

## Special Issue

# Advances in Stem Cell Differentiation: From Mechanisms to Therapeutic Applications

### Message from the Guest Editors

We are pleased to serve as for this upcoming Special Issue, "Advances in Stem Cell Differentiation: From Mechanisms to Therapeutic Applications". This Special aims to highlight cutting-edge research that advances our understanding of how stem cells respond to diverse regulatory signals, as well as showcase how these insights can be translated into innovative therapeutic strategies. We invite you to contribute original research articles, reviews, or perspectives focusing on the role of physical cues in stem cell differentiation. Studies exploring the impact of substrate stiffness, topography, mechanical loading, electrospinning, 3D bioprinting, biomaterial design, and bioelectrical signals are particularly welcome. We are especially interested in work that uncovers the underlying mechanisms through which these physical factors influence lineage specification and functional tissue formation. We look forward to your contributions and to advancing the dialogue around the intersection of mechanobiology, biomaterials, and regenerative medicine.

### Guest Editors

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### Deadline for manuscript submissions

31 October 2025



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### Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie

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