Record Nr. UNINA9910731489503321 Autore Mohamed Wael Titolo Trace Elements in Brain Health and Diseases / / edited by Wael Mohamed, Rajat Sandhir Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 981-9915-13-9 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (176 pages) Collana Nutritional Neurosciences, , 2730-6720 Altri autori (Persone) SandhirRajat Disciplina 612.82 Soggetti Neurology Neurophysiology Neurons Nervous system—Diseases Developmental neurobiology Cellular Neuroscience **Neurological Disorders** Development of the Nervous System Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1: Dietary Iron and brain development, - Chapter 2: Trace elements and brain function/MCI -- Chapter 3: Nutrigenomics and Trace Elements: Hopes and Hypes for Parkinson Treatment -- Chapter 4: Putative role of trace elements deficiency in psychiatric disorders including depression -- Chapter 5: Trace elements and neurodegenerative diseases -- Chapter 6: Edible Bird's Nest: Seeing the Unseen -- Chapter 7: Trace elements and epilepsy -- Chapter 8: Blood markers of oxidative stress in patients with ALS. Sommario/riassunto This book reviews the role of trace elements in brain development, function, metabolism, and neurodegenerative disorders. It explores the molecular mechanisms of the effects of trace elements on metabolic pathways, mitochondrial nutrients, neurodegeneration, Central Nervous System (CNS) disorders, cell signaling, and neuronal functions. The book also discusses transport mechanisms of trace elements within CNS and their impact on neurotransmitter biology. Further, it examines

the deleterious effects due to dyshomeostasis of trace elements in the

central nervous system (CNS), resulting in damage to neurons and glial cells through the generation of reactive oxygen species and oxidative stress turn leading to neurodegeneration and neurological dysfunction. The book also explores the putative role of trace element deficiency in psychiatric disorders, including depression, and the imbalance of trace elements on neuronal genomic stability.