

PRINCIPLES OF CNS DRUG DEVELOPMENT: FROM TEST TUBE TO PATIENT. 2009. By John Kelly. Published by John Wiley & Sons Ltd. 304 pages. C\$180 approx.

Rated ★★☆☆

Neuroscience research, like most areas of biomedical research in the 21st Century, is under increasing pressure to become more “translational”. Arising from the relentless need to convert curiosity driven research into products, expressions such as “bench to bedside” or “principle to patient” are used frequently, but optimistically. Successful translational research is challenging for both basic and clinical scientists as they endeavour to take their fundamental insights and convert them into useful drug molecules or therapeutics. Accordingly, there is an important need for a brutally practical and pragmatic guidebook to take these researchers by the hand and drag them through (more hopefully over) the many potholes on the road from concept to marketable drug product. Although this book purports to be “from test tube to patient”, it is definitely not this much needed guidebook for neuroscientists – either basic or clinical. It is however a speciality textbook providing a generally excellent introductory overview (perhaps somewhat superficial in areas) for undergraduate students with little if any knowledge of neuroscience.

Over a surprisingly brief 286 pages of text, John Kelly from the Department of Pharmacology at the National University of Ireland (Galway) sets out to delineate the core processes in drug discovery and development for neurological disorders. The nine chapters of the book are divided into three principal sections. The first section (Chapters 1-4) provides an overview of major brain disorders (e.g. depression, Alzheimer’s disease, Parkinson’s disease, schizophrenia) with discussions of their global burden, neurobiological substrates and current pharmacological targets. The second section (Chapters 5-8) pertains to drug development with considerations of pharmacokinetics (i.e. absorption, distribution, metabolism, excretion; ADME), toxicology, efficacy and preclinical studies. The third and final section (Chapter 9) gives a perspective on the future of drug targets and development for neurological disorders. Finally, there is a five page collection of appendices that present a listing of drugs under development.

This is a very well written book. It is a clear and easy to follow introductory textbook. The material is straightforward and quite readable. The writing style is succinct and mercifully free of unnecessary verbal adornment. There are lots of facts presented in a logically sequential fashion. Each chapter ends with a solid collection of cited references, which reflect the literature in a comprehensive and up-to-date manner. Virtually every chapter is enhanced by the liberal use of tables. Although several of the tables present uniquely British data, in general the tables provide a wealth of useful additional data. However, unlike the tables, the figures are few in number and are of disappointing quality (below the standards of comparable books). Additional and better executed figures would have added significantly to the presentation.

The data that have been presented in this book are accurate and informative. However, the book needs to include more. For example, the test tube to patient presentation goes directly from identifying druggable targets to having drug molecules in hand for preclinical pharmacokinetics and toxicology testing. The entire area of drug design, synthesis and optimization has been completely omitted – and this certainly is a crucial component of the test tube to patient process. A chapter dedicated to the task of going from a druggable target to a drug molecule would be an absolutely essential addition to this textbook. Also, there is marked variability in the depth of presentation; for instance, the discussion of pharmacokinetics is rather sophisticated in places, whereas the discussion of neurotransmitters is very rudimentary, at a high school level at times. Moreover, for a practising neuroscientist, the descriptions of disorders such as Alzheimer’s disease or schizophrenia are annoyingly basic, lacking in both nuance and rigour.

No matter how well written, no book can meet the needs of all potential readers. If I were teaching an undergraduate (or junior graduate) course on the pharmacology of neurological drug development and were looking for a reasonable introductory text, I would consider reaching for this book. If I were an at-the-bench neuroscientist looking for serious help to assist my translational research aspirations, I would probably leave this book on the shelf.

*Donald F. Weaver
Halifax, Nova Scotia, Canada*

MEMORY IN MIND AND CULTURE. 2009. Edited by Pascal Boyer, James V. Wertsch. Published by Cambridge University Press. 323 pages. C\$40 approx.

Rated ★★☆☆

There are many books on memory, most of them on the experimental and clinical aspects or episodic, instrumental and semantic memory, but this edited volume reflects the surge of interest in autobiographical memory (AM) and in the collective memories of cultures. This area of memory study seems to some the “soft underbelly” of memory research, with dubious methodology and more social, than hard core neuroscience. Autobiographical memory research began with Galton at the end of the 19th century, who used cue words to probe his own memory and found somewhat to his disappointment, that he always remembered the same things with each cue. He even concluded that his memory was impoverished. The cueing technique was resurrected by Crovitz and Schiffmann in the 70’s to elicit life stories. Initially AM had been marginalized and not considered clinically or scientifically as important as episodic or semantic memory. However AM became somewhat trendy lately as this book attests.

