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Imaging on Oral and Maxillofacial Regions

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Image Article

e oral and maxillofacial regions have numerous tissue types and intricate anatomical structures that serve essential health and aesthetic purposes. Bioactive materials with the potential to treat oral and maxillofacial diseases include biodegradable metals (BMs).

e current state of research on BMs for oral and maxillofacial applications as well as potential future research directions are outlined in this summary. Bone fracture xation systems based on Mg- and Zn-



Figure 1:

based BMs, as well as guided bone regeneration (GBR) membranes, are the subject of in-depth discussion. Clinical translation holds great promise for Zn-based BMs with superior mechanical properties for GBR membranes and a moderate degradation rate [1,2].

Due to their insoluble degradation products and relatively slow degradation rate, Fe-based BMs severely restrict their clinical application. Additionally, we suggested BMs containing hydrogels for the regeneration of cartilage, so tissue, and nerves as well as 3D-printed BM bone sca olds, surface modi cation for BM GBR membranes, and other potential future research directions for BMs in the oral and maxillofacial regions. e development of BMs in the oral and maxillofacial regions has made progress that can be used for clinical translation in the future (Figure 1).

References

and Ca2+ differentially regulate beta 1 integrin-mediated adhesion of dermal fbroblasts and keratinocytes to various extracellular matrix proteins

cations (Mg2+, Ca2+) differentially infuence the beta 1 integrin-mediated migration of human fbroblasts and keratinocytes to different extracellular

*Corresponding author:		
Received:	Reviewed:	Editor assigned:
Revised:		Published:
Citation:		
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