1. Record Nr. UNINA9910437606103321 Encyclopedia of Metalloproteins [[electronic resource] /] / edited by **Titolo** Robert H. Kretsinger, Vladimir N. Uversky, Eugene A. Permyakov Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Springer,, 2013 **ISBN** 1-4614-1533-0 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (LVII, 2574 p. 1108 illus., 777 illus. in color. eReference.) 572 Disciplina Soggetti **Biochemistry Proteomics** Cell biology Microbial genetics Microbial genomics Biochemistry, general Cell Biology Microbial Genetics and Genomics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di contenuto Period 2: Lithium, Beryllium -- Period 3: Sodium, Magnesium, Aluminium -- Period 4: Potassium, Calcium, Scandium, Titanium, Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Gallium -- Period 5: Rubidium, Strontium, Yttrium, Zirconium, Niobium, Molybdenum, Technetium, Ruthenium, Rhodium, Palladium, Silver, Cadmium, Indium, Tin -- Period 6: Caesium, Barium, Lanthaninds (Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, Ytterbium), Lutetium, Hafnium, Tantalum, Wolfram, Rhenium, Osmium, Iridium, Platinum, Gold, Mercury, Thallium, Lead, Bismuth -- Period 7: Francium, Radium, Actinides (Actinium, Thorium, Protactinium, Uranium). In biochemistry, a metalloprotein is a generic term for a protein that Sommario/riassunto

contains a metal cofactor. The metal may be an isolated ion or may be

coordinated with a nonprotein organic compound, such as the

porphyrin found in hemoproteins. In some cases, the metal is cocoordinated with a side chain of the protein and an inorganic nonmetallic ion. This kind of protein-metal-nonmetal structure is seen in iron-sulfur clusters Metalloproteins deals with all aspects related to the intracellular and extracellular metal-binding proteins, including their structures, properties and functions. The biological roles of metal cations and metal-binding proteins are endless. They are involved in all crucial cellular activities. Many pathological conditions are related to the problematic metal metabolism. Research in metalloprotein-related topics is therefore rapidly growing, and different aspects of metalbinding proteins progressively enter curricula at Universities and even at the High School level on occasion. However, no key resource providing basic, but comprehensible knowledge on this rapidly expanding field exists. The Encyclopedia of Metalloproteins aims to bridge this gap, and will attempt to cover various aspects of metalloprotein/metalloproteomics and will deal with the different issues related to the intracellular and extracellular metal-binding proteins, including their structures, properties and functions. The goal is to cover exhaustively all catalytically and biologically crucial metal ions and to find at least one interacting protein for other metal ions. The Encyclopedia of Metalloproteins will provide a key resource for advanced undergraduate and graduate students, researchers, instructors, and professors interested in protein science, biochemistry, cell biology, and genetics.