

Principles of Nucleic Acid Structure

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This unique and practical resource provides the most complete and concise summary of underlying principles and approaches to studying nucleic acid structure, including discussion of x-ray crystallography, NMR, molecular modelling, and databases. Its focus is on a survey of structures especially important for biomedical research and pharmacological applications. To aid readers less familiar with the subject, the book includes an introduction to technical terminology used to describe nucleic acid structure and conformation. This book includes extensive coverage of the latest advances relevant to recognition of DNA and RNA by small molecules and proteins. In particular, the reader will find discussions on topics such as RNA folding, riboswitches, ribosome structure and RNA-antibiotic interactions, DNA quadruplexes and their drug complexes, DNA and RNA protein complexes, nucleosome-drug complexes and short interfering RNA (siRNA)-protein complexes. This handy guide is ideal for not only advanced undergraduates, but graduate students and active researchers alike.

Key Features:

- Over 200 high-quality diagrams and drawings
- Complete list of resources, including relevant online databases and software
- Comprehensive guide to both recent and classic literature



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