

of neurons. The next three chapters deal with addiction, tolerance, and dependence. A detailed introduction into the problem of alcoholism including structural and kinetic features of alcohol- and acetaldehyde-dehydrogenases and their isozymes, and the correlation of various genotypes with alcoholism and consecutive disorders are given. Chapter 22 presents known polymorphic genes affecting nicotine metabolism and dopaminergic transmission and the potential benefit of future genome wide scans in tobacco addiction. Chapter 23 provides an excellent historic and pharmacologic overview on the opioid system. However, pharmacogenomics which would have included the impact of genomic variations is little discussed in this chapter. Differences between ethnic groups in drug metabolism, disposition, reasons for ethnic variations, molecular history of genetic polymorphisms, and their impact on public health (costs) and ethics are topics in chapter 24. Chapter 25 has some overlap with chapter 24 in ethnic aspects but then focuses on societal/ethical issues: pharmacogenomics will help to differentiate between human individuals based on genetic differences rather than dividing humans into different racial groups. Chapter 26 presents a “pharmacoproteomics” approach to unravel the molecular diversity of the human vasculature at the protein–protein interaction level by using a phage display random peptide library for the purpose of an individualized tissue specific targeted delivery. Finally, chapter 27 gives an extensive glossary including basic genetic terms and is a great help for newcomers in pharmacogenomics, and ends with helpful genomic resources on the World Wide Web.

In conclusion, experts describe – mostly very well and comprehensibly written – basically all facets of the exciting new discipline called pharmacogenomics. This book offers a wealth of highly actual information and can be emphatically recommended not only for those already working in pharmacogenomics but also for newcomers and life scientists who may intend to include pharmacogenomics in their research or teaching.

Matthias U. Kassack*
*Pharmaceutical Institute, University of Bonn,
 Bonn, Germany*

* Pharmaceutical Institute, University of Bonn, An der Immenburg 4, 53121 Bonn, Germany. Tel.: +49-228-735240; fax: +49-228-737929.
E-mail address: kassack@uni-bonn.de (M.U. Kassack).

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“Polymeric Biomaterials” 2nd Edition

Severian Dumitriu (Editor), Marcel Dekker, New York, Basel; 2002, 1184 pages, US\$ 275; ISBN 0-8247-0569-6

Searching databases for polymeric biomaterials is cumbersome. Medline and Chemical Abstracts alone provide

thousands of references, a ‘success’ that leaves people new to the field pretty much out in the rain. The vast amount of information available on these biomaterials must be ordered not only in regards to their chemical composition and physicochemical properties, but also according to their potential applications. This has become all the more necessary as polymer biomaterials are nowadays tailored substances that are fine-tuned to the needs of specific applications. ‘Polymeric Biomaterials’, edited by S. Dumitriu, is an attempt to bridge this gap between the multitude of publications in the field and the need for a careful introduction. An overview over the field is also provided for the more experienced reader. Where it was deemed necessary, the editor devoted whole chapters to individual material classes such as polysaccharides, silicones and biodegradable polymers. This is certainly important as these are substances with a tremendous amount of variability and, therefore, a plethora of applications. What I found most attractive besides these material based chapters, was contributions devoted to applications of well-defined materials. Although individual chapters typically focus on specific topics, they are related to major fields such as drug delivery, tissue engineering, gene therapy, prostheses and others. These individual chapters are well written and illustrated. The book has a detailed index so that searching for materials is comfortable. The book is certainly a useful tool for all those that would like an overview of the materials, as well as their potential applications. The price of US\$ 275 seems a little bit high, but is still a good investment.

Achim Göpferich*
*Department of Pharmaceutics, University of Regensburg,
 Regensburg, Germany*

* Department of Pharmaceutics, University of Regensburg, D-93040 Regensburg, Germany. Fax: +49-941-9434807.

E-mail address: achim.goepferich@chemie.uni-regensburg.de (A. Göpferich).

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“Antimicrobial Pharmacodynamics in Theory and Clinical Practice”

C. Nightingale, T. Murakawa, P. Ambrose (Editors), Marcel Dekker, New York, Basel; 2001, 432 pages, \$ 175; ISBN 0-8247-0561-0

The pharmacology of antimicrobial agents (AA) can be divided into two components: pharmacokinetic (PK) and pharmacodynamic (PD). Whereas PK parameters define the distribution of drug in serum and other compartments and elimination, PD parameters give information on the interaction between the AA and microorganism.