Special Issue

Mechanism of Gene Modification Therapy for Cystic Fibrosis

Message from the Guest Editors

Gene modification therapies offer a targeted approach to correcting the underlying defect in cystic fibrosis (CF), which is caused by mutations in the CFTR gene. mRNA-based methods deliver functional CFTR transcripts to airway epithelial cells, enabling the transient production of the CFTR protein without any changes to the genome. In contrast, gene-editing technologies such as CRISPR/Cas aim to permanently repair pathogenic mutations at the DNA level. Advances in precision and safety are essential for achieving long-lasting therapeutic benefits in CF patients.This Special Issue will highlight recent advances in the molecular mechanisms of gene modification therapies for cystic fibrosis. Topics will include mRNA-based approaches, gene editing technologies, and delivery strategies. We invite the submission of original research articles and reviews that address mechanistic insights, safety considerations, and translational perspectives in CF gene therapy.

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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