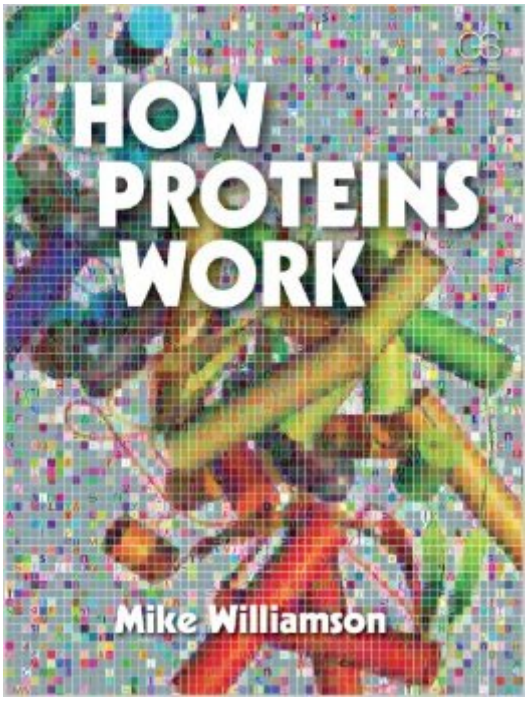
How Proteins Work



Synopsis

How Proteins Work is an up-to-date and authoritative account of protein function in living systems, explained within the governing parameters of physics, chemistry, and evolution. This text will enable advanced undergraduate students in biochemistry and biophysics to understand the relationships among protein function, structure, and dynamics. It will also serve as a valuable resource for graduate students and researchers looking for a reference on the fundamentals underlying protein function. By providing an integrated view of proteins at both a cellular and systemic level, this textbook shows how evolution drives proteins to adopt domain structures that combine to achieve biological outcomes. The association of proteins into dimers, molecular machines, and multi-enzymatic complexes enables them to achieve catalytic and functional efficiency.

Book Information

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Customer Reviews

Best book I’ve ever read on biochemistry and proteins. Don’t expect it to be bogged down in the technical details, it sprints through the concepts and provides ample amounts of references for those who want more. Very well worded - some minor typos in this version - missing commas and

letters - the concepts are concrete though.

'How Proteins Work' by Mike Williamson is a great text. Its eleven chapters cover various aspects of protein structure and function. It should be applicable to advanced undergraduates, graduates, and academics. I particularly liked Professor Williamson's conversational, relaxed, and friendly writing style. He also takes care to explain in relatively simple terms with appropriate examples. This book deals with topics that other mainstream biochemistry textbooks ignore (e.g. entropy/enthalpy compensation). I found Chapters 1 on protein structure and evolution and Chapter 2 on protein domains particularly useful for my undergraduate students because they had sufficient detail, easy to follow, and interesting. Professor Williamson demonstrates an insight into 'how proteins work' that is obviously built from years of experience in teaching and research. I found this book fascinating and even simple things like the calculation of the number of protons in an E.coli cell (page 129) are a delight! Each chapter is well supplemented with good diagrams, images, and a list of cited references. Pedagogically the text uses extensive sub-headings for organisation, bold type for important terms, boxed text to distinguish more detailed explanations or interesting asides, quotations, wide margins with notes, nicely formatted tables, a list of references for further reading, referrals to relevant websites, and end of chapter problems. The book is colourful, well organised, and easy on the eyes. I like this text and have recommended it to the students in my course on structural bioinformatics. I still have a lot to read but I commend Professor Williamson for taking the time, and considerable effort, to write a great book!Dr Steven Bottomley. Lecturer and Unit Coordinator in Structural Bioinformatics. School of Biomedical Sciences. Curtin University.

worth to buy it if you need a reference book for your school.It took a several week to arrive since they ship it from India but it was o.k. for me

Excellent and well laid out chapters. Gives a great overview and is useful for people wishing to get a basic introduction into proteins.

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