

Special Issue

G-quadruplex and Microorganisms

Message from the Guest Editor

G-quadruplexes (G4s) are nucleic acids secondary structures that form in DNA or RNA guanine (G)-rich strands. In the recent years, the presence of G4s in microorganisms has attracted increasing interest. In prokaryotes G4 sequences have been reported in several human pathogens and bacterial species present in the environment. Bacterial enzymes able to process G4s have also been identified. In viruses, G4s have been suggested to be involved in key steps of the viral life cycle: they have been associated with the human immunodeficiency virus (HIV), herpes simplex virus 1 (HSV-1), the human papilloma, Zika, Ebola, hepatitis C virus and other viruses' genome. G4 binding proteins and mRNA G4s have been implicated in the regulation of the viral genome replication and translation. G4 ligands have been developed and tested both as tools to study the complexity of G4-mediated mechanisms in the viral life cycle, and as therapeutic agents. Moreover, oligonucleotides that fold into G4 have been found to be active against several microorganisms. This special issue will focus on G4s involved in microorganisms addressing all the above aspects.

Guest Editor

Prof. Dr. Sara N. Richter
Department of Molecular Medicine, University of Padua, Padua, Italy

Deadline for manuscript submissions

closed (31 May 2019)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/18585

Molecules
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
molecules@mdpi.com

[mdpi.com/journal/
molecules](https://mdpi.com/journal/molecules)





Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



[mdpi.com/journal/
molecules](https://mdpi.com/journal/molecules)



About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th 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 all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarInLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).