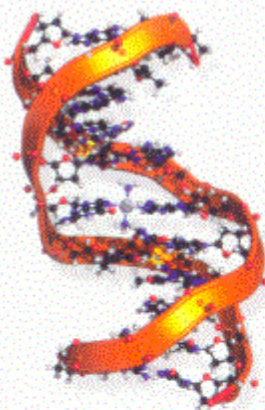


Metal Complex-DNA Interactions



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Metal ions and metal complexes have long been recognized as critically important components of nucleic acid chemistry, both in regulation of gene expression and as promising therapeutic agents. Understanding how metal complexes interact with DNA has become an active research area at the interface between chemistry, molecular biology and medicine.

Metal Complex-DNA Interactions provides a comprehensive overview of this increasingly diverse field, presenting recent developments and the latest research with particular emphasis on metal-based drugs and metal ion toxicity. The text is divided into four parts:

- **Basic Structural and Kinetic Aspects:** includes chapters on sequence-selective metal binding to DNA and thermodynamic models.
- **Medical Applications:** focuses on anticancer platinum drugs, including discussions on DNA repair in antitumor effects of platinum drugs and photodynamic therapy.
- **DNA Recognition - Nucleases and Sensors:** describes probes for DNA recognition, artificial restriction agents, metallo-DNAzymes for metal sensing applications and metal ion dependent catalysis in nucleic acid enzymes.
- **Toxicological Aspects:** deals with structural studies of mercury-DNA interactions, chromium-induced DNA damage and repair, and the effect of arsenic and nickel on DNA integrity.

This book will be a valuable resource for academic researchers and professionals from a range of pharmaceutical and chemical industries, particularly those involved in the development of new and less toxic anticancer metallo-drugs, and in the field of environmental and toxicological chemistry.

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