

1. Record Nr.	UNINA9910830892403321
Titolo	Metallotherapeutic drugs and metal-based diagnostic agents [[electronic resource]] : the use of metals in medicine // [edited by] Marcel Gielen, Edward R.T. Tiekink
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2005
ISBN	1-280-23877-1 9786610238774 0-470-29820-0 0-470-86404-4 0-470-86405-2
Descrizione fisica	1 online resource (644 p.)
Altri autori (Persone)	GielenM <1938-> (Marcel) TiekinkEdward R. T
Disciplina	615.23 615/.23
Soggetti	Metals - Therapeutic use Metals - Diagnostic use
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes bibliographical references and index.
Nota di contenuto	METALLOTHERAPEUTIC DRUGS AND METAL-BASED DIAGNOSTIC AGENTS; Contents; List of Contributors; Preface; 1 (3)Li Lithium Metallotherapeutics; 1.1 Introduction; 1.2 The Inorganic Chemistry of Lithium; 1.3 Biology of Lithium; 1.3.1 The history of lithium therapeutics; 1.3.2 Lithium and the body; 1.4 Targets of Lithium; 1.4.1 Glycogen synthase kinase-3; 1.4.2 Inositol phosphate signalling; 1.5 Lithium Therapeutics; 1.5.1 Bipolar disorder and schizophrenia; 1.5.2 Alzheimer's disease; 1.5.3 Ischemia (stroke); 1.5.4 Adverse effects; Acknowledgements; References 2 (5)B Boron Compounds as Therapeutic Drugs2.1 Boron Neutron Capture Therapy; 2.2 Classes of Boron Compounds for Potential Use in BNCT; 2.2.1 DNA binders; 2.2.2 Boron-containing amino acids and related peptides; 2.2.3 Boron-containing nucleic acid precursors; 2.3 Phosphates, Phosphonates and Phosphoramidates; 2.4 Amines; 2.5 Boron Analogues of Pyrophosphates; 2.6 Boronated Polyamines; 2.7

Carbohydrates; 2.8 Lipoproteins; 2.9 Lipids and Phospholipids; 2.10 Radiation Sensitizers; 2.11 Cyclic Thiourea Derivatives
 2.12 Central Nervous System (CNS) Depressants: Promazines, Hydantoin and Barbiturates
 2.13 Hydantoin and Barbiturates; 2.14 Oligonucleotide Antisense Agents; 2.15 Hormones; 2.16 Liposomes; 2.17 Conclusions; Acknowledgements; References; 3 (12)Mg The Role of Magnesium as a Metallotherapeutic Drug; 3.1 Introduction; 3.2 Magnesium as a Drug; 3.2.1 Gestational hypertension, preeclampsia and eclampsia; 3.2.2 Asthma; 3.2.3 Stroke; 3.2.4 Acute myocardial infarction; 3.2.5 Arrhythmias; 3.2.6 Miscellaneous; References; 4 (13)Al Aluminum Metallotherapeutics; 4.1 Introduction; 4.2 Adjuvants; 4.2.1 Alum
 4.2.2 Al(OH)₃ 4.2.3 Aluminum phosphate; 4.3 Antacids; 4.3.1 Aluminum hydroxide; 4.3.2 Aluminum glycinate; 4.3.3 Peptic ulcer disease; 4.3.4 Bismuth aluminum carbonate; 4.3.5 Bismuth-magnesium-sodium aluminosilicate; 4.4 Phosphate Binders; 4.4.1 Basic aluminum carbonate; 4.4.2 Aluminosilicates; 4.5 Alginate Raft Formulations; 4.6 Blistering Diseases in the Elderly; 4.7 Metabolic Diseases and Aluminum; 4.8 Anti-malarial Substances; 4.9 Potential Aluminum Toxicity; 4.10 Conclusions; References; 5 (14)Si Biological Activity of Organosilicon Compounds; 5.1 Introduction
 5.2 Organosilicon Modification
 5.2.1 O-, S- and N-Silylation; 5.2.2 C-Silylation; 5.3 Sila Analogues; 5.4 Specific Organosilicon Compounds; References; 6 (20)Ca The Role of Calcium as a Metallotherapeutic Drug; 6.1 Introduction; 6.2 Calcium Homeostasis; 6.3 Hormonal Regulation of Calcium Metabolism; 6.4 Optimal Amount of Dietary Calcium Intake and Benefits of Calcium Supplementation; 6.5 Osteoporosis; 6.6 Hypertension; 6.7 Hypertension in Pregnancy and Preeclampsia; 6.8 Colon Cancer; 6.9 Weight Control and Regulation of Body Fat; 6.10 Periodontal Disease; 6.11 Kidney Stones
 6.12 Calcium Supplements: Side Effects

Sommario/riassunto

There are an astonishing number and variety of roles that metals play in contemporary medicine. This book contains information on the medicinal uses of inorganics, that is, of elements such as boron, lithium, selenium, to name a few, as well as metal-containing species. In keeping with the notion that healthy mammals rely on (bio-essential) metals for the normal functioning of approximately a third of their proteins and enzymes, a large number of drugs are metal-based and considerable effort is being devoted to developing both second- and third-generation drugs as well as generating novel me