1. Record Nr. UNINA9910830600603321

Titolo	Neurodegenerative diseases and metal ions [[electronic resource] /] / edited by Astrid Sigel, Helmut Sigel, and Roland K.O. Sigel
Pubbl/distr/stampa	Chichester, West Sussex, England ; ; Hoboken, NJ, : Wiley, c2006
ISBN	1-280-51878-2 9786610518784 0-470-02811-4 0-470-02810-6
Descrizione fisica	1 online resource (489 p.)
Collana	Metal ions in life sciences ; ; v. 1
Altri autori (Persone)	SigelAstrid SigelHelmut SigelRoland K. O
Disciplina	572.51 616.8
Soggetti	Nervous system - Degeneration Nervous system - Diseases Metal ions - Health aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Metal Ions in Life Sciences; Historical Development and Perspectives of the Series; Preface to Volume 1; Contents; Contributors to Volume 1; Titles of Volumes 1-44 in the Metal Ions in Biological Systems Series; Contents of Volumes in the Metal Ions in Life Sciences Series; 1 The Role of Metal Ions in Neurology. An Introduction; 1 Introductory Remarks; 2 Comments on Metal Ions in Neurology; Acknowledgments; Abbreviations; References; 2 Protein Folding, Misfolding, and Disease; 1 Introduction; 2 Experimental Methods; 3 The Denatured State; 4 Protein Folding Dynamics 5 -Synuclein and Parkinson's Disease6 Conclusions and Outlook; Acknowledgments; Abbreviations and Definitions; References; 3 Metal Ion Binding Properties of Proteins Related to Neurodegeneration; 1 Introduction; 2 Cu2+ Interactions with Mammalian Prion Proteins and Their Fragments; 3 Interactions of Metal Ions with the Amyloid Precursor Protein and Its Fragments; 4 Concluding Remarks;

Acknowledgments; Abbreviations; References; 4 Metallic Prions: Mining the Core of Transmissible Spongiform Encephalopathies; 1 Introduction 2 Historical Connections Between Copper and Transmissible Spongiform Encephalopathies3 Copper Binding to Prion Protein; 4 Copper Coordination by Prion Protein; 5 Copper Uptake and Prion Protein Internalization; 6 Prion Protein as an Antioxidant; 7 Manganese Binding; 8 Transmissible Spongiform Encephalopathies and Metals; 9 Conclusions; Abbreviations; References; 5 The Role of Metal Ions in the Amyloid Precursor Protein and in Alzheimer's Disease; 1 Introduction; 2 Amyloid Precursor Protein and Brain Copper Homeostasis; 3 Amyloid Precursor Protein and Cu,Zn-Superoxide Dismutase-1
4 General ConclusionsAbbreviations; References; 6 The Role of Iron in the Pathogenesis of Parkinson's Disease; 1 Introduction; 2 Iron in the Etiology of Parkinson's Disease; 3 Sources of Increased Iron in Parkinson's Disease; 4 Consequences of Iron Overload in Parkinson's Disease; 5 General Conclusions; Acknowledgments; Abbreviations and Definitions; References; 7 In Vivo Assessment of Iron in Huntington's Disease and Other Age-Related Neurodegenerative Brain Diseases; 1 Introduction. Puzzling Changes in Cell Numbers in Huntington's Disease Brain
2 Human Brain Development and Disease Phenotypes3 Oligodendrocytes and Iron in Brain Development and Degeneration; 4 Transition Metal Metabolism and Proteinopathies; 5 In Vivo Measurement of Brain Iron; 6 Novel Treatment Considerations; 7 Conclusions; Acknowledgments; Abbreviations; References; 8 Copper-Zinc Superoxide Dismutase and Familial Amyotrophic Lateral Sclerosis; 1 Introduction; 2 Molecular Mechanisms of fALS SOD1 Pathogenesis; 3 Structural Features of Human SOD1; 4 'Wild-Type-like' fALS Mutants; 5 'Metal Binding Region' fALS Mutants; 6 Monomeric SOD1 and Pathogenesis; 7 Conclusions
Acknowledgments

Sommario/riassunto

About the Series... Metal Ions in Life Sciences links coordination chemistry and biochemistry in their widest sense and thus increases our understanding of the relationship between the chemistry of metals and life processes. The series reflects the interdisciplinary nature of Biological Inorganic Chemistry and coordinates the efforts of scientists in fields like biochemistry, inorganic chemistry, coordination chemistry, molecular and structural biology, enzymology, environmental chemistry, physiology, toxicology, biophysics, pharmacy, and medicine. Consequently, t