BOOK REVIEW

7.0 Tesla MRI Brain Atlas. *In Vivo* Atlas with Cryomacrotome Correlation

Zang-Hee Cho (ed.). Heidelberg, New York, Dordrecht, London: Springer, 2010, Hardcover, 566 pp., Price $299.00, ISBN 978-1-60761-153-0

Recent advances in magnetic resonance imaging (MRI), especially in those of ultra-high field (UHF) MRI, have considerably influenced our understanding in the field of brain imaging for neuroscience research as well as for clinical applications. With the present brain atlas, Zang-Hee Cho and his colleagues at the Neuroscience Research Institute, Gachon University of Medicine and Science, Incheon, Republic of Korea, set a new standard in neuroanatomy. Using a 7.0 Tesla MRI and based on a new reference system, around 500 images of a live subject are presented with correlating cryomacrotome photographs, taken at various (coronial, sagittal, and axial) cuts. This volume illustrates the considerable sensitivity and applicability of modern MRI, making possible astonishing developments in the field of neuroimaging. Following an introduction explaining the orientation and source of brain images, terminology and labeling, coronal, sagittal and axial images of cadaver, and *in vivo* 7.0 Tesla MRI are presented in excellent quality, with the coronal cadaver color image on the right and the corresponding Tesla MRI picture on the left side, with all parts of the brain meticulously described. Eighty-eight coronal sections, 78 sagittal sections of the temporal lobe, and 80 axial sections are compared with images of 1.5 Tesla MRI of the midbrain, occipital, brainstem, and hippocampal areas. Exquisitely produced in an oversized format to allow careful examination of the brain in real scale, each image is precisely annotated and detailed, given overwhelming insights into brain anatomy. The images in this extraordinary atlas provide a wealth of details of the brainstem (at the back cover unfortunately erroneously spelled 'main stem') and midbrain structures that were previously thought impossible to visualize *in vivo* in such detail as in this book. Groundbreaking and provoking, this atlas may give answers and inspirations for further studies in the *in vivo* anatomy of the human brain and, thus, documents modern advances in human brain anatomy and mapping, exceeding the information hitherto presented by other atlasses of the human brain. An extensive index allows rapid orientation in the complicated field of human brain anatomy. The price of this unique atlas appears appropriate in view of its excellent quality and extent. It certainly will be a valuable resource for neuroradiologists, neuroscientists, and related researches, opening a new era in neuroimaging.

K. A. Jellinger
Vienna, Austria