

## Special Issue

# Advanced Research on CAR-T Cell Therapy

### Message from the Guest Editor

Although CAR T cell therapy is effective in liquid cancer therapy, its application in solid cancer is difficult. On the other hand, TCR T cell therapy appears to be effective in some cases, for example, NY-ESO-1 and MAGE-A4. Compared with the TCR-T cell therapy, infused CAR T cells cannot be maintained for long or their function decreases rapidly. As a majority of infused cells differentiate into effector memory or terminal memory cells, central memory and stem cell memory formation is not enough. In this Special Issue, several studies will be reported. The co-expression of IL-7 and CCL19 can recruit APC cells and activate bystander host cells and induce antigen spread. The co-expression of membrane-bound IL-12 induces memory differentiation after antigen stimulation and increased tumor suppression. Lymph-node-targeting amphiphile vaccine can boost CAR-T cells and induce antigen spread. Using these approaches and few new ones, several cases of solid tumors will be cured with CAR T cell therapy.

---

### Guest Editor

Dr. Yasushi Akahori

Department of Personalized Cancer Immunotherapy, Graduate School of Medicine, Mie University, Tsu 514-8507, Japan

---

### Deadline for manuscript submissions

closed (20 August 2025)



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/196245](https://mdpi.com/si/196245)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto:ijms@mdpi.com)

[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)





# International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)



## About the Journal

### Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

---

### Editor-in-Chief

Prof. Dr. José L. Quiles  
Department of Physiology, Institute of Nutrition and Food Technology  
"Jose Mataix", Biomedical Research Center, University of Granada,  
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

---

### 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, MEDLINE, Embase, CAPus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)