Special Issue

Precision Nucleic Acid Therapeutics

Message from the Guest Editor

Oligonucleotide therapeutic approaches, including antisense oligonucleotides, siRNA, aptamers, microRNA mimics, antimiRs, and DNAzymes, continue to demonstrate great potential in developing drugs for the treatment of various inherited and acquired diseases. So far, eight antisense oligonucleotide drugs (Vitravene, Kynamro, Exondys 51, Spinraza, Tegsedi, Waylivra, Milasen, and Vyondys 53), two siRNA drugs (Onpattro and Givlaari), and one aptamer drug (Macugen) have received approvals for clinical use, and notably, eight of them were approved in the last five years alone. The use of chemically modified nucleic acids are paramount towards developing successful oligonucleotide drugs, but so far only a very small number of nucleic acid chemistries have been utilised in clinical developments. Although the oligonucleotide therapeutics field has progressed significantly in the last three decades, delivery efficacy, tissue-specific targeting, and the cost of therapy still remain as major challenges. This Special Issue is initiated to further promote the advancements of the field in all aspects of functional nucleic acid therapeutic developments.

Guest Editor

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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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