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Nota di contenuto	Chapter 1. Understanding the Blood-Brain Barrier: From Physiology to Pathology -- Chapter 2. Noradrenaline Regulation of Brain-Body Communication -- Chapter 3. Brain-Body Communication in Glucose Metabolism -- Chapter 4. Insulin Like Growth Factor-1 as Brain - Body Connector -- Chapter 5. Neuronal Synaptic Communication and Mitochondrial Energetics in Human Health and Disease -- Chapter 6. Microbiome - A Key Regulator of Body-Brain Interactions -- Chapter 7. An Emerging Role for Gut-Brain Signaling Involving Ghrelin in Chronic Stress -- Chapter 8. The Connection Between the Appetite-Regulatory Peptides Ghrelin And GLP-1 And Alcohol Use Disorder -- Chapter 9.

Rett Syndrome: Thinking Beyond Brain Borders -- Chapter 10. Brain-Resident Immune Cells in Neurodevelopmental Disorders -- Chapter 11. Beyond Infections: Exploring Immune-Mediated Pathways Linking Cannabis and Emerging Environmental Contaminants to Neurodevelopmental Outcomes -- Chapter 12. MicroRNAs Fine-Tune Brain and Body Communication in Health and Disease.

Sommario/riassunto

This book offers a broad exploration of the intricate networks that facilitate communication between the brain and various systems in the body. At the heart of this volume is the examination of how these connections influence both physiological and pathological outcomes. The first two chapters of the book describe the Blood Brain Barrier (BBB) and the interaction of the brain with the peripheral nervous system. The following chapters delve into the reciprocal communication of the brain and the circulatory, immune, metabolic and digestive systems and discuss the impact of these communication mechanisms on human health and disease. Contributions from leading experts provide a detailed analysis of these complex interactions, making this book a must-read for anyone interested in the molecular underpinnings of brain-body communication. Researchers, scholars, and students in neuroscience, physiology, and related fields will find this book invaluable. It not only enhances understanding of the brain's role in regulating bodily functions but also offers insights into potential therapeutic targets for various disorders. This volume is an essential addition to any scientific library.