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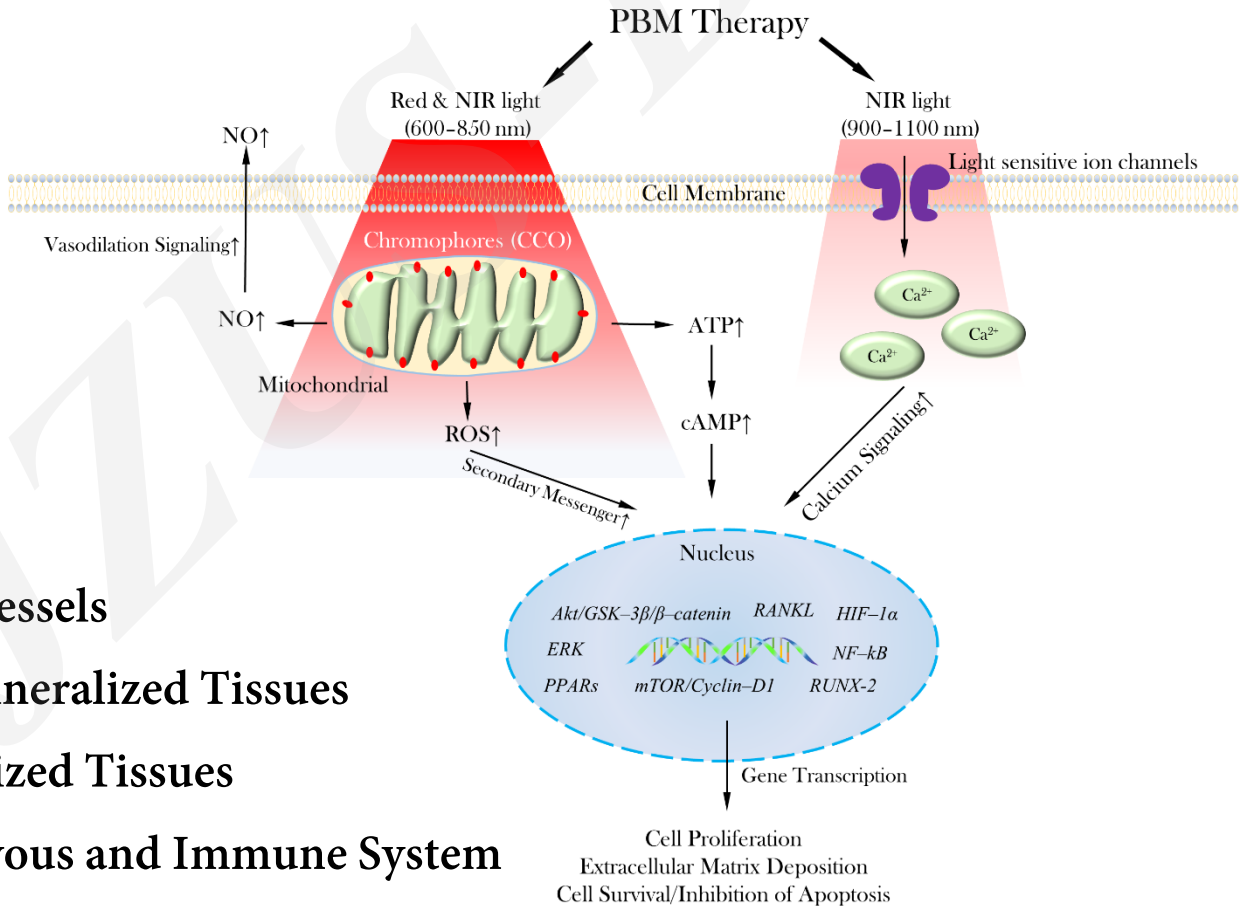
Photobiomodulation therapy assisted orthodontic tooth movement: potential implications, challenges, and new perspectives

Key words:
Low–level laser therapy (LLLT); Photobiomodulation therapy; Low-intensity-laser therapy (LILT); Orthodontic tooth movement; Orthodontics; Immunorthodontics

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Review Summary

This review explores possibilities for improving the application and effectiveness of photobiomodulation (PBMT) during orthodontic tooth movement (OTM).



