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BOOK REVIEW

Protein Misfolding and Disease. Principles and Protocols

(Bross, P., and Gregersen, N. (eds.), in Series: Methods in Molecular Biology, Vol. 232, Walker, J. M. (Series Editor), Humana Press, Totowa, New Jersey, 2003, 318 pp., $99.50)

This book consists of 24 chapters grouped into three parts. The first part of this book entitled "General concepts and models" contains seven chapters that deal with general problems of tertiary protein structure and its impairments under such pathological conditions as cystic fibrosis, α-1-antitrypsin deficiency, Parkinson's disease, and cancer.

In chapter 2 of this part the authors devote much attention to molecular chaperones, which bind to partially (un)folded polypeptide chains (before formation of tertiary structure). Although chaperons are not components of final supramolecular complexes exhibiting various biological activities, they promote optimal formation of noncovalent interactions in the polypeptide chains.

The second part of this book includes five chapters that deal with general methods of recombinant protein expression, protein expression in *E. coli*, yeast, site-directed mutagenesis, and methods of analysis of protein maturation and degradation.

The third part of this book includes 11 chapters containing descriptions of methods of determination of protein aggregation and protein staining in various tissues and cultivated cell isolates obtained from patients. Several chapters of this part deal with studies of protein tertiary structure formation in cytoplasm, microsomes, and mitochondria.

This book provides basic knowledge on the mechanisms of formation of various conformations of protein structures and detailed protocols employed for studies of various aspects of this field. Almost all chapters contain numerous comments on protocols and a main bibliography on the considered problems. An alphabetical index provides rapid orientation in the material given in this book. The book is well illustrated with photographs, graphs, figures, and tables, these helping the reader to better understand the considered problems. I believe that this book will be useful for specialists in protein chemistry and biochemistry, molecular biology, and medicine. It may also be useful for students and their teachers specializing in the field of proteomics.

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