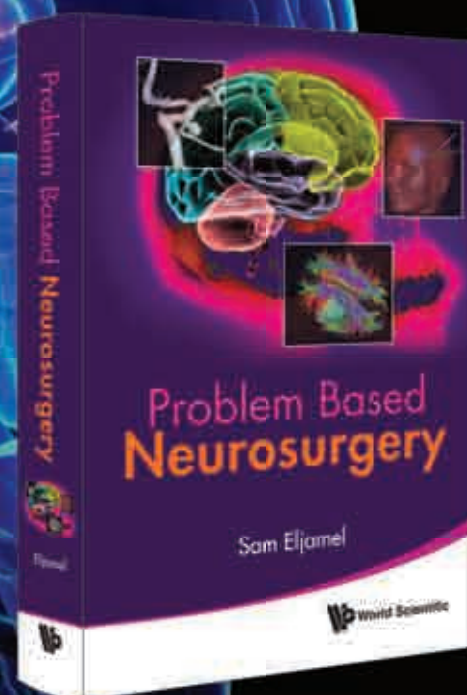
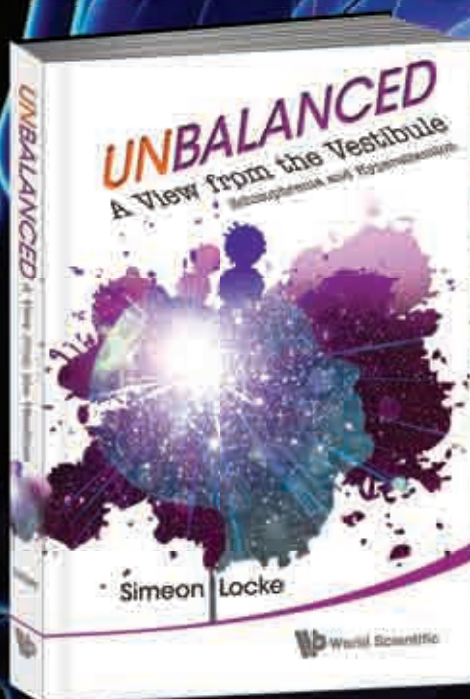


Notable titles in **Neurology & Neuroscience 2011**



UNBALANCED

A View From the Vestibule — Schizophrenia and Hyperattention
 by **Simeon Locke** (Harvard Medical School, USA)

In this highly stimulating book, Dr Locke proposes a new basic mechanism to account for many of the findings in schizophrenia. His ideas are based on observations and experiments at a State Psychiatric Hospital where he was the director of a Neurological Unit for ten years. He was struck by an outstanding sign of schizophrenia which had not attracted attention in the classical literature. Schizophrenia patients, he noticed, were too alert, too attentive. If this hyperawareness or widespread unfocussed attention is the result of excessive arousal, Dr Locke reasoned it would make sense to look into the vestibular system which is alleged to be one of the most effective contributions to the ascending reticular activation system.

Readership: Neuroscientists, psychiatrists, mental health professionals and general public.

144pp	Feb 2011	
978-981-4299-62-6	US\$64	£42
978-981-4299-63-3(ebook)	US\$83	

PROBLEM BASED NEUROSURGERY

by **Sam Eljamel** (The University of Dundee, UK)

Problem Based Neurosurgery is a remarkable fusion of recent advances in neuro-imaging and neurosurgery with modern teaching of integrated system based curricula. It approaches each problem systematically from history, and physical examination to differential diagnosis, investigations and management options. The book captures four decades of advances and experiences in diagnosis and management of patients.

Readership: Undergraduates, postgraduate foundations doctors, fellows, non-specialists, residents, community doctors, and physician assistants.

