high-quality contributions that explore the molecular underpinnings of orthodontic biomechanics, root and alveolar bone resorption, soft tissue response, and strategies for treatment acceleration. Particular emphasis will be placed on research linking basic molecular mechanisms to clinical applications, including biological modulation, surgical adjuncts, and technologies aimed at improving treatment efficiency and predictability.

We welcome original research articles, comprehensive reviews, and cutting-edge clinical studies that bridge the gap between fundamental science and contemporary orthodontic practice.

Guest Editors

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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.

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