Special Issue

Investigation of the Importance of Non-B DNA Structures at the Interface between Chemistry and Biology

Message from the Guest Editors

DNA is a very polymorphic macromolecule, the folding of which extends far beyond the double helix. Sequences with high propensity to form non-canonical structures are particularly enriched in disease-related human genes, as well as in the genome of various microorganisms. This observation suggests a potential role of non-B DNA in the onset of several human diseases, including cancer, neurodegenerative disorders, and infectious diseases. Recent studies addressing the role of DNA secondary structures have mainly focused on tetraplex structures, such as G-quadruplexes and i-motifs, corroborating the potential of these structures as innovative targets for therapeutic intervention. Interesting evidence also hints at a potential biological role for triplexes, hairpins, and cruciform structures. Consequently, interest in studying non-canonical DNA structures has significantly expanded in recent years, engaging research spanning from synthetic chemistry to cell biology. This Special Issue aims to gather experts in the field of non-B DNA to cover different facets of non-canonical nucleic acid structures and recent advances in this area at the interface between chemistry and biology.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

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