492pp	Jan 2011	
978-981-4317-07-8	US\$133	£92
978-981-4317-08-5(ebook)	US\$173	

COMPUTATIONAL NEUROANATOMY

The Methods

by **Moo K Chung**

(University of Wisconsin-Madison, USA)

Key Features:

- Includes necessary and very practical mathematical and statistical methodologies
- Accessible to a wide range of readers and provides methodological understanding in a manner immediately usable to researchers
- Covers various topics in great detail without sacrificing readability; it can be used as both a textbook for graduate students and a reference for researchers

Computational neuroanatomy is an emerging field that utilizes various non-invasive brain imaging modalities, such as MRI and DTI, in quantifying the spatiotemporal dynamics of the human brain structures in both normal and clinical populations. This discipline emerged about twenty years ago and has made substantial progress in the past decade. The main goals of this book are to provide an overview of various mathematical, statistical and computational methodologies used in the field to a wide range of researchers and students, and to address important yet technically challenging topics in further detail.

Readership: Researchers and graduate students in the fields of computational neuroscience and brain imaging, medical image analysis and pattern recognition.

400pp **Summer 2011**
978-981-4335-43-0 **US\$124 £77**
978-981-4335-44-7(ebook) **US\$161**

THE BRAIN-BEHAVIOUR CONTINUUM

The Subtle Transition Between Sanity and Insanity

by **Jose Luis Perez Velazquez &**

Marina Frantseva (University of Toronto, Canada)

This book is a comprehensive overview of the main current concepts in brain cognitive activities at the global, collective (or network) level, with a focus on transitions between normal neurophysiology and brain pathological states. It provides a unique approach of linking molecular and cellular aspects of normal and pathological brain functioning with their corresponding network, collective and dynamical manifestations that are subsequently extended to behavioural manifestations of healthy and diseased brains. This book introduces a high-level perspective, searching for simplification amongst the structural and functional complexity of nervous systems by consideration of the distributed interactions that underlie the collective behaviour of the system.

Readership: Neuroscientists (experimentalists, theoreticians and computational neuroscientists), psychiatrists, neurologists, neurosurgeons, biophysicists, and those interested in the working of the brain and its relation to behaviour.

300pp **May 2011**
978-981-4340-60-1 **US\$98 £61**
978-981-4340-61-8(ebook) **US\$127**

NEUROLOGY FOR MRCP

The Essential Guide to Neurology for MRCP Part 1, Part 2 and PACES

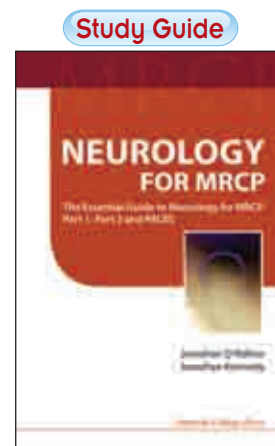
by **Jonathan D Rohrer & Jonathan Kennedy**

(UCL Institute of Neurology, Queen Square, UK)

This book is the essential revision guide for neurology in the Membership of the Royal College of Physicians (MRCP). Neurology has been rated as the most difficult subject in MRCP examinations and there has been no concise and easy-to-use revision guide to help candidates through the exams until now. *Neurology for MRCP* is written by two experienced neurologists who have taught both the written (Part 1 and Part 2) and clinical (PACES) sections of the exam. This pioneering new book will also be useful for medical students sitting for their final examinations and for doctors who are preparing for the PLAB examination.

Readership: Junior doctors sitting for the membership of the Royal College of Physicians (MRCP) and PLAB examinations, trainee neurologists and all junior doctors in training.

100pp **Mar 2011**
978-1-84816-462-8(pbk) **US\$39 £25**



NEURAL TUBE DEFECTS

by **Jorge A Lazareff** (University of California Los Angeles, USA)

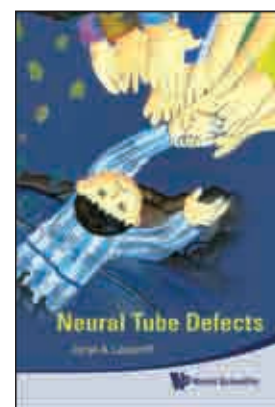
Neural Tube Defects are a group of related but individual pathologies that are the most common congenital anomalies of the Central Nervous System.

