

# Book Review

**Polymeric Drug Delivery Systems**, Glen S. Kwon, editor, Marcel Dekker, 2005, Hardback, 642 p., ISBN 0824725328

It is surprising that this book represents the first edition of this title in the series *Drugs and the Pharmaceutical Sciences*, given the depth of research and growing importance of polymeric drug delivery systems. Although there are other texts that have been published that focus on this active area of research, this text appears to be the first major volume since 2000. A similarly titled volume, *Polymeric Drug Delivery*, by Sönke Svenson will be released later in 2006. Components and sections of other publications also deal with polymeric drug delivery systems but do not reach the level of detail and breadth of discussion described in the current text.

This volume represents contributions from many established pioneers in the field in addition to young investigators. Chapter 1 opens with an interesting narrative on the development of polymer-drug conjugates or "polymer therapeutics." Chapter 2 addresses PEGylation from primarily a synthetic point of view. Chapter 3 discusses pH-dependent polymer systems for oral and parenteral applications. Chapters 4, 5, 6, and 7 review hydrogel polymeric systems with varying degrees of detail. Collectively, these chapters complete nearly a book within a book. Chapter 8 details implantable systems for brain tumors. Chapter 9 addresses the important issue of PLGA-induced stability concerns for protein delivery. Chapters 10 through 13 review emergent polymeric systems including nanoparticulates, recombinant polymers, and self-assembly polymeric systems. Chapter 14 details interesting developments for the use of Pluronic systems for drug delivery. Finally, Chapter 15 details work on nonviral polymeric gene delivery systems focusing on

graft copolymers. These topics are wide ranging and are likely to attract a diverse readership. On the other hand, similar themes and issues are encountered throughout the text that promote the value of the volume as a whole.

What is absent from the text is the use of these systems via alternative administration routes (e.g., nasal, buccal, pulmonary, topical, and transdermal). This omission is probably due to several reasons including the need to limit the size of the text (already 650 pages) and a current lack of focused research of polymeric systems in these areas. In addition, as noted in some of the chapters that discuss development in clinical trials, the technologies used to probe absorption, distribution, kinetics, and quality control for polymeric systems are lagging behind the delivery systems. This is an issue for performance evaluation of these systems and a future edition may be well supplemented with a chapter on these concerns. There was discussion on regulatory hurdles facing polymeric systems, and this aspect is of considerable interest as we move forward and may deserve more focus.

These are minor drawbacks from an otherwise excellent text that seeks to cover an expansive field. The bibliographies included at the end of each chapter will be essential guides for researchers in this area. Most chapters have extensive and well-balanced citations to complement well-written reviews and will form an excellent resource for anyone involved in the research and development of polymeric drug delivery systems.

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