

Special Issue

Advances in CAR Cell Therapies and Manufacturing

Message from the Guest Editors

This special issue will focus on CAR (Chimeric Antigen Receptor) cell therapies, highlighting recent advancements and manufacturing processes transforming cancer immunotherapy. The Issue will highlight new CAR types and important cell attributes such as the secretion of cytokines, granzymes etc. Different gene delivery strategies will be considered for introducing the CAR transgene into target cells, including viral methods employing lentiviral vectors and non-viral methods with or without the use of (nano)particle vectors.

This Issue will explore efficient methods for expanding and cryopreserving CAR cell products, optimizing cell yield and quality while minimizing cost. This includes discussions on optimizing the cell expansion step for optimal growth and differentiation, and exploring scale-up approaches for allogeneic products. Lastly, it will discuss essential biomarkers and assays for evaluating the safety, efficacy, and functionality of CAR cell products. This includes exploring critical quality attributes like transduction efficiency, viability, purity, and advancements in real-time monitoring and in-line quality control technologies.

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 15.5 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).