

Table of Contents

CONTRIBUTORS TO VOLUME 261	ix
PREFACE	xiii
VOLUMES IN SERIES	xv

Section I. DNA and RNA Structure

1. How to Generate Accurate Solution Structures of Double-Helical Nucleic Acid Fragments Using Nuclear Magnetic Resonance and Restrained Molecular Dynamics	ULI SCHMITZ AND THOMAS L. JAMES	3
2. Comparison of X-ray and NMR-Determined Nucleic Acid Structures	BRUCE A. LUXON AND DAVID G. GORENSTEIN	45
3. Distance Geometry in NMR Determination of Solution Conformation of Nucleic Acids: Application of d-ACCGTTAACGGT	P. K. RADHA, R. NIBEDITA, R. AJAY KUMAR, AND R. V. HOSUR	73
4. Statistical Analysis of DNA Duplex Structural Features	NIKOLAI B. ULYANOV AND THOMAS L. JAMES	90
5. Structure Determination and Analysis of Local Bending in an A-Tract DNA Duplex: Comparison of Results from Crystallography, Nuclear Magnetic Resonance, and Molecular Dynamics Simulation on d(CGCAAAAATGCG)	MATTHEW A. YOUNG, JAYASHAREE SRINIVASAN, IGOR GOLJER, SURAT KUMAR, DAVID L. BEVERIDGE, AND PHILIP H. BOLTON	121
6. DNA Mismatches and Modified Bases	G. VICTOR FAZAKERLEY AND YVES BOULARD	145
7. NMR Studies of Complex DNA Structures: The Holliday Junction Intermediate in Genetic Recombination	GÖRAN CARLSTRÖM, SHIOW-MEEI CHEN, SIOBHAN MICK, AND WALTER J. CHAZIN	163
8. Structural Studies of DNA Three-Way Junctions	NEOCLES B. LEONTIS, MARTIAL E. PIOTTO, MICHAEL T. HILLS, ARUN MALHOTRA, IGOR V. OUPOROV, JEAN M. NUSSBAUM, AND DAVID G. GORENSTEIN	183

9. Parallel-Stranded Duplex DNA: An NMR Perspective	M. W. GERMANN, N. ZHOU, J. H. VAN DE SANDE, AND H. J. VOGEL	207
10. ^1H NMR Spectroscopy of DNA Triplexes and Quadruplexes	JULI FEIGON, KARL M. KOSHLAP, AND FLINT W. SMITH	225
11. Solid-State NMR of DNA	CHI-LONG JUANG, PEI TANG, AND GERARD S. HARBISON	256
12. Systems for the NMR Study of Modified Nucleoside-Dependent, Metal-Ion Induced Conformational Changes in Nucleic Acids	PAUL F. AGRIS AND STEPHEN C. BROWN	270
13. Preparation of Isotopically Enriched RNAs for Heteronuclear NMR	ROBERT T. BATEY, JOHN L. BATTISTE, AND JAMES R. WILLIAMSON	300
14. Biochemical and NMR Studies of RNA Conformation with an Emphasis on RNA Pseudoknots	JOSEPH D. PUGLISI AND JACQUELINE R. WYATT	323
15. Multidimensional Heteronuclear NMR Experiments for Structure Determination of Isotopically Labeled RNA	ARTHUR PARDI	350

Section II. Nucleic Acid Dynamics

16. Studies of Base Pair Kinetics by NMR Measurement of Proton Exchange	MAURICE GUÉRON AND JEAN-LOUIS LEROY	383
17. Determination of Fast Dynamics of Nucleic Acids by NMR	ANDREW N. LANE	413
18. Isotope Labeling for ^{13}C Relaxation Measurements on RNA	GARRY C. KING, J. WADE HARPER, AND ZHIJIAN XI	436
19. Site-Specific Dynamics in DNA: Theory and Experiment	B. H. ROBINSON AND G. P. DROBNY	451

Section III. Nucleic Acid Complexes

20. NMR and Nucleic Acid-Protein Interactions: The <i>Lac</i> Repressor Operator System	R. KAPTEIN, R. BOELEN, V. P. CHUPRINA, J. A. C. RULLMANN, AND M. SLIJPER	513
---	--	-----

21. Induced Structural Changes in Protein–DNA Complexes	YOSHIMASA KYOGOKU, CHOJIRO KOJIMA, SANG JEON LEE, HIDEHITO TOCHIO, NOBUAKI SUZUKI, HIROSHI MATSUO, AND MASAHIRO SHIRAKAWA	524
22. Uses of ^{13}C - and ^{15}N -Labeled RNA in NMR of RNA–Protein Complexes	KATHLEEN B. HALL	542
23. Studies of Nucleic Acids and Their Protein Interactions by ^{19}F NMR	FRAYDOON RASTINEJAD, CARYN EVILIA, AND PONZY LU	560
24. NMR Studies of Drug–DNA Complexes	MAX A. KENIRY AND RICHARD H. SHAFER	575
AUTHOR INDEX		605
SUBJECT INDEX		629