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Descrizione fisica	1 online resource (322 pages) : color illustrations, tables
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Soggetti	Central nervous system Noradrenergic mechanisms Central nervous system - Molecular aspects
Lingua di pubblicazione	Inglese
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Nota di contenuto	Locus coeruleus noradrenergic neurons and astroglia in health and disease / Robert Zorec, Nina Vardjan and Alexei Verkhratsky -- Astroglial adrenergic receptor signaling in brain cortex / Leif Hertz and Ye Chen -- White matter astrocytes: Adrenergic mechanisms / Maria Papanikolaou and Arthur Morgan Butt -- Role for astroglial [alpha] - adrenergic receptors in glia-neuron communications and aging-related metaplasticity in the neocortex / Ulyana Lalo and Yuriy Pankratov -- Adrenergic Ca and cAMP excitability: effects on glucose availability and cell morphology in astrocytes / Robert Zorec, Marko Kreft and Nina Vardjan -- Adrenergic receptors on astrocytes modulate gap junctions / Eliana Scemes, Randy F. Stout, Jr. and David C. Spray -- Fluxes of lactate into, from, and among gap junction-coupled astroglia and their interaction with noradrenaline / Gerald A. Dienel -- Dialogue between astrocytes and noradrenergic neurones via L-lactate / Anja G. Teschemacher and Sergey Kasparov -- Noradrenergic system and memory: The role of astrocytes / Manuel Zenger, Sophie Bulet-Godinot, Jean-Marie Petit and Pierre J. Magistretti -- Hippocampal noradrenaline regulates spatial working memory in the rat / Rosario Gulino, Anna Kostenko, Gioacchino De Leo, Serena Alexa Emmi,

Domenico Nunziata and Giampiero Leanza -- Enteric astroglia and noradrenergic/purinergeric signaling / Vladimir Grubisic and Vladimir Parpura -- Noradrenaline drives structural changes in astrocytes and brain extracellular space / Ang D. Sherpa, Chiye Aoki and Sabina Hrabetova -- Signalling pathway of [beta]-adrenergic receptor in astrocytes and its relevance to brain edema / Baoman Li, Dan Song, Ting Du, Alexei Verkhratsky and Liang Peng -- Noradrenaline, astroglia, and neuroinflammation / Jose L.M. Madrigal -- Astrocytic [beta]-adrenergic receptors and multiple sclerosis / Jacques De Keyser -- Potentiation of [beta]-amyloid-induced cortical inflammation by noradrenaline and noradrenergic depletion: implications for Alzheimer's disease / Douglas L. Feinstein and Michael T. Heneka.

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Sommario/riassunto

"Noradrenergic Signaling and Astroglia integrates what is known about the active role of astroglia in the locus coeruleus-noradrenergic system and outlines the most recent advances in the field. It discusses the molecular mechanisms underlying norepinephrine-induced receptor activation in astroglia, cellular metabolism and CNS energy provision, in vitro, ex vivo, and in vivo models, gliosignalling and neuronal activity, and astroglial networks, gap junctions, and morphological plasticity. The book also addresses the role of astroglial adrenergic receptor activation in memory formation, cognition, regulation of sleep homeostasis, and lastly in neurological disorders, including trauma (cellular edema), neurodegeneration (Alzheimer's disease), and neuroinflammation (multiple sclerosis). Noradrenergic Signaling and Astroglia is a valuable source of new knowledge for a wide audience, including graduate students, post-doctoral fellows, and researchers in neuroscience, life sciences, and the biological and biomedical sciences"

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