# Special Issue

# Physiological and Pathophysiological Responses to Biomaterials 2.0: From Nano- to Microscale Effects and Interactions

## Message from the Guest Editors

In recent years, the intertwinement of molecular physiology, biomaterials science and tissue engineering has led to the elucidation and definition of many mechanisms of cell–material and tissue–material interactions. Nevertheless, the increasing investigations on new biomaterial formulations and biomedical devices at the nano-, meso- or microscale levels imply the identification of new types of impact and extremely diverse responses from cells and tissues, which may vary upon the physiological or pathophysiological processes which the biomaterial/device must face. In this 2nd version of our Special Issue, we invite the submission of research articles, communications and review articles, on the broad topic of cell–material and tissue–material interactions specifically investigated at nano-, meso- or microscale levels of application, for deepening knowledge on (a) the use of biomaterials in physiological and pathophysiological contexts, and (b) the basic structure–function relationships of biomaterials and biomedical devices (including scaffolds, surfaces and microfluidic devices, for advanced in vitro models) with cells and tissues.

## Guest Editors

Dr. Amilcare Barca

Dr. Marta Madaghiele

Dr. Stefania Scialla

## Deadline for manuscript submissions

31 March 2026

**Biology**

**an Open Access Journal by MDPI**

**Impact Factor 3.5**
**CiteScore 7.4**
**Indexed in PubMed**

mdpi.com/si/113100

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

mdpi.com/journal/biology

# Biology

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed

mdpi.com/journal/biology

# About the Journal

## Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

## Editors-in-Chief

Prof. Dr. Jukka Finne
Research Programme in Molecular and Integrative Biosciences, Faculty of Biological and Environmental Sciences, University of Helsinki, P.O. Box 56, FI-00014 Helsinki, Finland

Prof. Dr. Andrés Moya
Integrative Systems Biology Institute, University of Valencia and CSIC, 46980 Valencia, Spain

## Author Benefits

**High Visibility:**

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

**Journal Rank:**

JCR - Q1 (Biology) / CiteScore - Q1 (General Agricultural and Biological Sciences)

**Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.4 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the first half of 2025).

MDPI