tabolism), 14 (Quantitative Structure–Mutagenicity Relationships), 18 (Molecular Basis for the Structure–Carcinogenicity Relationships of Polynuclear Aromatic Hydrocarbons), and 20 (Concept of the Integrated Approach)—the last a description of the EPA GENE-TOX program—provide some especially interesting applications to toxicological research.

QSAR methods should become increasingly important in toxicology, since the toxicologist is confronted with the problem of assessing the safety of millions of chemical entities which may cause injury or death to living organisms by only a reasonably small number of distinct toxic mechanisms. For example, genetic effects of toxic chemicals can be assessed by a half-dozen or so distinct classes of bioassays for different types of genetic damage. As the mechanisms underlying various types of toxic responses become better understood, QSAR methods will become more useful as a screening tool for predicting the adverse effects of new chemical entities. This book can serve as a useful introduction to the literature on QSAR for the practicing toxicologist and other scientists concerned with safety assessment of drugs and chemicals. The novice will find Chapters 5 and 6 particularly useful as an introduction to the field. Chemists who routinely use SAR approaches in research will find this work less helpful, since the problems of defining toxicological endpoints are not treated with the same standards of quality as the chapters on SAR methods. Nevertheless, this book is a valuable review.

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New Calcium Antagonists: Recent Developments and Prospects. Edited by A. FLECKENSTEIN, K. HASHIMOTO, M. HERRMANN, A. SCHWARTZ, and L. SEIPEL. Gustav Fischer Verlag, D-7000 Stuttgart 72, Postfach 720143, West Germany. 1983. 236 pp. 15 × 23 cm. Price DM 36.

This book represents the proceedings of a workshop on the calcium channel blocker diltiazem, held in May 1982 in honor of Professor A. Fleckenstein (the "father of calcium antagonists") on the occasion of his 65th birthday. Twenty-four international experts and their coworkers contributed chapters dealing almost exclusively with the authors' personal experimental findings. Of the 24 chapters in the book, only two are of a review nature. However, all the chapters provide recent and fascinating data on calcium antagonists. Although the focus of the workshop is on diltiazem, many other calcium antagonists are discussed throughout the book.

Eleven chapters are devoted to clinical experience with diltiazem and other calcium antagonists in the treatment of angina pectoris, coronary artery stenosis, coronary atherosclerosis, hypertension, and cardiac arrhythmias. The concensus from these chapters, is that the calcium antagonists are most valuable in treating all of these cardiovascular diseases.

Thirteen chapters deal with various aspects of the basic pharmacology of diltiazem and other calcium antagonists. Of these, nine chapters are concerned with the basic and applied pharmacology of calcium antagonists on the cardiovascular system. Among them, a notable chapter discussing the value of calcium antagonists in the prevention of arterial calcinosis provides tantalizing information and paves the way for future preventive clinical uses of this group of drugs. One chapter briefly suggests a therapeutic use for calcium antagonists in cerebrovascular disease, and another chapter details the molecular aspects (and pitfalls) of the binding properties of calcium antagonists to their presumptive membrane receptors and the relation of these receptors to the calcium channels which are blocked by these drugs. A review of the cellular mechanisms by which calcium antagonists preserve the integrity of myocardial cells and intracellular structures provides insightful reading. One chapter outlines the evidence for an interaction of calcium antagonists with presynaptic and postsynaptic α-adrenoreceptors, and serves to remind the reader of the complexity of the mechanism(s) of action of the calcium antagonists. Another reminder is provided in a chapter dealing with inhibition of adrenergic transmission by calcium antagonists at the vascular neuromuscular junction.

Despite the excellent scientific information provided in this book, a number of negative attributes are worth mentioning. The reader is repeatedly distracted by typographical errors which abound in virtually all chapters. Even the title on the front cover suffered from lack of proper proofreading. Furthermore, some chapters appear to have been transcribed from taped presentations, since incomplete sentences, verbless phrases, improper paragraph breakdown, and other miscellaneous grammatical oddities abound. A few chapters do not include a bibliography, and only one chapter was updated prior to publication. Finally, the absence of an index is unnerving, as is the absence of summaries or conclusions in a few chapters and English language summaries for two German language chapters.

In general, the book is most valuable to cardiovascular physiologists, pharmacologists, and clinicians who are involved in research aspects of calcium antagonists. It complements a half-dozen books on the same subject which appeared in the 1980's.

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