

CALL FOR PAPERS

Guanine rich DNA and RNA sequences can self-assemble to form noncanonical secondary and tertiary structures termed G-quadruplexes (GQs). Since the first report of guanine-quartet by Gellert et al. in 1962, the interest and research in these noncanonical nucleic acid architectures have increased by manifold. Potential quadruplex-forming sequences (PQS) are distributed throughout the human genome especially at the gene-controlling sites like promoters. The biological role of quadruplexes is yet to be validated, but due to presence of PQS at gene-controlling sites, there is particular interest in them as targets for therapeutic intervention. The structures of many quadruplexes by synthetic nucleotides have been elucidated by X-ray and NMR methods.

This special issue aims to cover the recent developments in the quadruplex research. We aim to cover diverse topics ranging from structure, formation and stability, exploration of biological role to potential role in biotechnology of quadruplexes. The issue will be of special interest to readers that want to know the formation and role of noncanonical nucleic acid architectures.

Potential topics include but are not limited to the following:

- ▶ Milestones in G-quadruplex research
- ▶ Functional assemblies made from supramolecular G-quadruplexes
- ▶ Thermodynamics of G-quadruplexes
- ▶ G-quadruplex probed at the single molecular level by force-based methods
- ▶ Characterization of G-quadruplexes by CD and fluorescence spectroscopy
- ▶ Synthesis and properties of oligonucleotides forming G-quadruplexes
- ▶ Solution dynamics and structure of G-quadruplexes studied by dynamic light scattering
- ▶ Fundamentals and applications of the geometric formalism of quadruplex folding
- ▶ Computational methods for studying G-quadruplex nucleic acids
- ▶ G-quadruplex folding
- ▶ Biological functions of G-quadruplexes
- ▶ Quadruplex nucleic acids as a therapeutic target
- ▶ Screening for quadruplex binding ligands
- ▶ Recognition of G-quadruplexes by metal complexes
- ▶ Catalytic G-quadruplexes
- ▶ Conductive behavior of G4-DNA-silver nanoparticle structures

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jna/gqu/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Shozeb Haider, University College
London, London, UK
shozeb.haider@ucl.ac.uk

Guest Editors

Gary Parkinson, University College
London, London, UK
gary.parkinson@ucl.ac.uk

Tom Marsh, University of St. Thomas, St
Paul, USA
tcmars@stthomas.edu

Submission Deadline

Friday, 1 September 2017

Publication Date

January 2018