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neurodegeneration -- 12 Role of Zinc Transporters in Type 2 Diabetes and Obesity -- 13 Zinc Signals in Immunology -- 14 Zinc Signals in Inflammation -- 15 Zinc transporters and zinc signaling in skin formation and diseases -- 16 Post-translational mechanisms of zinc signalling in cancer -- 17 Zinc Signaling (Zinc'in) in Intestinal function -- 18 In Situ Imaging of Zinc with Synthetic Fluorescent Probes -- 19 Zinc Signals in biology.

Sommario/riassunto

This book, now in an extensively revised second edition, describes the crucial role of zinc signaling in biological processes on a molecular and physiological basis. Global leaders in the field review the latest knowledge, including the very significant advances in understanding that have been achieved since publication of the first edition. Detailed information is provided on all the essentials of zinc signaling, covering molecular aspects and the roles of zinc transporters, the zinc sensing receptor, and metallothioneins. Detection techniques for zinc signals, involving genetically encoded and chemical probes, are also described. The critical contributions of the zinc signal in maintaining health and the adverse consequences of any imbalance in the signal are then thoroughly addressed. Here, readers will find up-to-date information on the significance of the zinc signal in a wide range of conditions, including cardiovascular disorders, neurodegenerative diseases, diabetes, autoimmune diseases, inflammatory conditions, skin disease, osteoarthritis, and cancer. The book will be of value for researchers, clinicians, and advanced students.