

Bioconjugate Techniques. By Greg T. Hermanson. Academic Press, San Diego, CA. 1996. xxiii + 785 pp. 18 × 26 cm. ISBN 0-12-342335-X. \$99.00. \$49.95 (pbk).

Bioconjugation involves the linking of two or more molecules to form a novel complex having the combined properties of its individual components. The technology of bioconjugation has affected many areas of biology and shows promise to extend into many more aspects of medicinal chemistry than are presently involved. There is a perceived need for a one-volume compendium with utility as a source of information for the novice as well as a ready resource for more experienced practitioners. This volume serves both functions.

The book is divided into three sections: Bioconjugate Chemistry, an introduction and an overall view of functional targets and the chemistry of reactive groups; Bioconjugate Reagents, which addresses the various strategies and the appropriate functional group chemistry involved in the processes; and Bioconjugate Applications, in which practical aspects, including specific protocols for an impressive number and variety of bioconjugation technologies, are discussed in some detail and at some length.

This is a well-organized and well-written book; it is readable and comprehensible to the novice (like this reviewer), but its content and stylistic approach seem sufficiently sophisticated to appeal to active, knowledgeable workers in the field. It is an impressive compilation of useful theoretical and practical information that is not readily available elsewhere in a single volume. The subject material is well and carefully addressed. All sections of the book have a strong organic chemistry flavor; chemical structures, equations, and synthetic flow diagrams are employed extensively and appropriately. Structures are carefully drawn, and few errors were noted. The entire book is well documented and referenced; the bibliographic section is at the end of the volume and consists of approximately 1000 citations. Numerous references to literature of the 1990s, as well as older citations, are included.

The author's efforts have provided not only a useful reference work but also a book that could serve as the basis or a reading resource for a graduate-level course for students of medicinal chemistry, pharmacology, biochemistry, or pharmaceuticals. This book is recommended to workers and aspirants in the fields of bioconjugate preparation and utilization.

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Annual Reports in Medicinal Chemistry. Volume 31. Editor-in-Chief: James A. Bristol. Academic Press, Inc., A Division of Harcourt Brace & Co., San Diego, CA. 1996. xi + 413 pp. 17 × 25 cm. ISBN 0-12-040531-8. \$70.00 (pbk).

This is Volume 31 in a series sponsored by the Division of Medicinal Chemistry of the American Chemical Society. It is so important to medicinal chemists that all members of the Division receive copies. This volume, like its predecessors, provides timely and critical reviews, usually of 10 pages or less and exhaustively referenced, of important established and emerging topics in the biological sciences which are anticipated to be of major current interest and to provide the basis for future drug therapies. The 35 chapters in the book form the basis for seven sections that are entitled as follows: (I) Central Nervous System Diseases, (II) Cardiovascular and Pulmonary Diseases, (III) Cancer and Infectious Diseases, (IV) Immunology, Endocrinology, and Metabolic Diseases, (V) Topics in Biology, (VI) Topics in Drug Design and Discovery, and (VII) Trends and Perspectives. Each chapter is written by an active researcher and expert in the field and is up-to-date to early 1996.

As in other recent volumes, the emphasis of the chapters is in favor of specifically focused and mechanistically oriented chapters intended to inform the reader of the most important results in a new area of research as opposed to an annual update of an established field. Thus, newer topics addressed in Sections I–IV include neuropeptide Y, gonadal steroid receptors, P₂ purinoreceptors, PDE inhibitors, GPIIb/IIIa inhibitors, NK antagonists, chemotherapy of malaria, estrogen receptor modulators, cell adhesion integrins, obesity, osteoporosis, and MMP inhibitors. Section V, Topics in Biology, incorporates chapters on cell cycle, apoptosis, JAKs and STATs, proteasome, and MAP kinase. Section VI, Topics in Drug Design and Discovery, concentrates on mechanism-based drug discovery and newer technologies, e.g., new NMR methods, combinatorial chemistry, and plasma protein binding. The final section includes chapters that summarize new chemical entities (NCEs) introduced to the world's marketplace in 1995 (35, as compared to 44 in 1994 and 43 in 1993, but the same as in 1991 and 1992) and a historical chapter, The Protein Structure Project 1950–1959: First Concerted Effort of a Protein Structure Determination in the U.S.

Volume 31 of the *Annual Reports in Medicinal Chemistry* provides up-to-date reviews of topics of interest to all researchers, scientists, teachers, students, and administrators concerned with the development of new drug products. It is a must addition to the personal libraries of all medicinal chemists.

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