

and technical literature in the field. The text provides all one wishes to know about research methods in analgesia. The book is comprehensive and allows easy access to the desired information. In striving to meet his goal, Dr Szallasi has taken a well-organized, novel approach to presenting the material. All the chapters follow the same pattern

with a brief review of the literature, a list of materials, a detailed methods section with rich illustrations, ending with extremely helpful notes for the reader. A list of the references at the end of each chapter provides an additional source for the reader. The editor's decision to invite groups of authors and experts from the different areas of research in analgesia, has allowed a broad and up-to-date view of the field. In a very modern approach the editor included two chapters on alternatives to mammalian pain models that are highly useful and relevant. From the 3d to the 10th chapters, animal models of pain and inflammation are presented. The 11th chapter addresses the clinical correlates of animal models of chronic pain. From the 11th to the 15th chapters, good descriptions of the human experimental pain models are found. For clinicians, the 35th chapter that deals with standardization of pain measurements in clinical trials plus the 36th chapter on the "Procedural sedation and analgesia research" are of particular interest. Non-invasive techniques and imaging analysis in pain research are well discussed. Particularly valuable are the discussions on G-protein-coupled receptors, electrophysiological and neurochemical techniques, ion channels and cell biology, genetic aspects of pain and analgesia and gene-based approaches. The isolation and culture of bone marrow stromal cells including a discussion on the possible use of transplantation of stem cell in the study of neuropathic pain, a method for the delivery of RNA interference to peripheral neurons in vivo, combination of cell culture assays and knockout mouse analyses in the study of opioid partial agonism, genetic polymorphism and human sensitivity to analgesics proteomic and metabolomics applications to analgesia research are also presented. The book concludes with a concise review of the pharmacological agents available to treat pain. Quoting Dr. Serdar Erdine, President of The World Institute of Pain in the "Concluding Remarks" "The book brings a complete coverage of research methods in

PHARMACOLOGY

SZALLASI, A. (Ed.) *Analgesia*. Methods and protocols. New York: Humana Press, 2010. 560p.

The book offers a detailed discussion of methods for studying analgesia, presents and discusses research protocols, filling one of the many gaps in the scientific analgesia from target discovery through target validation and drug development to preclinical trials, and from in silico methods and cell lines through drosophilia and mice to patients". This book is of great value for investigators, students and physicians interested in understanding pain and the mechanisms involved in its relief. On consulting this book, researchers, students and professionals will have the opportunity to update their knowledge of experimental methods in analgesia.

Prof. Zuleica Bruno Fortes ICB/USP