The importance of this condition has generated a large body of literature that seldom was written for the clinician in a comprehensive and didactic manner.

In this book, each chapter is richly illustrated and dedicated to one disease with subheadings that encompass etiology, molecular biology, clinical anatomy, symptoms, rationale for surgical procedures, natural history and transition into adulthood. This systematic content scheme allows the treating physician to easily access information that will help him/her understand the patient's condition and decide the best treatment alternatives.

Readership: Medical practitioners, university graduates, academicians in clinical neurosciences.

292pp **Oct 2010**
978-981-4273-84-8 **US\$102 £63**
978-981-4273-85-5(ebook) **US\$133**



NEUROLOGY OF MUSIC

edited by **F Clifford Rose**

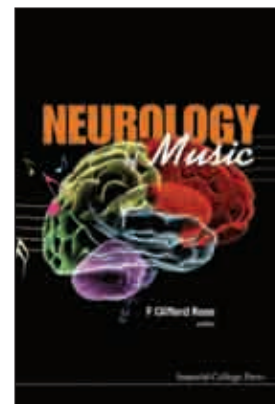
(Imperial College School of Medicine, UK)

The first British book on neurology in music was published over 30 years ago. Edited by Drs Macdonald Critchley and R A Henson, it was entitled *Music and the Brain* (published by Wm Heinemann Medical Books), but all of its contributors are now either retired or deceased. Since then, there has been an increasing amount of research, and the present volume includes the most significant of these advances.

The book begins with the evolutionary basis of meaning in music and continues with the historical perspectives, after which the human nervous system is compared to a clavichord, highlighting the use of metaphor in the history of modern neurology. It discusses the neurologist in the concert hall as well as the musician at the bedside by showing how neurology enriches musical perception, the main theme being the cerebral localisation of music production and perception. The book also emphasises the value of teaching singing to treat speech disorders and the importance of nerve compression in musicians, the final chapter being on recent techniques of imaging the musical brain.

Readership: Postgraduate students and researchers in neurology as well as the general public.

424pp **Jul 2010**
978-1-84816-268-6 **US\$128 £79**
978-1-84816-269-3(ebook) **US\$166**



Bestselling Backlist Titles

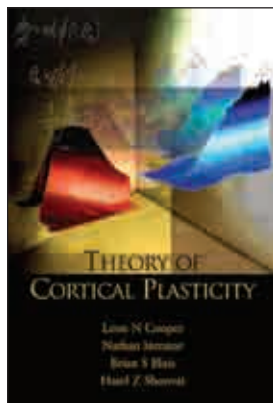
THEORY OF CORTICAL PLASTICITY

(With Software Package "PLASTICITY") by **Leon N Cooper** (Brown University, USA), **Nathan Intrator** (Brown University, USA & Tel-Aviv University, Israel), **Brian S Blais** (Bryant College & Brown University, USA) & **Harel Z Shouval** (The University of Texas Medical School at Houston & Brown University, USA)

This insightful book provides an elegant analysis of theoretical structure in neuroscience research, and elucidates the role BCM theory has played in guiding research leading to our present understanding of the mechanisms underlying cortical plasticity.

Readership: Graduate students, academics and researchers in neuroscience, neural networks, neurobiology and mathematical biology.

332pp **Apr 2004**
 978-981-238-746-2 **US\$137 £90**
 978-981-238-791-2(pbk) **US\$70 £46**
 978-981-256-255-5(ebook) **US\$178**



World Scientific Series in 20th Century Biology - Vol. 3

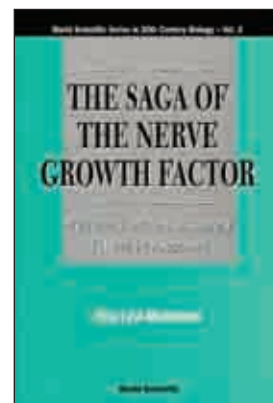
THE SAGA OF THE NERVE GROWTH FACTOR

Preliminary Studies, Discovery, Further Development by **Rita Levi-Montalcini** (Istituto di Neurobiologia, Italy)

This volume is a collection of articles written by Nobel Laureate Rita Levi-Montalcini and published from 1942 to 1995. Studies described in the first part set the stage for the discovery of a protein molecule which became known as the Nerve Growth Factor (NGF), described in detail in the second part.

