



## Recent Prospectives in CAR T-based Therapy for Solid and Hematological Malignancies

Guest Editors:

**Dr. Carlo Cenciarelli**

Institute of Translational  
Pharmacology, National  
Research Council of Italy, Rome,  
Italy

**Prof. Dr. Hany E. Marei**

Faculty of Veterinary Medicine,  
Department of Cytology and  
Histology, Mansoura University,  
Mansoura, Egypt

Deadline for manuscript  
submissions:

**closed (15 October 2022)**

### Message from the Guest Editors

Dear Colleagues,

CAR T-cell therapy has been demonstrated to be effective in CD19-positive blood cancers; thus, this offers great hope for a wide range of aggressive tumors. Despite the great promise of CAR T-cell-based therapy, several challenges still exist such as cancer cells heterogeneity, abnormal signaling pathways involved in tumor progression, antigen escape, the hostile inhibitory tumor microenvironment, and T cells' dysfunction/exhaustion. All of these issues must be addressed before a full clinical application can begin. More recently, another T-cell therapy has taken hold, and we hope in this Special issue can provide advances in T cells engineered with Fc $\gamma$ -chimeric receptors (CRs) redirected against solid tumors and blood malignancies. We also intend to highlight the most recent clinical trials with a focus on the rationale for using different types of CAR T cells, emphasizing the various ways in which such trials are designed to overcome specific hurdles, as well as how outcomes are reflected in improving therapeutic arsenals against various cancer types.

- CAR
- Fc $\gamma$ -CR
- T cells
- solid tumors
- blood malignancies





an Open Access Journal by MDPI

## 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

## 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.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [PMC](#), [CAPUS / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (*Pharmacology & Pharmacy*) / CiteScore - Q2 (*Medicine (miscellaneous)*)

## Contact Us

*Biomedicines* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/biomedicines](http://mdpi.com/journal/biomedicines)  
[biomedicines@mdpi.com](mailto:biomedicines@mdpi.com)  
[X@Biomed\\_MDPI](#)