

Contents

Preface	ix
1. Inhibition of G-Quadruplex Helicase Activity As Determined by Surface Plasmon Resonance	1
Matthew Decker, Bhupendra Mishra, Dalip Kumar, and Wendi M. David	
2. A Fluorescence-Based G-Quadruplex DNA Cleavage Assay	13
Michelle Schoonover and Sean M. Kerwin	
3. Biophysical Studies of the Structure, Stability, and Ligand Binding Properties of G-Quadruplex DNA: Thoughts and Comparisons of the K-ras, c-MYC, and Bcl-2 Oncogene Promoter Sequence Quadruplexes	33
Jamie M. Dettler and Edwin A. Lewis	
4. A CD Spectroscopic Investigation of Intermolecular and Intramolecular DNA Quadruplexes	51
Brenna A. Tucker, Sahmla Gabriel, and Richard D. Sheardy	
5. Nucleosomal DNA: Kinked, Not Kinked, or Self-Healing Material?	69
Rajib Mukherjee and Thomas C. Bishop	
6. The Size of Internal Loops Influences the Unfolding Thermodynamics of DNA Hairpins	93
Iztok Prislan, Hui-Ting Lee, Cynthia Lee, and Luis A. Marky	
7. A Thermodynamic Perspective of sRNA-mRNA Interactions and the Role of Hfq	111
Kanav Jain, Taylor B. Updegrave, and Roger M. Wartell	
8. Protein: Feeling the Groove of DNA	133
Derrick Watkins, Lydia-Ann Harris, Gerald B. Koudelka, and Loren Dean Williams	
9. Chemistry and Biology of Aflatoxin-DNA Adducts	147
Michael P. Stone, Surajit Banerjee, Kyle L. Brown, and Martin Egli	
10. Examining Flanking Sequence Specificity and Topological Specificity in the Binding of Various Molecular Types to DNAs Using Restriction Endonuclease Activity Assays	167
S. A. Winkle, E. Duran, J. Pulido, G. Santil, M. Talavera, C. Winkle, R. D. Sheardy, and V. Ramsauer	
Editors' Biographies	181

Indexes

Author Index	185
Subject Index	187