Readership: Students and researchers in biology, developmental neurobiology, biochemistry and medicine.

500pp **Apr 1997**
 978-981-02-2604-6 **US\$140 £92**
 978-981-283-031-9(ebook) **US\$182**



FRAGMENTS OF NEUROLOGICAL HISTORY

by **John M S Pearce** (Emeritus Consultant Neurologist, Hull Royal Infirmary, UK)

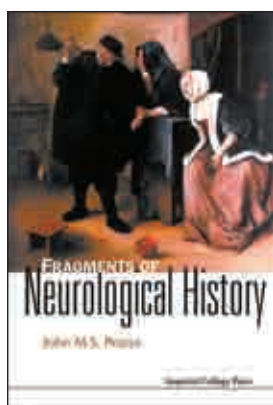
"It would be a real asset to all medical libraries. It is quite amazing how the author has so successfully covered the medical contributions of Vesalius, Virchow, Broca and others. The author's enthusiasm is quite infectious and the book will encourage readers to delve further into the fascinating realm of medical history."

Alan Meltzer

ex-Senior Medical Advisor, Laboratory Centre for Disease Control, Health Canada

Readership: Those interested in the history of neurology, neuroscience, general and psychological medicine.

652pp **Apr 2003**
 978-1-86094-338-6 **US\$153 £101**
 978-1-86094-936-4(ebook) **US\$199**



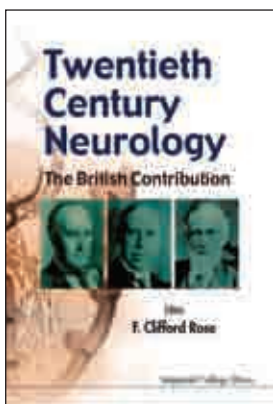
TWENTIETH CENTURY NEUROLOGY

The British Contribution edited by **F Clifford Rose** (London Neurological Centre, UK)

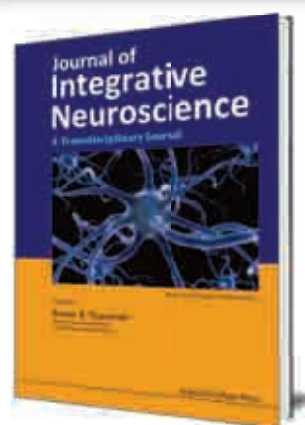
Neuroscience is one of the scientific fields where progress in the 20th century has been spectacular. With the coming of the new millennium, it is appropriate to look at some of the advances and the neurologists who helped to produce them. The original contributions in this volume reflect the background against which the rapid advances have taken place in the past 100 years.

Readership: Neurologists and medical historians.

332pp **Nov 2001**
 978-1-86094-245-7 **US\$110 £72**
 978-1-84816-166-5(ebook) **US\$143**



Journal



JOURNAL OF INTEGRATIVE NEUROSCIENCE (JIN)

www.worldscinet.com/jin 

"JIN has developed a clear niche in the computational neuro literature as the only journal serving as a vanguard for the critical evaluation of the physiological bases of various neural models" **Harold Lecar, University of California, Berkeley**

Selected Articles from V10 N1 (Mar 2011)

NIPKOW CONFOCAL IMAGING FROM DEEP BRAIN TISSUES

Yuji Takahara, Norio Matsuki and Yuji Ikegaya
 DOI No: [10.1142/S0219635211002658](https://doi.org/10.1142/S0219635211002658)
 Page: 121-129

