Molecular and Cellular Signaling (Biological and Medical Physics, Biomedical Engineering)

Martin Beckerman
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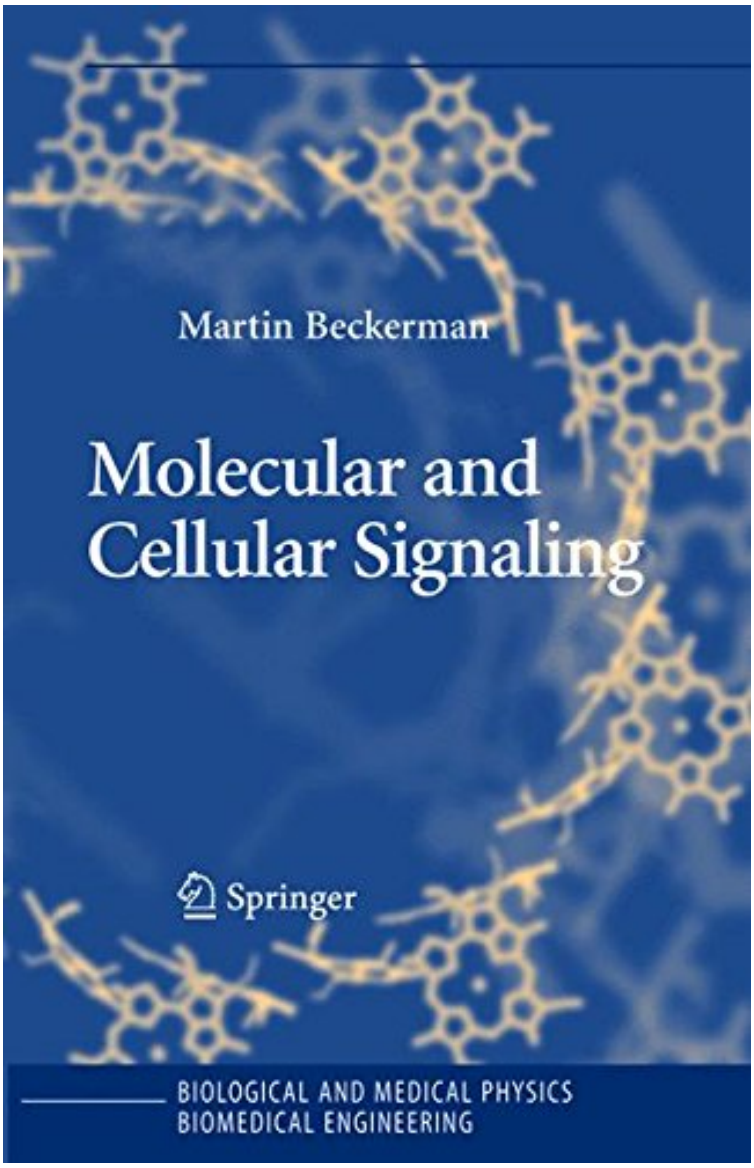

#1336194 in Books Martin Beckerman 2005-03-22Original language:EnglishPDF # 1 9.21 x 1.31 x 6.14l, 2.16 #File Name: 0387221301582 pagesMolecular and Cellular Signaling | File size: 66.Mb

Martin Beckerman : Molecular and Cellular Signaling (Biological and Medical Physics, Biomedical Engineering) before purchasing it in order to gage whether or not it would be worth my time, and all praised Molecular and Cellular Signaling (Biological and Medical Physics, Biomedical Engineering):

1 of 1 people found the following review helpful. Excellent and Insightful WorkBy P. LeedDr. Beckerman has

carefully written an insightful and clear explanation of this important subject. This works builds upon his earlier work of "Adaptive Cooperative Systems" and continues his excellent effort to elucidate the key topics of this research area. I would recommend it highly to those involved in the medical and biochemistry research fields.

Makes connections between diseases, drugs and signaling in those chapters not specifically devoted to pathogens. Reviews background in first 5 chapters then offers chapters on cancers and apoptosis and on bacteria and viruses. Signaling in the immune, endocrine (hormonal) and nervous systems covered along with cancer, apoptosis and gene regulation. Each chapter ends with a problem section to facilitate discussion.

From the Back CoverA small number of signaling pathways, no more than a dozen or so, form a control layer that is responsible for all signaling in and between cells of the human body. The signaling proteins belonging to the control layer determine what kinds of cells are made during development and how they function during adult life. Malfunctions in the proteins belonging to the control layer are responsible for a host of human diseases ranging from neurological disorders to cancers. Most drugs target components in the control layer, and difficulties in drug design are intimately related to the architecture of the control layer. Molecular and Cellular Signaling provides an introduction to molecular and cellular signaling in biological systems with an emphasis on the underlying physical principles. The text is aimed at upper-level undergraduates, graduate students and individuals in medicine and pharmacology interested in broadening their understanding of how cells regulate and coordinate their core activities and how diseases arise when these regulatory systems malfunction, as well as those in chemistry, physics and computer science interested in pursuing careers in biological and medical physics, bioinformatics and systems biology. To that end, the book includes background information and review sections, and chapters on signaling in the immune, endocrine (hormonal) and nervous systems. It has chapters on cancer, apoptosis and gene regulation, and contains chapters on bacteria and viruses. In those chapters not specifically devoted to pathogens, connections between diseases, drugs and signaling are made. Each chapter also features a problem set to facilitate further discussion and understanding. About the Author: Martin Beckerman, Ph.D. is Senior Scientist at the Center forMartin Beckerman, PhD, is a senior research scientist at the Department of Energy/National Nuclear Security Administrations Y-12 National Security Complex in Oak Ridge, TN. Prior to assuming his current position at the Y-12 NSC, Dr. Beckerman held teaching and research positions at the Weizmann Institute of Science, the University of Rochester, the Massachusetts Institute of Technology, the University of Tennessee and the Oak Ridge National Laboratory. He has authored over 130 publications and hasbeen included in 1400 citations. About the AuthorMartin Beckerman, Ph.D. is Senior Scientist at the Department of Energy/National Nuclear Security Administrations Y-12 National Security Complex in Oak Ridge, TN. Prior to assuming his current position at the Y-12 NSC, Dr. Beckerman held teaching and research positions at the Weizmann Institute of Science, the University of Rochester, the Massachusetts Institute of Technology, the University of Tennessee and the Oak Ridge National Laboratory. He has over 130 publications, 1400 citations, and is the author of a previously published book entitled Adaptive Cooperative Systems.