Special Issue

Nucleic Acid Nanobiology for Drug Delivery and Immunotherapy

Message from the Guest Editor

Immunomodulatory nucleic acids have been identified as potent pharmaceuticals, ranging from Toll-Like Receptor (TLR) agonists to checkpoint blockades. Similarly designed DNA agonists have been shown to bind irreversibly to the same receptors to reduce undesirable immune responses. By harnessing the programmable architecture of nucleic acids, dynamic structures can be designed which are capable of carrying out precisely controlled functions and immunomodulation for uses in nanomedicine. The coverage of this special issue will include (but not limited) by following topics:

- Immunorecognition of nucleic acids in animal models and humans
- Desirable immunomodulation using nucleic-acid based nanoparticles
- Undesirable immunological side-effects of nucleic acid therapeutics
- Rational design and characterization of programmable nucleic-acid based nanoparticles
- Delivery of nucleic-acid based nanoparticles and effect of carrier on their immunorecognition
- Therapeutic nucleic-acid based nanoparticles: design, assembly, characterization

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Guest Editor

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Message from the Editor-in-Chief

As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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