EMERGENCE OF INTRINSIC REPRESENTATIONS OF IMAGES BY FEEDFORWARD AND FEEDBACK PROCESSES AND BIOLUMINESCENT PHOTONS IN EARLY RETINOTOPIC AREAS

I. Bókkon, V. Salari and J. A. Tuszyński
 DOI No: [10.1142/S0219635211002610](https://doi.org/10.1142/S0219635211002610)
 Page: 47-64

Other Titles of Interest

AFFINITY AND EFFICACY

The Components of Drug-Receptor Interactions by **Frederick J Ehler** (*University of California, Irvine, USA*)

The interaction of a drug with a receptor encodes a vector of information having components of affinity and efficacy. How this information is translated into a response depends on the unique cells, tissue, organ or system in which the receptor resides. This book describes how to analyze various responses to estimate the affinity and efficacy components of the initial drug-receptor interaction. More specifically, it describes how to measure the affinity and efficacy of drugs through the analysis of single receptor activity, the activation state of a population of receptors, and responses downstream from receptor activation. More light is shed on ligand-gated ion channels and G protein-coupled receptors in this book.

Readership: Postgraduates and researchers in pharmacology and physiology, professionals in the pharmaceutical industry, neuroscience researchers.

400pp Sep 2011
 978-981-4322-56-0 US\$120 £74
 978-981-4324-22-9(ebook) US\$156

THE HANDBOOK OF HOSPITAL MEDICINE

A Concise Guide for the Busy Hospitalist edited by **Andrew Dunn** (*Mount Sinai School of Medicine, USA*), **Navneet Kathuria** & **Paul Klotman** (*Baylor College of Medicine, USA*)

Hospital Medicine is the fast growing field of Medicine, and the importance of hospitalists in the delivery of care and success of hospitals continues to increase. The practice of hospital medicine is both rewarding and challenging: hospitalists need to provide high-quality care using the best available evidence in an efficient, cost-effective manner. In recognition of the need for rapid access to essential information, this text provides a concise yet comprehensive source for busy clinicians. *The Handbook of Hospital Medicine* provides detailed reviews of all clinical topics in inpatient medicine, including common diagnoses, hospital-acquired conditions, medical consultation, and palliative care, as well as key non-clinical topics, such as quality improvement tools, approach to medical errors, the business of medicine, and teaching tips. It is the single source needed for hospitalists striving to deliver outstanding care and provide value to their patients and hospitals.

Readership: Students, professional, hospitalists attendings in medicine, nurse practitioners and physician assistants, internal medicine residents.

400pp Mar 2012
 978-981-4354-90-5 US\$130 £85
 978-981-4354-91-2(ebook) US\$169

Molecular Medicine and Medicinal Chemistry

ALZHEIMER'S DISEASE: INSIGHTS INTO LOW MOLECULAR WEIGHT AND CYTOTOXIC AGGREGATES FROM IN VITRO AND COMPUTER EXPERIMENTS

Molecular Basis of Amyloid-Beta Protein Aggregation and Fibril Formation edited by **Philippe Derreumaux** (*University of Paris 7, France*)

This book provides a panoramic view across recent *in vitro* and *in vivo* studies along with state-of-the-art computer simulations, designed to increase the readers' understanding of Aβ oligomerisation and fibril formation. At the same time, the book delves into the pathogenesis of familial and sporadic Alzheimer's disease at the atomic level of detail.

Readership: Student; general public; professionals.

400pp Winter 2011
 978-1-84816-754-4 US\$158 £103
 978-1-84816-755-1(ebook) US\$205

STEM CELLS

From Mechanisms to Technologies edited by **Michal K Stachowiak** & **Emmanuel S Tzanakakis** (*State University of New York at Buffalo, USA*)

Microfluidic platforms can be used to recreate aspects of the stem cell niche and obtain a better understanding of the interactions among stem cells and with their environment. The milieu of stem cells and their progeny can be shaped with appropriately designed biomaterials for the engineering of tissues to replace, reconstitute or regenerate damaged organs. To that end, enabling bioreactor technologies will be necessary for the generation of large quantities of stem cells and their derivatives in a robust and cost-efficient manner. This book invites world-renowned experts in the above fields to discuss the latest advances in their respective areas and to provide insights on the future challenges and achievements in the area of stem cells.

