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Neuropsychiatric Disorders: An Integrative Approach

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BOOK REVIEW

Neuropsychiatric Disorders: An Integrative Approach

M. Gerlach, J. Deckert, K. Double, and E. Koutsilier, eds. New York: SpringerWien; 2007, 341 pages, 109 figures, \$229.00.

The *Journal of Neural Transmission* is a very well-respected peer-reviewed journal in the field of neuroscience. This 2007 supplement volume, entitled *Neuropsychiatric Disorders: An Integrative Approach*, is a Festschrift in honor of Professor Peter Riederer, Editor-in-Chief of the *Journal*, who retired in April 2007. Dr. Riederer was Professor of Clinical Neurochemistry in the Clinic for Psychiatry and Psychotherapy at the University of Würzburg, Germany, and is an enormously influential neurochemist, who authored more than 900 papers and book chapters and helped launch the careers of many successful scientists. His areas of interest include the neurochemistry of schizophrenia and mechanisms of neurodegeneration in Alzheimer disease and Parkinson disease.

The editors of this supplement have put together an impressive array of papers to celebrate Dr. Riederer's work and contributions to the field. Following a brief editorial preface that provides an overview of Dr. Riederer's career, the volume begins with a moving dedication by a collaborator, Dr. M.B.H. Youdim of the Israel Institute of Technology. Dr. Youdim describes his own experiences and the richness of his collaboration with Dr. Riederer, which resulted in nearly 100 coauthored papers and 25 books. Despite some awkwardness of language, the excitement of the early discovery of the efficacy of l-deprenyl in Parkinson disease is clearly conveyed, and as Dr. Youdim notes, "The rest is history." The reader gets an impression of how important Professor Riederer could be in inspiring other scientists and promoting novel ideas.

The second article in the supplement volume consists of a "Brief History of Neurochemistry" and is written by P. Foley of the Prince of Wales Medical Research Institute, Sydney, Australia. Dr. Foley explores the history of research on intracellular communication in the central nervous system and describes the major findings and interpretations as neurochemistry "graduated from a branch of general physiology to being centrally involved in models of central nervous system function." The article is enjoyable and contains historic quotes that give an inside look into the thinking of some of the leaders in neurochemistry. Dr. Foley takes us through the introduction of L-dopa therapy for parkinsonism, a milestone for neuropharmacologic research.

The remaining articles in the supplement volume are original research articles and

review articles, many from colleagues and collaborators of Professor Riederer. Researchers from all over the world have contributed. The articles are divided into 5 sections: "Basic Neuroscience," "Parkinson's Disease and Allied Conditions," "Alzheimer's Disease and Related Disorders," "Biological Psychiatry," and "Other Disorders." Thirty-one articles represent original research and are presented in the format of the *Journal of Neural Transmission*. Graphs, tables, and figures are clearly presented and labeled. A partial list of methodologies represented includes research on postmortem human or animal brains, cultured animal or human neuronal cell lines, clinical trials in humans, knockdown animals, therapeutic drug monitoring, and stem cells.

Eight review articles are sprinkled throughout the volume, unfortunately not clearly marked as such, though the titles of some suggest their nature. Topics range from an extensive review of the therapeutic potential of small inhibitory ribonucleic acid in the gene therapy of neurodegenerative disorders (Koutsilier et al) to a brief introduction to animal models of neurodegenerative disorders (Hirsch). Other topics related to neurodegenerative disorders include the following: an historical overview of the biochemistry of postmortem Parkinson disease brains (Nagatsu and Sawada); apoptosis, oxidative stress, and mitochondrial dysfunction in lymphocytes as biomarkers for Alzheimer disease (Leuner et al); an experimental animal model of early sporadic Alzheimer disease and the role of central insulin resistance (Salkovic-Petrisic and Hoyer); and kynurenes, redox disturbances, and neurodegeneration in multiple sclerosis (Rajda et al). In the biologic psychiatry section, the 2 reviews focus on attention and graphomotor functions in children with attention deficit hyperactivity disorder (Lange et al) and the immunologic bases of glutamatergic disturbance in schizophrenia (Nudmamud-Thanoi et al).

Only 1 imaging article is presented in this volume. The authors (Fischer et al) present data from the VITA study, a prospective longitudinal study on mental aging in which all individuals in a defined geographic birth-cohort in Vienna were invited to participate. The research presented here investigated deep and periventricular white matter hyperintensities in 532 subjects, 75–76 years of age. Periventricular hyperintensities were more frequently found in subjects with focal vascular lesions on MR imaging. Deep white matter hyperintensities were associated with antihypertensive treatment. Associations of both were found with focal atrophy of the medial temporal lobe structures. The authors concluded that both vascular and degenerative factors may favor the occurrence of white matter hyperintensities in this age group.

As a compendium of research articles in some of the key areas of basic and clinical neuroscience research, this book is most relevant for neuroscience researchers. The book as a whole is less likely to be of interest to a clinical neuroradiologist, though individual articles may be. Individual articles are listed in *Current Contents/Life Sciences* (Thomson Scientific) and are searchable via Medline. Review articles particularly may be of more general interest.

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