The American Society for Pharmacology and Experimental Therapeutics. The First Sixty Years, 1908–1969. Edited by K. K. CHEN. Published by the Society, Bethesda, Md. 1969. viii + 225 pp. 18.5 × 26 cm.

We of the *Journal of Medicinal Chemistry* salute one of the sister organizations of the ACS on a significant anniversary, especially since the present memorial volume about ASPET has been edited by a recent prominent member of our Editorial Advisory Board, and because so many of our friends and colleagues are mirrored and celebrated in its pages.

The early history of ASPET was a reflection of the unremitting energy and the vision of the founder of the Society, John J. Abel. He was also the founder and original owner of the *Journal of Pharmacology and Experimental Therapeutics*, and after nursing it through its difficult and lonesome beginnings, turned it over to the Society of which he was the first president for many years. Abel gave ASPET not only its footings but the wisdom and the vision to weather the low points when pharmacology was regarded as a hybrid of biochemistry, physiology, and experimental medicine, and its fate hung in the balance. One cannot help but draw comparisons between the definition of pharmacology by the Pharmacology and Toxicology Training Committee of the National Institutes of Health a decade ago, and the cautious wording in which a similar, but less perceptive and prophetic NIH committee, defined medicinal chemistry. The high standards of ASPET are expressed best by its careful selection of members which has never been debased by soliciting membership. The original 30-years exclusion of pharmacologists employed in industrial laboratories is now long past but reflects the childhood diseases of an insecure and financially poorly funded organization. Now in full adulthood, and continuing under the leadership of a long line of illustrious presidents, many of them from the industry, ASPET has become the foremost scientific, educational, and sociological spokesman for pharmacologists. Those of us medicinal chemists, including the half dozen who have been elected to membership in ASPET, who have worked with pharmacologists as scientists and as personal friends, will find wisdom, humor, and nostalgia as well as the picture of an exciting future in this account.

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[where the weather during the 1954 ASPET Fall meeting was exceptionally hot (p 69): 106°F, *i.e.*, 41.11°C]

Solid Phase Peptide Synthesis. By JOHN M. STEWART and JANICE D. YOUNG. W. H. Freeman and Co., San Francisco, Calif. 1969. xi + 103 pp. 19.5 × 26 cm. $5.00.

With increased research in the areas of molecular and biological chemistry the need for an efficient and simple method of peptide synthesis became apparent. In 1963 R. B. Merrifield developed the method which he called solid-phase peptide synthesis (SPPS). This technique utilizes an insoluble solid support of polystyrene copolymer beads as an anchor for the synthetic peptide chain. The terminal amino acid is bound to the resin support and the protected amino acids are added individually in a sequential series of manual or automated steps. The completed peptide is then cleaved from the resin. These techniques have been revised over the past few years by Merrifield and others, and recently the method was used by one of two groups concurrently achieving the first total synthesis of an enzyme, ribonuclease, containing 123 amino acid residues. Stewart and Young's book is a comprehensive, laboratory-oriented presentation of the methodology and scope of solid-phase peptide synthesis.

The authors have structured the book into three chapters and a set of appendixes and indexes. In the first section they review the chemical steps used in solid-phase peptide synthesis. They discuss attachment of the terminal amino acid to the resin support, coupling reactions, and cleavage of the completed peptide. There is also a discussion of the protection and deprotection of α-amino and side-chain functional groups on the amino acids. Their second chapter presents an exhaustive description of the laboratory procedures used in the synthetic sequence. They discuss the experimental preparation of the resin support, synthesis of the protected amino acids, preparation of the special reagents to be used in the synthesis, the special laboratory techniques involved, and cleavage of the finished peptides. There is also a short discussion on purification of peptides and analytical techniques. The final chapter describes the apparatus used to effect the synthesis and several types of reaction and cleavage vessels and their maintenance. Finally, the authors briefly consider manual and automated systems. The set of six appendixes which conclude the book list the addresses of suppliers, the glassware and apparatus, chemicals and reagents, molecular weights of amino acids and derivatives, protecting groups and reagents, and representative peptides prepared by solid-phase peptide synthesis.

This book by Stewart and Young presents a well-balanced view of the methodology of solid-phase peptide synthesis. The authors have emphasized the techniques from an experimental and practical viewpoint while considering such factors as cautions in handling harmful reagents and the scope and limitations of the technique. The experimental procedures are explicit, easy to follow, and categorized. Comprehensive author and subject indexes and a set of appendixes facilitate valuable and efficient use of the book as a reference source. Stewart and Young have included the contributions of many other workers in the field and the book contains 146 references, many of which were published in 1968. Figures and illustrations are used judiciously throughout the book to show simply systems and apparatus which would be difficult to describe. In essence, I think that the book provides a comprehensive yet concise review of solid-phase peptide synthesis and, for its low cost, is a good investment for any experimentalist wishing to undertake the solid-phase synthesis of peptides.

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Annual Reports in Medicinal Chemistry. 1968. Edited by CORNELIUS K. CAIN, with 51 contributors. Academic Press, New York, N. Y. 1969. x + 351 pp. 17 × 24.2 cm. $8.75.

For the first time in several years a sense of hope pervades the review chapters of this Annual Report. In reading particularly the articles by A. P. Grollman (Rational Design of Chemotherapeutic Agents), H. G. Mautner (Molecular Basis of Drug Action), F. E. Bloom (Neurotransmitters Revisited), and W. P. Purcell and J. M. Clayton (Physicochemical Parameters in Drug Design) one cannot help but feel that the gloom, caused by a dearth of new ideas, that has hovered over medicinal chemistry for half a decade, is beginning to lift. Of course such progress does not occur overnight, but the present volume seems to have been compiled at a time when the gains in new ideas and findings could be consolidated. For this reason, it is almost imperative that every medicinal chemist study these reviews attentively; novel thoughts arise most readily from intensive background reading, and the intangibly special position of this volume should provide a stimulus for additional unorthodox intellectual combinations.

In addition to those most searching chapters already mentioned, there are another 26 chapters spanning the whole width of medicinal chemistry. Some of these are systematic accounts of last year's happenings, others are imbued with fresh enthusiasm recounting a growing awareness of chemical-biological relationships which appeared unpromising a few years ago. Even the annual feature of Reactions of Interest in Medicinal Chemistry, which has been rather dull for several years and barely of fringe significance, has a new fresh look in J. J. Cannon's selection of really interesting organic reactions which have already simplified otherwise unrewarding synthetic procedures. One can only hope that the upward turn, noticeable in the 1968 Reports, will gather momentum in subsequent volumes of this carefully edited series.

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