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Nota di contenuto	BASICS: Animal Models for Brain Research -- Cerebral Glucose Metabolism -- Cerebral Blood Flow Measurements with Oxygen-15 Water PET -- Principles of Brain Perfusion SPECT -- The Impact of Genetic Polymorphisms on Neuroreceptor Imaging -- SYSTEMS: Imaging of Adenosine Receptors -- PET Tracers for Beta-Amyloid and Other Proteinopathies -- Imaging of Central Benzodiazepine Receptors in Chronic Cerebral Ischemia -- PET and SPECT Imaging of the Central Dopamine System in Humans -- PET Imaging of Endocannabinoid System -- Imaging Type 1 Glycine Transporters in the Central Nervous System Using PET -- Imaging Histamine Receptors Using PET and SPECT -- PET and SPECT Imaging of Brain Steroid Hormone Receptors -- Current Radioligands for the PET Imaging of Metabotropic Glutamate Receptors -- PET Imaging of Muscarinic Receptors -- Preclinical

Aspects of Nicotinic Acetylcholine Receptor Imaging -- Development of Radioligands for In Vivo Imaging of NMDA Receptors -- Progress in PET Imaging of the Norepinephrine Transporter System -- PET Imaging of Opioid Receptors -- PET Imaging of ABC Transporters in the Blood-Brain Barrier -- PET Imaging of Translocator Protein Expression in Neurological Disorders -- Imaging of the Serotonin System: Radiotracers and Applications in Memory Disorders -- Serotonin Synthesis Studied with PET -- Monoamine Oxidase A and Serotonin Transporter Imaging with PÉT -- PET Imaging of Sigma-1 Receptors -- Radioligands for Imaging Vesicular Monoamine Transporters.

Sommario/riassunto

PET and SPECT of Neurobiological Systems combines the expertise of renowned authors whose dedication to the development of novel probes and techniques for the investigation of neurobiological systems has achieved international recognition. Various aspects of neurotransmission in the brain are discussed, such as visualization and quantification of (more than 20 different) 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. 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 anyone in the field of clinical or preclinical neuroscience, from the radiochemist and radiologist/nuclear medicine specialist to the interested neurobiologist and general practitioner. It is the second volume of a trilogy on PET and SPECT imaging in the neurosciences. Other volumes focus on PET and SPECT in psychiatry and PET and SPECT in neurology".