



Book review

Transdermal Drug Delivery

Second edition (revised and expanded), Richard H. Guy, Jonathan Hadgraft (Eds.), ISBN: 0-8247-0861-x

“Transdermal Drug Delivery” is a significantly revised second edition of a text first compiled by the authors in 1989. In general, authoritative chapters are provided by some of the leading researchers in the field. An introductory chapter considers the feasibility of transdermal drug delivery, briefly outlining the pertinent background in terms of skin structure, Fickian diffusion theory and permeation enhancement strategies. The following three chapters, comprising approximately half the book, focus on mathematical models for transdermal drug delivery and partitioning of chemicals into skin. Indeed, these three chapters provide a most comprehensive account of these topics and include valuable lists of permeability coefficients for many chemicals applied to the skin from water and partition coefficients of numerous chemicals between stratum corneum and water.

The following six chapters review some strategies for increasing transdermal drug delivery. The background theory, advantages and limitations of iontophoretic drug delivery are combined with a brief review of the potential uses for the technique in non-invasive drug monitoring. Likewise, the mech-

anisms and parameters controlling drug delivery by electroporation and sonophoresis for both local and systemic effects are described in chapters 6 and 7. An interesting and somewhat neglected approach to improve transdermal drug delivery, through the use of biochemical or metabolic enhancers such as cholesterol or fatty acid lipid synthesis inhibitors precedes contributions on supersaturated systems and minimally invasive technologies such as the construction and use of microneedles. The book closes with a chapter considering some regulatory issues around the topic.

With many multi-authored books containing specialist chapters available, “Transdermal Drug Delivery” does achieve its stated objectives; it provides a snapshot of the current state of some research themes within the area, and, as outlined above, provides a valuable reference work, most notably in the area of predictive modelling from databases.

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