



Advanced Biomaterials for Periodontal Regeneration and Orthodontics

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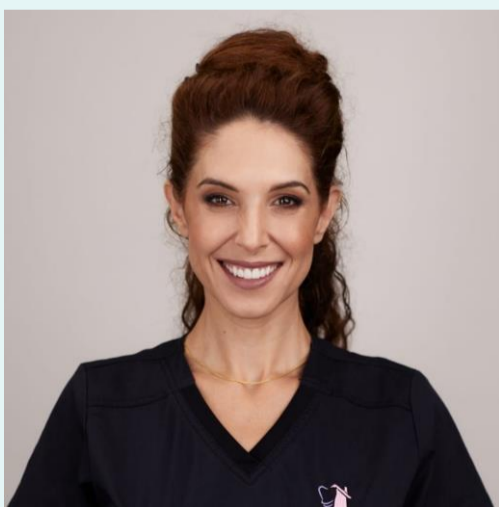
Dear Colleagues,

The field of periodontal regeneration and orthodontic therapy has evolved significantly with the development of advanced biomaterials designed to enhance biological healing and clinical predictability. Contemporary regenerative strategies increasingly integrate bioactive materials such as enamel matrix derivatives, hyaluronic acid formulations, bone substitutes, resorbable membranes, and scaffold-based systems to promote both hard- and soft-tissue regeneration.

In periodontology, these biomaterials aim to modulate inflammation, stimulate cellular proliferation and differentiation, and improve clinical attachment gain and bone regeneration. In orthodontics, biologically driven approaches are gaining attention, particularly in the management of periodontal–orthodontic interactions, corticotomy-assisted therapy, alveolar preservation, and tissue augmentation procedures. The convergence of regenerative biology and orthodontic biomechanics represents a shift toward minimally invasive, evidence-based, and interdisciplinary treatment protocols.

This Special Issue seeks to publish original research articles, systematic reviews, translational studies, and high-quality clinical reports that investigate material properties, biological mechanisms, clinical applications, and long-term outcomes of advanced biomaterials in periodontal and orthodontic practice. Submissions exploring novel biomaterial formulations, regenerative adjuncts, digital integration, and interdisciplinary treatment strategies are particularly encouraged.

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