Special Issue

Therapeutic RNA Delivery Systems for Treatment of Cancer

Message from the Guest Editors

RNA therapeutics are changing the way we treat cancer. Adding to their cost-effective manufacturing, RNA drugs can be custom-engineered to silence specific cellular pathways necessary for the cancer cells to survive. Lipid-based and polymeric nanoparticle systems have been developed to protect the RNA and mediate its intracellular delivery. Recent advances in the synthesis of vitro-transcribed mRNA, accompanied by the development of novel nanoparticle carriers for its effective systemic delivery, have additionally marked a new era in cancer therapy, introducing new treatment strategies where immunostimulatory and/or cancersuppressor proteins are expressed directly in vivo.

This Special Issue aims to summarize the most recent advances in the nanoparticle-assisted delivery of RNA for the treatment of cancer. In addition to recent research on nanoparticle carriers for RNA interference therapy, novel immunotherapeutic strategies using nanoparticle-formulated mRNAs (e.g., immunomodulator expression, dendritic cell activation, and/or T cell reprogramming) will be discussed.

Guest Editors

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Deadline for manuscript submissions

closed (10 January 2024)



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Editor-in-Chief

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