

## BOOK REVIEWS

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### Therapeutic Systems

**Rate-Controlled Drug Delivery: Concept and Development.** By *Klaus Heilmann*. 2<sup>nd</sup> Revised Edition. Georg Thieme Verlag, Stuttgart · New York. Thieme-Stratton Inc., New York

The stated goal of this short (pp 147), well-produced, monograph is to "inform physicians, pharmacists, and students of medicine and pharmacy . . . of the therapeutic possibilities already realized and of others realizable in the future with rate-controlled drug delivery systems". The author specifically (and rightly) points out that this is not a biopharmaceutical textbook – it is, however, a readable and noninvasive introduction to a developing and topical field. – The book starts out with sections that define terminology and indicate the limitations of conventional preparations. Given the scope of the text, the treatment here is necessarily superficial and occasionally irritating (e. g. a description of membrane structure that does not mention the fluid mosaic model of *Singer* and *Nicholson*). The bulk of the volume is contained in the next three chapters: therapeutic systems, therapeutic systems for systemic use, and therapeutic systems for local use. Here, Professor *Heilmann* succinctly details the key significant points of controlled drug delivery in both general and specific terms. The discussion is supplemented by very good figures and is illustrated by well-validated examples of controlled-release therapeutic systems, for example Alza's transdermal, oral (OROS), ocular (Ocusert), and intrauterine (Progestasert) devices. The book concludes with brief thoughts on: the use of controlled-delivery devices in research, the design of other systems, the outlook for the future and an indication that controlled-delivery may have economic advantages over more conventional therapy. The references are comprehensive and include literature through 1981. A satisfactory index is provided. – The monograph is, on the whole, an enjoyable and undemanding read. It serves as a useful summary of the field and will, no doubt, wet the appetite of novitiates in the area of drug delivery.

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**Measurement of Blood Flow and Local Tissue Energy Production by Thermal Methods, Evaluation of Methodology.** International Symposium Jerusalem. XII. European Conference on Microcirculation. Edited by *W. Muller-Schauenburg*, *H. Benzing*, *E. Betz*, *B. Blum*. Georg Thieme Verlag, Stuttgart · New York. Thieme-Stratton Inc., New York

Thermal methods to evaluate tissue blood flow have been around for an appreciable period of time. However, complete conceptual understanding of the existing methodology has not yet been attained and new, important advances have recently been made. Hence, the symposium, whose proceedings are collected in this volume, was organized in 1982. – The complexity of the subject is clearly demonstrated in the 22 papers presented in the monograph. Methodologies are evaluated and both experimental and theoretical models are discussed. A diverse array of measuring devices and sites of measurement are described. In the majority of papers, considerable care is taken to define precisely the phenomenon(a) under either experimental observation or theoretical consideration. Each paper ends with a short verbatim discussion of the Symposium participants and the book concludes with a short general discussion. The tone of the conference is nicely set by the introductory papers of *Grayson*, *Muller-Schauenburg* and *Benzing*. The specific reports are self-contained and adequately referenced. It should be said that this text cannot be read without a firm background in the field. The collection is definitely (and appropriately) aimed at researchers working at the forefront of the subject. – The book serves, therefore, as a timely indication of the state-of-the-art in blood flow and tissue energy production measurement. The value of such assessments (e. g. by heat clearance) in experimental biology and medicine seems assured.

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