Letter to the Editor

A Better Way to Present Posters

The proliferation of scientific research has made the presentation of all of this work at a scientific meeting an impossible task if one were to rely only on podium presentations and keep the meetings within a reasonably time frame. The concept of the poster session has allowed for a major increase in the dissemination of information at these conferences. This represents an almost irrefutable argument for continuing the use of poster presentations. The increasing number of posters at each meeting reflects their acceptance by the participants. We are in full agreement with the concept of poster presentations but feel that there is room for improvement in the implementation.

The problems that we find with poster sessions are as follows.

(1) There are so many that the space for meeting attendees to view them is decreasing. There is much unintentional pushing and shoving as people jockey in an attempt to read them. As a result, one either is being stepped on or poked or feels guilty about being in the way of other interested participants. This makes it difficult to read the poster in any depth. Also, the posters appear to be increasing in length (and therefore decreasing in the size of the print), which only compounds the situation described.

(2) After walking around for an hour or more in an attempt to find and read the papers of interest, fatigue often sets in and many good pieces of work often go unseen.

(3) Those of us who wear bifocals find it almost impossible to read a poster without bending over backward and, in time, become quite uncomfortable. This certainly adds to the fatigue mentioned above.

We therefore propose the following.

(1) Have the authors prepare a reproduction of their posters which can be distributed to the attendees for perusal and reflection prior to the meeting. This does not require elaborate photographic equipment; it can be accomplished conveniently with a photocopy machine with size reduction capability.

(2) Continue the present poster presentation system. Since the attendees will be able to read the work in advance, they will be able to spend their and the presenter's time more fruitfully in a discussion of the work. Crowding will be reduced because visiting of posters will be more selective.

We hope that our suggestion will be implemented at least experimentally, perhaps initially for one section only. The booklet of poster reproductions should be offered for purchase at the time of advance registration for a modest fee to cover costs.

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Book Reviews

Pharmaceutical Dosage Forms: Disperse Systems. Volume 1. Edited by H. A. Lieberman, M. M. Rieger, and G. S. Banker. Marcel Dekker, New York, 1988, xvi + 524 pp.

This book is the first of a two-volume treatise on dispersed pharmaceutical systems. The emphasis of Volume 1 is the theoretical aspects of suspensions, emulsions, and colloids. These two volumes constitute part of the series *Pharmaceutical Dosage Forms,* which describes the theory and practice of pharmaceutical products.

Fifteen authors have contributed to produce the 10 chapters in this first volume describing theoretical concepts pertaining to disperse systems. Chapter 1 provides a brief but lucid introduction to interfacial and stability considerations of disperse systems. However, much of what appears in this introduction is repeated in subsequent sections of the book. The theory of suspensions is described in Chapter 2 and includes topics such as the properties of particles, the solid–liquid interface, and the preparation, stabilization, and rheological aspects of suspensions. Laser diffraction methods, which are eminently suited to the characterization of liquid and semisolid dispersions, are not mentioned in the extensive section on particle size analysis.

In Chapter 3, emulsion theory is related to the stability of both two-phase and three-phase emulsions. Colloid theory is reviewed in Chapter 4. Emphasis is given to the electrostatic and steric stabilization of colloidal sols and dispersions. The preparation of pseudolatexes is also described. This is one of the few chapters in the book which is supplemented with an extensive list of references.

Chapters 5 and 6 discuss pharmaceutical suspensions and pharmaceutical emulsions, respectively. Both chapters are comprehensive and well written, containing information relevant to oral, parenteral, and topical drug delivery systems. Further, both chapters describe the formulation, manufacture, properties, and stability considerations of these systems. However, it is the view of these reviewers that both of these chapters should directly follow, or preferably be integrated with, the earlier theoretical chapters on suspen-

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sions and emulsions. This would provide a more systematic treatment of each dispersed system and eliminate much of the repetition.

Specialized pharmaceutical emulsions including macroemulsions, multiple emulsions, microemulsions, and vesicles are described in Chapter 7. This stimulating chapter also provides insight into the current and potential future application of these systems to drug delivery research. This chapter is also one of the few which provides a conclusion and is well referenced. Chapter 8 provides an excellent description of the physical, chemical, and biological properties of surfactants. It may have been more helpful if this was one of the earlier chapters because of the importance of surfactants to the theory of disperse systems.