Readership: Advanced undergraduates, postgraduates, and researchers in cell and molecular biology, systems biology and tissue engineering; biologists, biophysicists and bioengineers.

300pp Fall 2011
 978-981-4317-70-2 US\$102 £63
 978-981-4317-93-1(ebook) US\$133

TRENDS ON THE ROLE OF PET IN DRUG DEVELOPMENT

edited by **Philip H Elsinga**, **Aren van Waarde**, **Anne M J Paans** & **Rudi A J O Dierckx** (*University Medical Center Groningen, The Netherlands*)

Drug development is very expensive and a fight against time. PET offers possibilities to speed up this process by adding unique *in vivo* information on pharmacokinetics/dynamics of a drug at an early stage. This information can help decision makers to move the drug in the drug development process or to decide to stop further developments. This unique and complete book highlights the different ways PET can be used and describes the latest trends in the various disciplines within nuclear medicine to further improve methodologies and increase the number of tools to accelerate drug development. Various topics within tracer development, instrumentation, data analysis and many clinical and preclinical topics are described by leading scientists from industry and academia.

Readership: Radiologists, neurologists, imaging technicians, and researchers and managers within academia and pharmaceutical industry.

600pp Winter 2011
 978-981-4317-73-3 US\$138 £86
 978-981-4317-74-0(ebook) US\$179

DISCOVERIES IN PHARMACOLOGICAL SCIENCES

by **Popat N Patil** (*The Ohio State University, USA*)

The book will serve to enhance the cumulative scientific knowledge of the investigators in drug discovery. It contains a well integrated wealth of information in drug sciences and pharmacotherapeutics. The time, place and the human side of investigators, their portraits with biographical sketches are presented.

The reading of *Discoveries in Pharmacological Sciences* will satisfy the intellectual curiosity of investigators. Understanding of *Discoveries in Pharmacological Sciences* will provide a platform to judge the importance of the personalized medicine of tomorrow. Scattered classical information about drug sciences is effectively condensed here. The development of the scientific thoughts and creativity of the investigators through the ages in drug research are presented admirably.

Readership: Professionals (pharmacologists, chemists, physicians, science teachers); students.

610pp Jun 2011
 978-981-4355-07-0 US\$128 £83
 978-981-4355-08-7(ebook) US\$166

NEW TRENDS IN GEOMETRY

Their Role in the Natural and Life Sciences

edited by **Claudio Bartocci** (*Università di Genova, Italy*), **Luciano Boi** (*École des Hautes Études en Sciences Sociales, France*) & **Corrado Sinigaglia** (*Università degli Studi di Milan, Italy*)

This volume focuses on the interactions between mathematics, physics, biology and neuroscience by exploring new geometrical and topological modelling in these fields. Among the highlights are the central roles played by multilevel and scale-change approaches in these disciplines.

The integration of mathematics with physics, as well as molecular and cell biology and the neurosciences, will constitute the new frontier of 21st century science, where breakthroughs are more likely to span across traditional disciplines.

Readership: Students and researchers in mathematical sciences at graduate level.

312pp **Apr 2011**
 978-1-84816-642-4 **US\$98 £64**
 978-1-84816-643-1(ebook) **US\$127**



Textbook

ELECTIVE HAND SURGERY

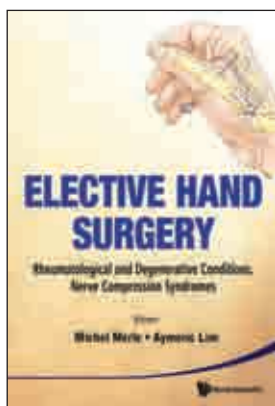
Rheumatological and Degenerative Conditions, Nerve Compression Syndromes

edited by **Michel Merle** (*Hôpital Kirchberg, Luxembourg*) & **Aymeric Lim** (*National University Hospital, Singapore*)

The volume contains essential information on elective (non-emergency) hand surgery practice. The author, M Merle, a world authority in surgery of the rheumatoid hand, synthesizes the depth of his experience into the book, and presents the management of these conditions in a clear manner. All the elective procedures are described in great detail and depth. The quality of the illustrations is outstanding.

