

INTRODUCTION TO PROTEINS

STRUCTURE, FUNCTION, AND MOTION

"The book by Kessel and Ben-Tal offers a unique combination of structure, thermodynamics and biology. I was impressed both by the breadth of the topics covered and by the depth in which they are treated. General principles are made intuitively clear based on well-chosen examples, many of them having relevance to disease. ..."

—Barry Honig, Columbia University, New York, New York, USA

"... the book provides general guidelines for understanding protein structure and demonstrates how we can use the structure to phrase testable hypotheses about biological function. ... The book gives a coherent picture of each topic ... The book provides background in cell biology, basic chemistry and thermodynamics, making it useful for newcomers to the protein structure field who want to catch up quickly. ... it [is also] easy for experts to dive into the more specialized aspects quickly. ..."

—Burkhard Rost, Technische Universität München, Germany

With more than 350 color images throughout, **Introduction to Proteins: Structure, Function, and Motion** presents a unified, in-depth treatment of the relationship between the structure, dynamics, and function of proteins. Taking a structural-biophysical approach, the authors discuss the molecular interactions and thermodynamic changes that transpire in these highly complex molecules. They use numerous proteins as examples to illustrate the topics and principles and to show how proteins can be analyzed in multiple ways. The text refers to many everyday applications of proteins and enzymes in medical disorders, drugs, toxins, chemical warfare, and animal behavior. Downloadable questions for each chapter are available at www.crcpress.com

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