



Special Issue Reprint

G-quadruplex and Microorganisms

www.mdpi.com/books/reprint/1495

Edited by Sara N. Richter

ISBN 978-3-03921-243-9 (Softback) ISBN 978-3-03921-244-6 (PDF)



G-quadruplexes (G4s) are nucleic acids secondary structures that form in DNA or RNA guanine (G)-rich strands. In recent years, the presence of G4s in microorganisms has attracted increasing interest. In prokaryotes, G4 sequences have been reported in several human pathogens. Bacterial enzymes able to process G4s have 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), human papilloma virus, swine pseudorabies virus, and other viruses' genomes. New evidence shows the presence of G4s in parasitic protozoa, such as the causative agent of malaria. G4 binding proteins and mRNA G4s have been implicated in the regulation of microorganisms' 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, new techniques to study G4 folding and their interactions with proteins have been developed. This Special Issue will focus on G4s present in microorganisms, addressing all the above aspects.



Order Your Print Copy You can order print copies at www.mdpi.com/books/reprint/1495

MDPINBOOKS Publishing Open Access Books & Series

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



ᆔ

High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).

Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG Grosspeteranlage 5 4052 Basel Switzerland Tel: +41 61 683 77 34 www.mdpi.com/books books@mdpi.com

