Special Issue

Cell and Tissue Engineering for Functional Analysis

Message from the Guest Editor

Functional expression in tissues and organs is determined by the gene expression profile at the cellular level. Many innovations have been made to evaluate the functions of tissue and organ cells, and knowledge to explain the biological phenomena observed in the tissue and organ cells has been accumulated using these technologies. Recently, stem cell engineering, genome engineering, and synthetic biology have been added to this approach, and cell-based engineering methods have been used to control the cellular response to internal factors and stimuli from the extracellular environment. By incorporating an artificial gene circuit into a cell, its function can be changed autonomously. Rewriting genetic programs encoded on the genome determine the fate and longevity of cells based on cell function. The fabrication of tissues made with cells that perform the functions designed by direct control of the cellular gene expression profile at the genomic level may bring advances in biomedical engineering. This Special Issue deals with the latest research on cell function analysis and its medical applications using technologies such as genome editing, AI, bioprinting, and microfluidics.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2022)

Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/si/74100

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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).