Record Nr. UNINA9910830211203321 Metal complex-DNA interactions [[electronic resource] /] / edited by **Titolo** Nick Hadjiliadis, Einar Sletten Pubbl/distr/stampa Oxford, : Wiley, c2009 **ISBN** 1-282-12409-9 9786612124099 1-4443-1208-1 1-4051-9410-3 Descrizione fisica 1 online resource (558 p.) Altri autori (Persone) HadjiliadisNick D SlettenEinar 572.864 Disciplina 612.01524 Metals - Physiological effect Soggetti **DNA-ligand interactions** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Metal Complex-DNA Interactions; Contents; Preface; List of Nota di contenuto Contributors: Acknowledgements: Part A: Basic Structural and Kinetic Aspects; 1: Sequence-Selective Binding of Transition Metal Complexes to DNA; 1.1 Introduction; 1.2 Ab initio Calculations and Photo-Cleavage Studies; 1.3 NMR Spectroscopic Studies of Metal Binding to DNA Oligonucleotides; 1.4 Summary of Theoretical and Experimental Evidence for Sequence-Selective Binding to DNA: 1.5 Sequence-Specific Groove Binding; Abbreviations; References; 2: Thermodynamic Models of Metal Ion-DNA Interactions; 2.1 Introduction 2.2 Interactions of Metal Ions with DNA2.3 Model and Mechanisms of Metal-Induced Formation of Point Defects; 2.4 Conclusions; Acknowledgements; Abbreviations; References; 3: Metal Ion Coordination in G-Quadruplexes; 3.1 Introduction; 3.2 Cation Coordination and Stability of G-Quadruplexes; 3.3 Structure of Sequences Consisting of Human Telomere Repeats; 3.4 G-Quadruplexes Adopted by Promoter Regions; 3.5 Bimolecular G-

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Sommario/riassunto

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 di