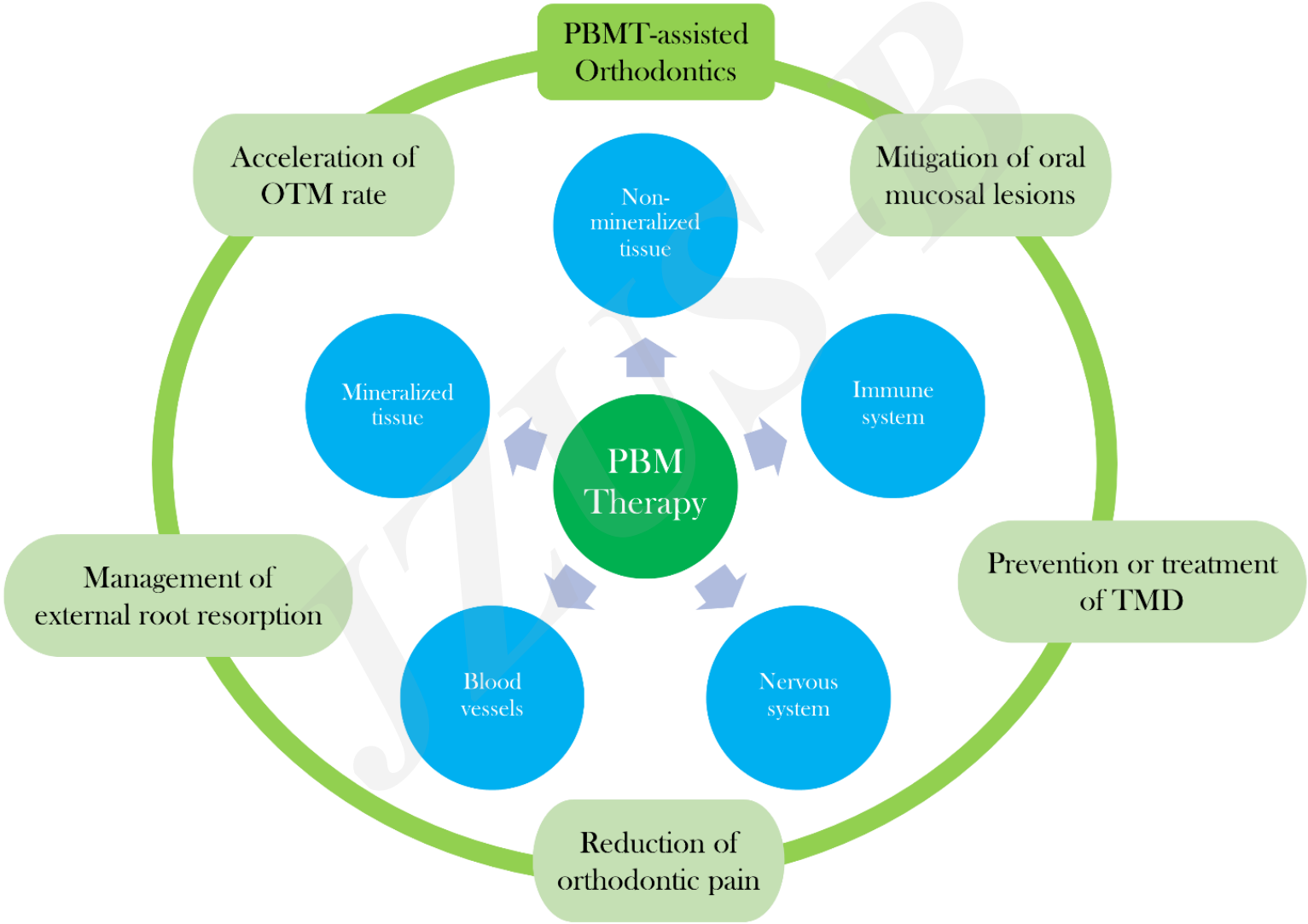
Effect of PBMT on Blood Vessels

Effect of PBMT on Non–Mineralized Tissues

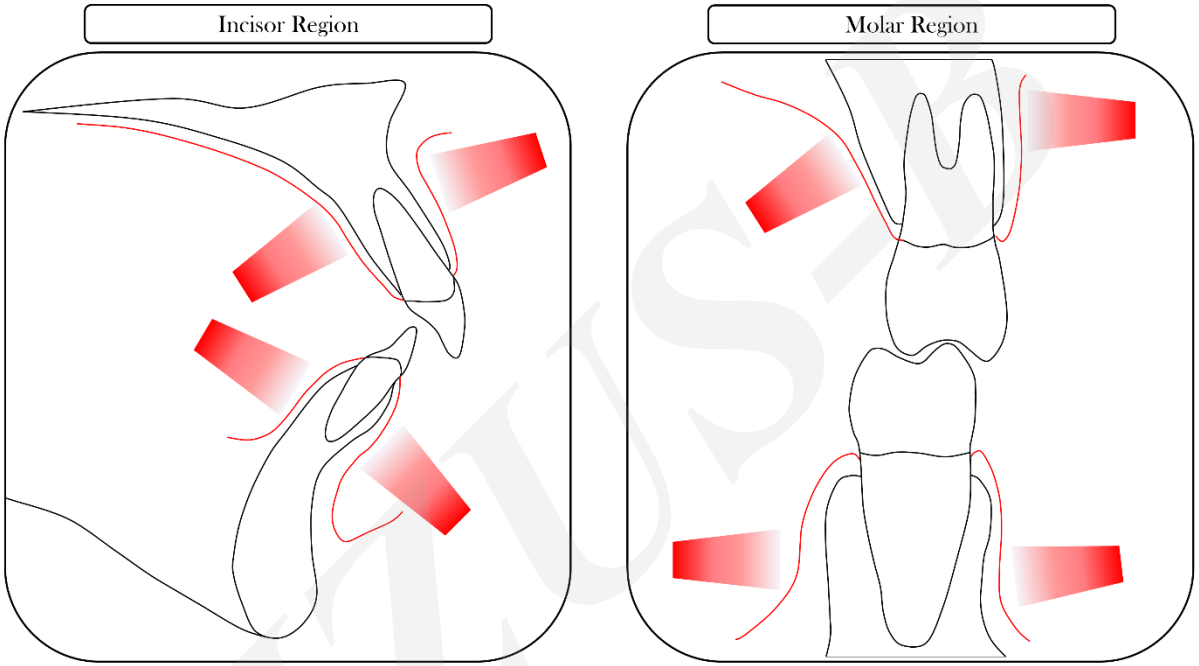
Effect of PBMT on Mineralized Tissues

Effect of PBMT on the Nervous and Immune System

“PBMT–assisted orthodontics”



Further Research



- Future research should be carefully designed to reveal as completely as possible the cellular and molecular regulatory mechanisms underlying PBMT in the field of orthodontics.
- Such developments will serve to optimize the applied PBMT protocols to ensure the efficacy and safety of PBMT in conjunction with OTM, in so-called PBMT–assisted orthodontics.