

Special Issue

Advances in Gene and Cell Therapy

Message from the Guest Editor

Cell therapy consists of implanting cells to repair or regenerate an organ. These cells may be adult, embryonic or induced pluripotent stem cells, and are the subject of many research programs and clinical assays, in particular, in the field of cardiopathies and skin diseases. Immunotherapy treatment of cancer, using CAR-T, is also a cell therapy that is being increasingly employed. In recent years, a technological health revolution has appeared, with the possibility of editing the genome, mainly using the CRISPR-Cas9 system.

Two women, J. Doudna and E. Charpentier, received the 2020 Nobel Prize for developing this technology.

Another medical revolution is the use of mRNA for transient gene transfer, as used in COVID-19 vaccines.

The present Special Issue aims to update these fields, including preclinical research aspects of molecular and cell biology that design the medicine of the future.

Potential topics include, but are not limited to, the following: Gene therapy (preclinical research and clinical assays);

Cell therapy (preclinical research and clinical assays);

RNA-based therapies or vaccines;

Immunotherapy;

Genome editing;

Development of vectors;

Oncolytic vectors.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) 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, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *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.

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