The Organic Chemistry of Drug Design and Drug Action, Second Edition

Richard B. Silverman Ph.D Organic Chemistry
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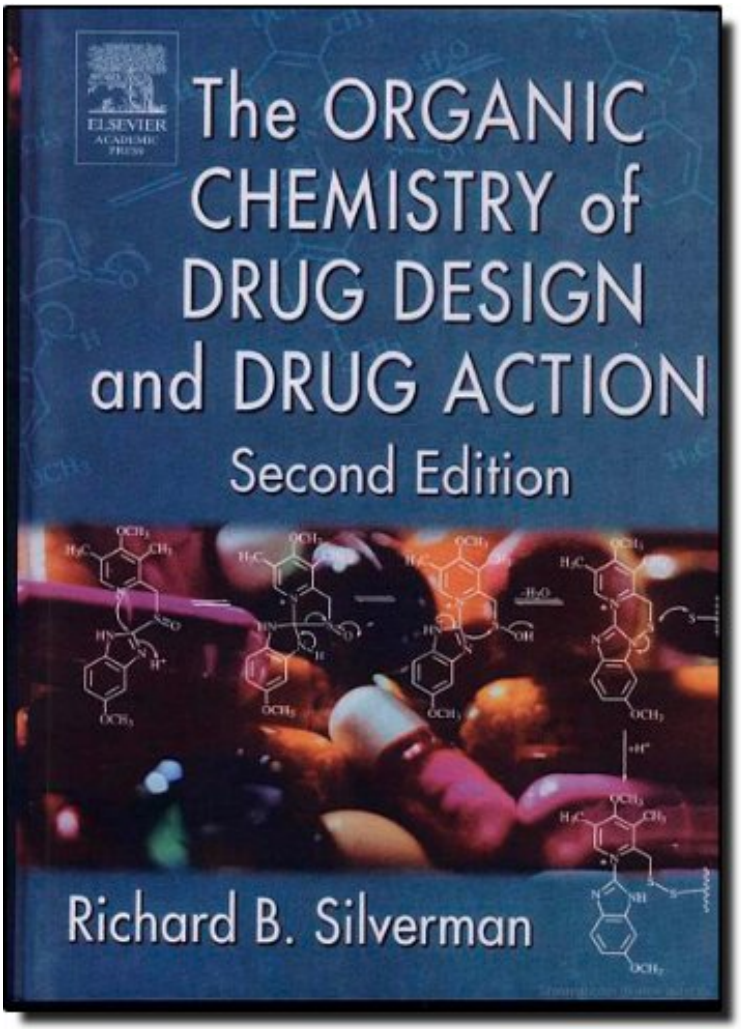

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Richard B. Silverman Ph.D Organic Chemistry : The Organic Chemistry of Drug Design and Drug Action, Second Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised The Organic Chemistry of Drug Design and Drug Action, Second Edition:

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and with a welth of detal on many diferent forms of chemistry used in the many advancing areas of drug design.

Standard medicinal chemistry courses and texts are organized by classes of drugs with an emphasis on descriptions of their biological and pharmacological effects. This book represents a new approach based on physical organic chemical principles and reaction mechanisms that allow the reader to extrapolate to many related classes of drug molecules. The Second Edition reflects the significant changes in the drug industry over the past decade, and includes chapter problems and other elements that make the book more useful for course instruction.New edition includes new chapter problems and exercises to help students learn, plus extensive references and illustrationsClearly presents an organic chemist's perspective of how drugs are designed and function, incorporating the extensive changes in the drug industry over the past ten yearsWell-respected author has published over 200 articles, earned 21 patents, and invented a drug that is under consideration for commercialization

