

Book review

‘Cell Culture Models of Biological Barriers’ In Vitro Test Systems for Drug Absorption and Delivery

C.-M. Lehr, editor. 2002, Taylor & Francis, London, 430 pages, £90, ISBN 0-415-277762-8.

This is certainly a beautifully produced book. It is excellently printed on high quality paper, and contains 16 excellent color plates. But Taylor and Francis, the publishers, have a good reputation for quality. Of course, the scientific content of the book is our central interest. As Lehr says in the preface, this book aims to provide a practical guide to contemporary cell culture-based in vitro techniques for drug transport studies using biological barriers. The modest second sentence maintains that this book was not written primarily for experts, but rather for novices in this field. This maybe have been the intention, but the result is a fairly advanced covering of biological models for studying transport barriers. As such, it can only be praised.

The first section of the book covers general aspects of epithelial cells and tissue culture. This is more or less an introduction to the subject, and also includes issues of validation and quality control. The lengthy second part of the book gives individual models to simulate particular epithelium and endothelium barriers of relevance to drug delivery. There are some really good chapters here,

including descriptions of Caco-2 cell monolayers, intestinal tissue, alveolar epithelium, nasal mucosa, skin and skin equivalence, buccal epithelium, and corneum and conjunctival epithelium. This is an excellence source of reference for anyone contemplating starting up work in the use of these in vitro cell and tissue systems. In the final part of the book, a little like Revelations, there are some comments about emerging tools and techniques for studying biological transport cross barriers. These include the prediction of drug absorption kinetics by computational methods, the use of confocal fluorescence microscopy and scanning force microscopy, and also fluorescence correlation spectroscopy. For me these are the most interesting chapters, illustrating some potentially quite useful come even exciting, new techniques and methods. £90, is around 130€. This is a very reasonable price for a book of this quality, both in terms of its printing (do not forget those color plates) and content.

Geoffrey Lee*

*Department of Pharmaceutics,
Lehrstuhl für Pharmazeutische Technologie,
University of Erlangen,*

*Cauerstrasse 4, Erlangen 91058, Germany
E-mail address: lee@pharmtech.uni-erlangen.de*

*Tel.: +49 9131 852 9552; fax: +49 9131 852 9545.