Special Issue

Targeted Delivery of Genes

Message from the Guest Editors

Achieving target-specific delivery of oligonucleotides, whether to disease sites, specific tissues, or organs, is crucial for enhancing therapeutic precision and minimizing off-target effects. This precise delivery, facilitated by advanced methods like chemically modified oligonucleotides and nanoparticles, holds immense promise for improving treatment efficacy. Oligonucleotides and genes, particularly mRNA, siRNA, antisense RNA, and the CRISPR-Cas9 system, hold promise as alternatives to conventional therapeutic modalities. This Special Issue aims to compile research articles and reviews spotlighting cancer-targeted. tissue-targeted, and organ-targeted delivery of oligonucleotides. Special emphasis is placed on modified mRNA, siRNA, antisense RNA, CRISPR-Cas9, microRNA, plasmid DNA and DNA, along with their effective delivery systems involving nanoparticles, dendrimers, and LNPs. Understanding the structural and chemical modification of oligonucleotides, coupled with successful packaging systems, is paramount for the success of gene therapy in this rapidly advancing field. We look forward to receiving your submission.

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Editor-in-Chief

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