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Titolo	Pet and spect of neurobiological systems / / edited by Rudi A. J. O. Dierckx, 3 others
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Descrizione fisica	1 online resource (XII, 1132 p. 374 illus., 165 illus. in color.)
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Nota di contenuto	PART I BASICS: Animal Models for Brain Research -- Small Animal Molecular Imaging - PET, SPECT -- Cerebral Glucose Metabolism -- Cerebral Blood Flow Measurement with 15O-Water PET -- Principles of Brain Perfusion SPECT -- The Impact of Genetic Polymorphisms on Neuroreceptor Imaging -- PART II SYSTEMS: Acetylcholinesterase -- Adenosine Receptors -- Beta-Amyloid and Other Proteinopathies -- Central Benzodiazepine Receptors -- Cyclooxygenase-2 -- Dopamine System in Humans -- Endocannabinoid System -- Glutamate Receptors (Metabotropic) -- Histamine H3 Receptors -- Hormone Receptors (Steroids) -- Monoamine Oxidase B -- MRP1 Function in the BBB -- Neuroinflammation: From Target Selection to Preclinical and Clinical Studies -- Nicotinic Acetylcholine Receptors -- NMDA Receptors -- Norepinephrine Transporter -- Opioid Receptors -- P-Glycoprotein and Other ABC Transporters -- Phosphodiesterases -- Purinergic Receptors -- Serotonin System -- Serotonin Transporter and Monoamine Oxidase A -- Sigma-1 Receptors -- Sigma-2 Receptors -- Synaptic Density (SV2A) -- Tau Pathology -- Translocator Protein -- Tropomyosin Receptor Kinase -- Vesicular Acetylcholine Transporter -- Vesicular Monoamine Transporter.
Sommario/riassunto	This book, now in a fully updated second edition, is a comprehensive and up-to-date guide to the use of PET and SPECT for the imaging of

neurobiological systems. Diverse aspects of neurotransmission in the brain are discussed, such as visualization and quantification of neuroreceptors, neuroinflammatory markers, transporters, and enzymes as well as neurotransmitter synthesis, -amyloid deposition, cerebral blood flow, and the metabolic rate of glucose. The latest results in probe development are also detailed. A wide range of systems not addressed in the first edition are covered, reflecting the advances made in recent years. The book combines the expertise of authors internationally renowned for their dedication to the development of novel probes and techniques for the investigation of neurobiological systems. Most chapters are written jointly by radiochemists and nuclear medicine specialists to ensure a multidisciplinary approach. This state of the art compendium will be valuable to all with an interest in clinical and preclinical neuroscience. Companion volumes on the use of PET and SPECT in neurology and psychiatry complete a trilogy.