Special Issue

Regulatory Role of ECM Biophysical Signals on Cell and Nuclear Mechanics

Message from the Guest Editors

In vivo, cells are continuously exposed to multiple microenvironmental stimuli, such as chemical, topographic, and mechanical gradients encased within the extracellular matrix, which control their time and space presentation to tightly regulate cell and tissue functions. Recently, it has been appreciated that extracellular-borne forces are transmitted to the nucleus via the cytoskeletal filaments and biochemical signaling to alter the chromatin organization, inter-chromosome contacts, and gene expression programs. This foundation of mechanobiology aims to link the regulatory role of biophysical signals on cell functions (i.e., migration, differentiation, and neoplastic transformation) with the tensional status of the cytoskeleton along with the mechanical interplay between cytoskeletal forces and nuclear envelope deformation. Focusing on these key aspects, we believe that this Special Issue offers the opportunity to develop a deeper understanding of the mechanisms that regulate mechanically induced alterations in chromatin organization and their effects on cell state and fate by assessing cell cytoskeleton mechanics in a proper extracellular context.

Guest Editors

Dr. Valeria Panzetta

Centro di Ricerca Interdipartimentale sui Biomateriali (CRIB), Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, Università degli Studi di Napoli Federico II, 80125 Naples, Italy

Prof. Dr. Sabato Fusco

Department of Medicine and Health Sciences "Vincenzo Tiberio", University of Molise, 86100 Campobasso, Italy

Deadline for manuscript submissions

closed (31 May 2023)

Biomedicines

an Open Access Journal by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed

mdpi.com/si/112068

Biomedicines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomedicines@mdpi.com

mdpi.com/journal/biomedicines

Biomedicines

an Open Access Journal by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed

mdpi.com/journal/biomedicines

MDPI

About the Journal

Message from the Editor-in-Chief

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to Biomedicines, be it original research, review articles, or developing Special Issues of current key topics.

Editor-in-Chief

Prof. Dr. Felipe Fregni
1. Neuromodulation Center and Center for Clinical Research Learning, Spaulding Rehabilitation Hospital and Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114, USA
2. Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA 02115, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q1 (Medicine (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).