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Nota di contenuto	The Purinergic Signaling: Overview -- Adenosine A2A Receptor-containing Heteromers and Neuroprotection -- Purinergic Signaling in Brain Physiology -- Neurotrophic Actions of Adenosine and Guanosine: Implications for Neural Development and Regeneration? -- Purinergic Signaling in Neurogenesis and Neural Fate Determination: Current Knowledge and Future Challenges -- Purinergic Signaling in Autism Spectrum Disorder -- Purinergic Signaling in Depression -- Roles of Purinergic Receptors in Alzheimer's Disease -- Purinergic Signaling in Basal Ganglia Diseases: Parkinson's Disease -- A Step in the ALS Direction: Lessons from the Purinome -- Purinergic P2 Receptors in Epilepsy -- Purinergic Signaling in Neuroinflammation -- Purinergic Signaling in Brain Tumors -- Development of Purinergic Receptor Agonists and Antagonists -- Acupuncture for Counteracting P2X4 and P2X7 Receptor Involvement in Neuroinflammation.

Sommario/riassunto

This volume explores the quickly evolving field of Purinergic signaling, and examines how receptors for ATP and other nucleotides, and receptors for adenosine, act in neuronal transmission, control of synaptic activity, proliferation, differentiation and cell death regulation in the CNS. This book focuses on the participation of purinergic receptors and ectonucleotidases, degrading ATP into adenosine, in embryonic and adult neurogenesis in vitro and in vivo as well as in synaptic transmission and pathophysiology. Further, the chapters discuss varying brain diseases, including Parkinson’s, and Alzheimer’s disease, autism, mood disorders and epilepsy, as well as brain tumors, in the context of purinergic signaling and its clinical aspects. The development of purinergic receptor agonists is also an important issue of this book. This book provides a critical review of the current state of science and will be useful for both scientists and students who are or would like to get involved in this area. Furthermore, this book addresses neuroscientists, physician and professionals from the industry, who would like to update themselves in this exciting and rapidly growing field of neuroscience.