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Quadruplex Nucleic Acid Ligands in Drug Discovery

Guest Editor:

Dr. Alexandra Paulo

University of Lisbon, Faculty of Pharmacy, iMed-Medicinal Chemistry Group, Lisbon, Portugal

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Message from the Guest Editor

The four-stranded structures formed by the guanine-rich sequences of nucleic acids (DNA or RNA), termed Gquaduplexes (G4), are emerging as very promising nanostructures in the field of medicine. Their presence in the human genome and in the genome of human pathogens, as well as their involvement in the regulation of several cellular processes, turn these nucleic acid transient structures into promising drug targets. Another quadruplex nucleic acid emerging as a drug target is the i-motif that can be formed in the complementary DNA cytosine-rich strand. In addition, G4-forming oligonucleotides are also promising agents for selective drug delivery and have high applicability in nanotechnology, due to their structural diversity, high stability, and cell permeability.

This Special Issue will address the following topics:

* Design and synthesis of quadruplex-binding small molecules and organic–metal complexes;

* Methods to study quadruplex-ligand interactions;

* Studies demonstrating the applicability of quadruplex ligands in drug discovery and in health-related nanotechnology.









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Prof. Dr. Amélia Pilar Rauter

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Message from the Editor-in-Chief

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