Proceedings of the XIVth International Symposium on Medicinal Chemistry, edited by FA Wouters, Elsevier, Amsterdam, 561 pp.

This is the 28th volume of the Pharmacochemistry Library (Editor: H Timmerman).

This book regroups 45 contributions from the participants of the XIVth International Symposium on Medicinal Chemistry, Maastricht, The Netherlands, 8–12 September 1996. It reflects the current trends in medicinal chemistry research.

Octanol–Water Partition Coefficients: Fundamentals and Physical Chemistry, edited by J Sangster, Volume 2, Wiley Series in Solution Chemistry, John Wiley & Sons, Chichester, 1997, 170 pp, £ 60,00.

This is the second volume of the Wiley series in Solution Chemistry. The first one dealt with pH and Buffer Theory. This volume is devoted to fundamentals and physical chemistry concerning octanol–water partition coefficients. It is divided into 6 chapters. The first one introduces the usefulness of the octanol–water partition coefficient. The second one is devoted to thermodynamical aspects of partitioning while chapter 3 presents experimental methods of measurement which are discussed in chapter 4. The methods of calculating partition coefficients are described in chapter 5, and the subject of chapter 6 is a discussion on Log K_{ow} predictive methods.

Combinatorial Chemistry, Synthesis and Application, edited by SR Wilson and AW Czarnik, John Wiley & Sons, Chichester 1997, 269 pp, £ 55.

26 Contributors, mainly from the USA, present 12 contributions on the main aspects of combinatorial chemistry, which is known as a new approach to synthetically produce molecular diversity. Although combinatorial chemistry had its origin in peptide chemistry, the book is focused on non-peptide organic applications, with only a few exceptions.

Purinergic Approaches in Experimental Therapeutics, edited by KA Jacobson and MF Jarvis, John Wiley & Sons, Chichester, 1997, 581 pp, £ 100.

This book deals with scientific data defining the role of purines and pyrimidines in various diseases. The respective roles of adenosine and ATP and their respective recognition sites are considered over a broad range of therapeutic areas, including cardioprotection, thrombosis, pulmonary, renal and gastrointestinal functions, diabetes, inflammation, cancer, epilepsy, neurodegeneration, ischemia, anaesthesia and pain. The constellation of adenosine- and ATP-mediated responses in cellular regulation is emphasized by the authors.

Structure-based Drug Design, edited by P Veerapandian, Marcel Dekker, New York, 1997, 656 pp, $ 175.

58 contributors have elaborated 22 chapters dealing with the use of structural information in the drug design process, in the area of AIDS, Arthritis and Inflammation, Cancer Diabetes, Heart diseases, Parkinson's disease, Sleeping Sickness, Immune diseases and Cytokines, Antivirals. Three contributions evoke Novel Methodologies. This book covers a very broad spectrum of diseases and shows how three-dimensional structural evaluation may be helpful for drug design.

Carbohydrates in Drug Design, edited by ZJ Witczak and KA Nieforth, Marcel Dekker, New York, 1997, 712 pp, $ 175.

This comprehensive book emphasizes the role of carbohydrates as antiinflammatory, anticancer, antidiabetic, anticonvulsant, antibiotic, and antiviral agents covering chemical properties, biological functions, *state-of-the-art* methodologies for synthesizing model compounds, conformational and steric effects, synthetic and enzymatic approaches, and the discovery and development of *new* leads in emerging fields. Reviewing major advances in medicinal carbohydrate chemistry, Carbohydrates in Drug Design explores the potential of sialyl Lewis and low-affinity sialic acid derivatives as potent multivalent inhibitors of the influenza virus, discusses polysulfates as possible anti-HIV agents, revealing how some polysulfates display differential inhibitory activity against various HIV strains, examines the significance, structure, and antithrombotic activity of heparin, detailing its role in cancer and Alzheimer's disease and highlighting heparin analogs as promising new agents, reports on the development of novel enzyme inhibitors for obtaining drugs based on the structure–activity relationship of naturally occurring inhibitors, describes the design and preparation of new modified nucleosides as anti-HIV agents, focusing on the use of anhydro derivatives as intermediates.

Heterocycles in Life and Society, An Introduction to Heterocyclic Chemistry and Biochemistry and the Role of Heterocycles in Science, Technology, Medicine and Agriculture, by AF Pozharskii, AT Soldatenkov and AR Katritzky, John Wiley & Sons, Chichester, 1997, 301 pp, £ 19.99.

This book presents a translation of a Russian original by AF Pozharskii and AT Soldatenkov published in 1993 by Khimiya. It consists of 11 chapters. The first two chapters present the elements of the structure and properties of heterocycles. The next four chapters deal with the key role of heterocycles in life processes. Chapters 7–9 are dedicated to the applications of heterocycles in medicine, agriculture and industry respectively. Chapter 10 is devoted to modern trends and prospects of development and chapter 11 deals with the origin of heterocycles.

Computer-Assisted Lead Finding and Optimization, Current Tools for Medicinal Chemistry, edited by H van de Waterbeemd, B Testa and G Folkers, Verlag Helvetica Chimica Acta, Basel, Wiley–VCH Weinheim, 1997, 553 pp, £ 90.

This book reports the lectures of the 11th European Symposium on Quantitative Structure–Activity Relationships, which was held 1–6 September 1996 in Lausanne, Switzerland. An account is presented of current strategies used in computer-assisted drug design. Topics include progress in chemometrics, molecular modeling, and the three-dimensional QSAR approaches. Mathematical methods such as genetic algorithms or artificial neural networks and fuzzy logic have found their application in rational molecular design.