

Student Speech Contest 2025

From ions to new blood vessels: stimulating angiogenesis with Cu-releasing bioactive glasses



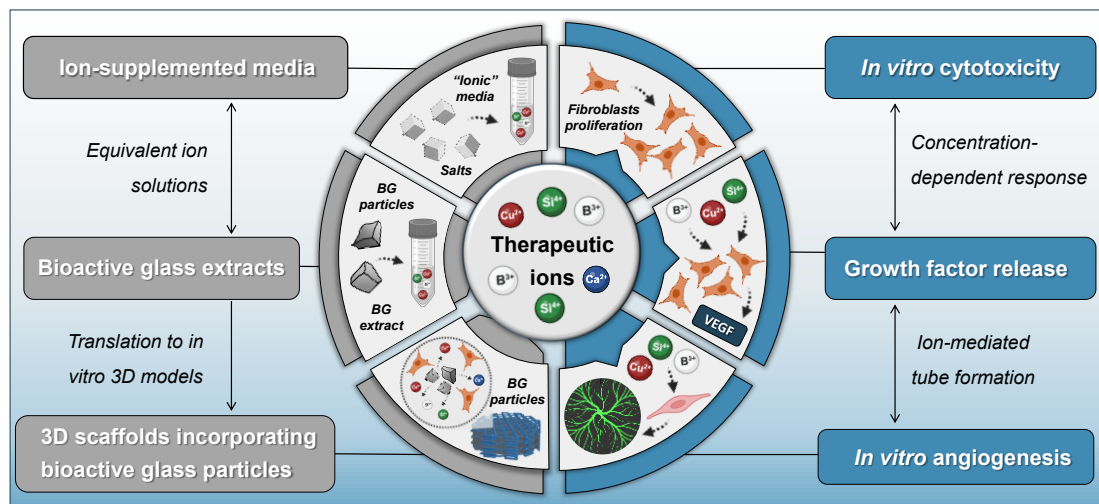
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Abstract.



Bioactive glasses (BGs) are widely recognized for their ability to release therapeutic ions that modulate biological processes such as angiogenesis. To directly assess these ion-mediated effects, equivalent ion solutions and BG extracts were systematically compared in terms of fibroblast viability, growth factor secretion, and tube formation capacity. Finally, the incorporation of BG particles into 3D-printed scaffolds, acting as a 3D model that mimics the tissue environment, confirmed their ability to promote vascular network formation.