Readership: Hand surgeons, orthopedic surgeons, plastic surgeons, rheumatologists, occupational therapist and physiotherapists.

524pp **Mar 2011**
 978-981-4277-87-7 **US\$136 £90**



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A PRACTICAL GUIDE TO COMPREHENSIVE STROKE CARE

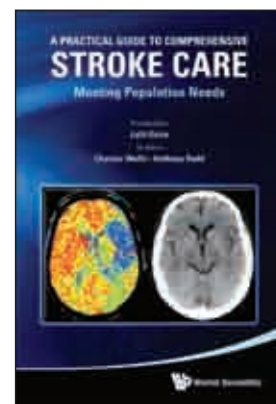
Meeting Population Needs

edited by **Lalit Kalra** (*King's College London, UK*), **Charles Wolfe** (*King's College London, UK*) & **Anthony Rudd** (*Guy's and St Thomas' Hospital, London, UK*)

Written for health professionals and managers involved in the planning or provision of stroke care, this book provides a comprehensive, state-of-the-art overview of the evidence and practices that underpin high quality stroke care. It sets the scene by describing the epidemiology, trends and needs of stroke patients, followed by chapters on the prevention of stroke, investigation and management of TIAs (transient ischaemic attack), early management and thrombolysis, clinical management of acute stroke patients and rehabilitation. Each chapter is thematically-linked and provides a complete, up-to-date review of evidence, its implications for clinical practice, proven multidisciplinary models of delivering high quality care, organisation of services for greatest impact within cost constraints and emerging areas for future management of stroke patients.

Readership: Health professionals involved in planning or provision of stroke care, including doctors, nurses, specialists, therapists, health service managers and policy makers.

420pp **Dec 2010**
 978-981-4299-51-0 **US\$139 £90**
 978-981-4299-52-7(ebook) **US\$181**



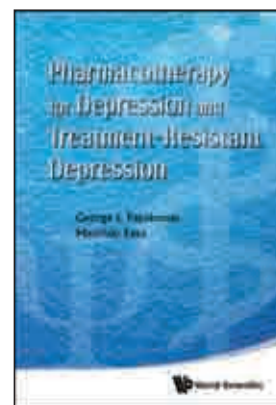
PHARMACOTHERAPY FOR DEPRESSION AND TREATMENT-RESISTANT DEPRESSION

by **George I Papakostas** & **Maurizio Fava** (*Massachusetts General Hospital, USA & Harvard Medical School, USA*)

This unique ground-breaking work, authored by renowned Harvard-based researchers G I Papakostas and M Fava, represents, by far, the most comprehensive compilation to date of medical studies and reports involving the use of antidepressants for the treatment of major depressive disorder, one of the most prevalent and devastating medical illnesses afflicting mankind today. The book is organized into four parts; each part focusing on a separate theme that will facilitate the reader to precisely access particular information of interest, whether be it clinical or scientific in nature. Each part is then sub-divided into several thematic chapters, which are enriched with tables and figures citing results from the most influential studies in the field. Finally, clinical and research "pearls" are listed throughout the book in bullet-point fashion to help summarize the available knowledge-base in a user-friendly format.

Readership: Psychiatrists, primary-care clinicians, psychologists, graduate students, investigators and scientists involved in antidepressant drug investigations.

728pp **Apr 2010**
 978-981-4287-58-6 **US\$167 £115**
 978-981-4287-59-3(ebook) **US\$217**



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