Special Issue

Mechanotransduction in Control of Cell Fate and Function

Message from the Guest Editors

Mechanotransduction defines the process by which cells perceive and respond to microenvironmental physical forces (e.g., tension, compression, distortion, friction) and cues (e.g., rigidity, topography) by activating a cellular signaling sequence mediated by mechanosensitive cellular components and gene expression. Although the underlying molecular mechanisms have not been completely understood, increasing evidence suggests that mechanotransduction is critically involved in the control of cell differentiation, tissue homeostasis, and organ development. This Special Issue welcomes original research and review papers addressing the contribution of biophysical forces and cues deriving from the extracellular microenvironment in shaping stem cell fate. Interdisciplinary applications will stimulate future research in this exciting and rapidly-progressing field.

Guest Editors

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About the Journal

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).