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Topics covered include technical factors in brain imaging, pathological basis of age-related structural and functional changes, neurochemistry and genetics of brain imaging in aging, and the use of imaging techniques in diagnosis, longitudinal testing, drug development and testing, and presymptomatic detection. The book is intended to be both a detailed review of the current status of brain imaging and aging and to serve as an introduction to the field for those who may be starting investigations using imaging techniques of PET, structural MRI, and functional MRI. Combining new brain imaging techniques with biochemical analysis, animal studies, and molecular biology, researchers are starting to unravel the intricate interactions that make the brain work, and the complex chains of events that can make it fail.

On May 16â€“17, 2006, some of the world's top neuroscientists gathered at New York University for a conference titled Imaging & the Aging Brain, which was cosponsored by the New York Academy of Sciences and the American Federation for Aging Research. The presentations focused on the recent technological revolution in brain imaging, which is transforming the way researchers understand normal and pathological aging processes.