ELSEVIER

European Journal of Pharmaceutics and Biopharmaceutics 52 (2001) 261–262

European Journal of Pharmaceutics and Biopharmaceutics

www.elsevier.com/locate/ejphabio

Book reviews

Controlled release veterinary drug delivery
Michael J. Rathbone and Robert Gurny (Editors), Elsevier, Amsterdam; 2000, 375 pp.; $207.00; ISBN: 0-444-82992-X

Controlled release drug delivery is already covered by a number of excellent volumes. However, all these books focus on delivery systems designed for human use. Although the basics of controlled release drug delivery systems for human and for veterinary use are similar, the details of drug delivery to animals are in fact very different. Thus, it is the purpose of this book to introduce the reader to the unique opportunities and challenges of the field of controlled release veterinary drug delivery systems (CRVDDS).

The book comprises 13 chapters and can be roughly divided into three sections. The introductory part of this book comprises two chapters. The first one provides an overview of biopharmaceutical and pharmacokinetic principles. The second chapter deals with mechanisms of drug release from CRVDDS. A lot of information given in the introductory chapters is already known from other volumes dealing with human medicine. However, it was interesting to learn more about the variability coming from the different target species. The following 11 chapters in the second section of the book focus on specialized systems exclusively designed for the treatment of animals. Chapters 3 and 4 deal with intra-ruminal and post-ruminal drug delivery systems and rumen-stable products. Ocular veterinary drug delivery systems are encountered in chapter 5. The subsequent chapter highlights the complexities and potential of the intravaginal route for drug delivery in animals. Chapter 7 and 8 describe systems for the treatment of livestock, firstly the products for estrous control and secondly systems for the control of ectoparasites. Chapter 9 raises questions concerning CRVDDS for companion animals with the primary focus on dogs and cats. The last chapter of section II discusses controlled release of vaccines to animals. This chapter addresses issues such as mode of delivery, specificity of immune response, safety, and the desire to induce mucosal immunity.

The last section of the book (chapters 11 through 13) gives information on testing and regulatory aspects of CRVDDS. These three chapters can be very helpful for the practitioner; however, only the US regulations are reflected whereas all other markets are neglected.

In summary, the book provides a sound and comprehensive overview of this challenging and exciting field of pharmaceutical research. Those who will go deeper into details will be guided by more than 1200 citations which are provided with the book.

It is recommendable to all workers in the field as well as to everybody who wants to get an insight in this interesting and diverse area of research.

Rolf Daniels*
Institut für Pharmazeutische Technologie, Technische Universität Braunschweig, Braunschweig, Germany

* Fax: +49-531-391-5661.
E-mail address: r.daniels@tu-bs.de (R. Daniels)

PII: S0939-6411(01)00161-8

***The Blood Brain Barrier and Drug Delivery to the CNS* D. Begley et al. (Editors) Marcel Dekker, CH-Basel; 2000, 264 pages, US$ 150; ISBN 0-8247-0394-4**

For many researchers in drug delivery and drug targeting, it is Armageddon, for healthy people, it fends off diseases that are usually severe and often deadly, and for some patients, it hinders the optimal treatment of diseases: the blood brain barrier (BBB). Since Ehrlich's early experiments performed with dyes, some of which entered the brain while others did not, science never stopped to unravel the basics of the phenomena involved in substances entering the brain in a selective manner. The reasons are obvious. There are many severe diseases such as Alzheimer's or Parkinson's disease, to mention just a few, that could be better treated if the endothelial cell layer of capillaries in the brain were a little bit less picky with respect to their gate-keeper function. It is obvious that there is a tremendous amount of research that has been carried out on this subject during the almost 100 years since the BBB was discovered. A quick glance at databases such as Medline alone renders more than thousands of hits on the subject.

Well, here you might ask yourself how that little book by Begley, Bradbury and Kreuter might help. What I liked about the book is that the authors achieved indeed to condense a lot of information in their textbook. Furthermore, they achieved very nicely to point out what the current development in this field is. The book contains indi-

vidual chapters that are built on one another. After a brief description of the historical development and physiology, physicochemical aspects of drug brain uptake are discussed. Chapters on cell culture models for endothelial cells and their use for in vitro testing of drug permeation follow. Important are the chapters on transport systems that allow to shovel drugs into the brain, but some of which also point the other way such as P-glycoprotein. Finally, the book contains two chapters on targeting aspects in which, amongst others, nanoparticles are discussed as a potential carrier system for drugs.

The book is well written, clearly organized and certainly a valuable source of information for all those that are interested in the field. Besides their definite strength in a scientific sense, the 250 pages were also an appetizer that makes one wonder why we do not contribute to this field with our own research.

Achim Göpferich*
Department of Pharmaceutical Technology,
University of Regensburg, 93040
Regensburg, Germany

* Tel.: +49-941-943-4843; fax: +49-941-943-4807.
E-mail address: achim.goepferich@chemie.uni-regensburg.de (A. Göpferich)

PII: S0939-6411(01)00168-0