

About the book

The study of receptors has become a major discipline of study for many investigators in the biomedical sciences. The interaction of hormones, neurotransmitters, and effectors with receptor systems has been recognized as a key element in regulatory biology. As a result, there is a pressing need to gather and organize essential concepts in receptorology.

This book presents a concise yet comprehensive treatment of the essential concepts of receptor research. The text discusses in detail the methods of ligand binding to receptors and the techniques used for the analysis of binding isotherms. The concepts of receptor-to-effector coupling, receptor desensitization, cooperativity in receptor-related phenomena, partial agonism, and "spare receptors" are evaluated critically. For each subject a quantitative algebraic analysis is given with a full critical discussion of the subject. Many specific examples from the experimental literature illustrate important issues. Whenever models are discussed, diagnostic experiments designed to differentiate between them are defined. Again, specific examples from the current literature on receptors are quoted and analyzed. There is also a brief chapter on receptor purification and reconstitution.

In summary, the book combines essential concepts and basic rules with practical advice for the study of receptor-ligand interactions. This book will be of great value to the pharmacologist, the neurochemist, the endocrinologist, and the biochemist.

About the author

Alexander Levitzki is chairman of the Department of Biological Chemistry at The Hebrew University in Jerusalem. Author of over one hundred original research articles, he has conducted research and taught at the Weizmann Institute, the University of California at Berkeley (as a recipient of the Fulbright-Hays Award), the University of Oregon at Eugene, and the National Cancer Institute of the U.S. National Institutes of Health. As one of the most prominent contributors in his field, Dr. Levitzki is a member of a number of honorary bodies and journal advisory boards in addition to holding broad administrative responsibilities at his university.



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