"...this text is directed towards graduates who are embarking on a career in medicinal chemistry in the discovery laboratory. Sliverman continues to blur the edges between chemistry and pharmacology in a manner that is incontrovertibly relevant to the discipline of drug design and development." --Michael E. Cooper, GE Healthcare, The Maynard Centre, in DDT, VOL. 9, 2004 "What stands out in comparison with other books discussed here is that the subjects are generally addressed in detail, and each theoretical point is illustrated with examples of specific drugs. A great deal of knowledge is reflected...that is suitable for both advanced students and PhDs a like who have not yet become acquainted with the area, but who wish to prepare themselves for a career in drug research." --ORGANIC CHEMISTRY ORG., 2005 Praise for the First Edition: "This book is a tour de force in the title area...This book would be appropriate for advanced undergraduate students and graduate students...strongly recommended to scientists who are seeking an efficient introduction to medicinal chemistry, background in a specific drug principle or category, or a dose of inspiration." --JOURNAL OF THE AMERICAN CHEMICAL SOCIETY "... unified, well-organized and clearly presented ...It is so clearly written that it will be of value to both students and veteran scientists...My congratulations to Dr. Silverman in consolidating such a multiplicity of facts and data so as to truly begin to reduce medicinal chemistry from a hybrid of chemistry, pharmacology and related sciences to a single, clearly defined, rationalized discipline." --Carl Kaiser, Director of Medicinal Chemistry, NOVA PHARMACEUTICAL CORPORATION "The author shows an uncanny ability to present the salient principles in a systematic, well-balanced and logical way..." --William C. Groutas, WICHITA STATE UNIVERSITY "I was favorably impressed with the clarity of Dr. Silverman's writing style which made the material interesting and easy to read...Treatment of the material is quite comprehensive without being overly detailed and the referencing and illustrations are well chosen..." --John G. Topliss, PARKE-DAVIS "...The organization of this book and the clarity of presentation are outstanding... It is highly recommended to medicinal chemists as well as to all others entering into the field or concerned with the science of medicinal chemistry." --JOURNAL OF MEDICINAL CHEMISTRY Praise for the new edition: "...intent of the first edition was to provide a textbook for advanced undergraduate students or graduate students, the scope of the second edition has been expanded so that it not only serves the original purpose but also serves as an excellent reference book for practicing medicinal chemists." --John W. Ellingboe, Wyeth Research for the Journal of Medicinal Chemistry, 2004 "...this book is a thorough overview of drug discovery and development... It is not only an excellent textbook for students but also a valuable resource for those already practicing medicinal chemistry." --John W. Ellingboe, Wyeth Research for the Journal of Medicinal Chemistry, 2004From the Back CoverThis book provides a new approach to the teaching and understanding of medicinal chemistry. It is a survey of basic principles of drug design and drug action in which the concepts are presented from a physical organic chemistry perspective so that the design, development, and mechanisms of action and metabolism of drugs can be rationally understood. The reader is then able to apply these principles to any specific classes of drugs of interest and to understand how these drugs might act at a molecular level.KEY FEATURES*Provides an organic and synthetic chemist's perspective of how drugs are designed and how they function *Teaches organic chemists and biochemists the fundamentals of drug design and drug action using drugs as examples*No prior knowledge of biochemistry, pharmacology, or physiology is assumed*Extensive use of references to the primary and secondary literature for more in depth reading about all concepts*Extensive use of structures, schemes, and figures to illustrate points*Problem sets and answers are included for each topic *Informal but clear writing style so practicing chemists and undergraduates can easily understand the concepts presentedRichard B. Silverman is professor has published over 200 articles in the areas of synthesis, bioorganic chemistry, and medicinal chemistry, has been awarded 21 patents, and has invented a drug that is under consideration for commercialization.About the AuthorProfessor Richard B. Silverman received his B.S. degree in chemistry from The Pennsylvania State University in 1968 and his Ph.D. degree in organic chemistry from Harvard University in 1974 (with time off for a two-year military obligation from 1969-1971). After two years as a NIH postdoctoral fellow in the laboratory of the late Professor Robert Abeles in the Graduate Department of Biochemistry at Brandeis University, he joined the chemistry faculty at Northwestern University. In 1986, he became Professor of Chemistry and Professor of Biochemistry, Molecular Biology, and Cell Biology. In 2001, he became the Charles Deering McCormick Professor of

Teaching Excellence for three years, and since 2004 he has been the John Evans Professor of Chemistry. His research can be summarized as investigations of the molecular mechanisms of action, rational design, and syntheses of potential medicinal agents acting on enzymes and receptors. His awards include DuPont Young Faculty Fellow (1976), Alfred P. Sloan Research Fellow (1981-1985), NIH Research Career Development Award (1982-1987), Fellow of the American Institute of Chemists (1985), Fellow of the American Association for the Advancement of Science (1990), Arthur C. Cope Senior Scholar Award of the American Chemical Society (2003), Alumni Fellow Award from Pennsylvania State University (2008), Medicinal Chemistry Hall of Fame of the American Chemical Society (2009), the Perkin Medal from the Society of Chemical Industry (2009), the Hall of Fame of Central High School of Philadelphia (2011), the E.B. Hershberg Award for Important Discoveries in Medicinally Active Substances from the American Chemical Society (2011), Fellow of the American Chemical Society (2011), Sato Memorial International Award of the Pharmaceutical Society of Japan (2012), Roland T. Lakey Award of Wayne State University (2013), BMS-Edward E. Smissman Award of the American Chemical Society (2013), the Centenary Prize of the Royal Society of Chemistry (2013), and the Excellence in Medicinal Chemistry Prize of the Israel Chemical Society (2014). Professor Silverman has published over 320 research and review articles, holds 49 domestic and foreign patents, and has written four books (The Organic Chemistry of Drug Design and Drug Action is translated into German and Chinese). He is the inventor of LyricaTM, a drug marketed by Pfizer for epilepsy, neuropathic pain, fibromyalgia, and spinal cord injury pain; currently, he has another CNS drug in clinical trials.