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Descrizione fisica	1 online resource (VI, 286 p. 32 illus., 24 illus. in color.)
Collana	Progress in Inflammation Research, , 0379-0363
Disciplina	616.079
Soggetti	Immunology Neurosciences Cell membranes Infectious diseases Cytokines Growth factors Membrane Biology Infectious Diseases Cytokines and Growth Factors
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	General Introduction to Barrier Mechanisms in the Central Nervous System -- Topological Aspects of the Blood-brain and Blood cerebrospinal Fluid Barriers and their Relevance in Inflammation Research -- The Contribution of the Extracellular Matrix to the BBB in Steady State and Inflammatory Conditions -- Pathophysiology of the Bloodbrain Barrier in Neuroinflammatory Diseases -- Leakage at Blood-neural Barriers -- Blood-Brain Barrier Transporters and Neuroinflammation: Partners in Neuroprotection and in Pathology -- MicroRNAs in Brain Endothelium and Inflammation -- Blood-Brain Barrier Dysfunction during Central Nervous System Autoimmune Diseases -- Pathways Across the Blood Brain Barrier -- Neuroinflammation in Bacterial Meningitis -- Blood Vessels in the Brain: a Signaling Hub in Brain Tumor Inflammation.
Sommario/riassunto	Within the central nervous system (CNS) the constantly changing blood

stream is separated from the CNS parenchyma by the blood brain barrier (BBB) restricting passage to selected immune cells. Under pathological conditions, however, viruses, bacteria, parasites and autoaggressive immune cells can penetrate the barrier and contribute to CNS inflammation. The BBB actively contributes to neuroinflammation by presentation of chemokines, expression of cell adhesion molecules and alteration of barrier properties. As such, understanding the role of the BBB under healthy and pathological conditions is essential for the development of new drugs to efficiently combat inflammatory diseases of the CNS. This book presents a comprehensive collection of reviews that focus on the role of the BBB. Experts in the field share their insight on structural, topological and functional properties of the BBB. They elaborate on pathophysiological changes of the inflamed BBB such as permeability, transporter proteins and alterations in microRNAs and cytokine profile. Additional chapters on multiple sclerosis and bacterial meningitis provide in depth information on significant neuroinflammatory diseases. The selection is complemented by a review on the current understanding of the BBB as signaling hub in tumor pathogenesis in the brain.