Chapter 9, on the rheology of disperse systems, provides a sound review of the theory and practice of viscometry, but only eight pages of this relatively extensive chapter are devoted to the rheological aspects of disperse systems. Chapter 10 describes the experimental design, modeling, and optimization strategies for product and process development. Although there are only limited examples of the application of this approach with dispersed systems in the published literature, the opportunities offered by the various optimization techniques are well elucidated.

This book contains valuable, current information on disperse systems. However, the book could have been better organized for a more systematic treatment of the material. While the editors state in the Preface that a multiauthored book will contain redundancies and that they did not strive to eliminate duplication completely, this book contains excessive repetition. For example, the DLVO theory is discussed in considerable detail in Chapters 2, 3, and 4. Essentially identical tables for the classification of dispersions appear on pages 14 and 152. Most chapters are supplemented with adequate and up-to-date reference lists. Typographical errors such as the spelling errors on pages 21 and 33 are relatively few.

Despite these limitations, this is a well-written book which provides the necessary theoretical information essential for the understanding of suspensions, colloids, and emulsions. It would serve as a useful library reference source for educators, pharmaceutical science graduate students, and industrial pharmacists involved in formulation research and product development of disperse systems. Thus, the editors have achieved their aims.

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Modern Developments in Cholinergic (Muscarinic) Receptors and Drugs. Edited by P. A. van Zwieten and E. Schonbaum. Gustav Fischer Verlag, Stuttgart and New York, 1989 (Vol. 7, No. 1, of Progress in Pharmacology and Clinical Pharmacology), 122 pp., DM 88,-/77.50 ($46/$40) for the subscribers to the whole series.

The recognition of M_1-selective antagonistic action of pirenzeipine, a highly valuable drug in the treatment of peptic ulcer disease, and the search for centrally acting muscarinic agonists with therapeutic potential against Alzheimer's and related disorders have stimulated a renewed interest for drugs with more selectivity for muscarinic receptor subtypes. This important treatise represents a compilation of the proceedings of a symposium held in Oss, The Netherlands, September 18, 1987, organized by the Dutch Pharmacological Society. The symposium attracted many of the top researchers in the muscarinic receptor field. The editors and all contributing authors should be commended for their efforts in making this a delightful yet concise book which provides readers with new insight for future development in this field.

The book begins with an excellent review of the historical development of muscarinic receptor subtypes by one of the leading researchers in this field. The following eight chapters deal with muscarinic receptor subtypes (agonists and antagonists); neuronal muscarinic receptors modulating acetylcholine release; allosteric alterations of muscarinic receptors; muscarinic receptors in the heart and vascular system, in the respiratory tract (two pages only), and in the central nervous system; inhibitory muscarinic receptors involved in gastrointestinal motility; and the stimulation of myenteric cholinergic nerves and gastrointestinal motility. With the exception of the chapter on muscarinic receptors in the respiratory tract (unfortunately the authors only provided an abstract for this chapter), all other chapters provide a thorough treatment of relevant new findings in this field. This reviewer finds the chapter on the structure–activity relationship of selective M_1- and M_2-receptor subtypes particularly fascinating. With the recognition of muscarinic receptor subtypes $M_{1\alpha}$ (hippocampal type), $M_{1\beta}$ (ganglionic, cortical type), $M_{2\alpha}$ (cardiac type), and $M_{2\beta}$ (smooth muscle/glandular type), the design of new and more selective therapeutic agents can be anticipated. Indeed, the genes encoding for five distinct muscarinic receptors have recently been cloned. Furthermore, chapters on neuronal muscarinic receptor modulating acetylcholine release and allosteric alterations of muscarinic receptors should offer new target sites for the design of muscarinic drugs of therapeutic interest.

In conclusion, this book presents a critical and up-to-date review of muscarinic receptors in a timely fashion. As a paradigm for all compilations of scientific research, the editors include an extensive bibliography. The analysis and discussions presented are useful to researchers, graduate students, and faculty alike. This text, a paramount study of the development in cholinergic research, is recommended to the libraries of pharmacy and medical schools.

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