AN IN-DEPTH LOOK AT NEW DISCOVERIES IN PROTEIN MISFOLDING DISEASE RESEARCH

Protein misfolding/aggregation diseases are a medical puzzle that has baffled researchers for many years. These diseases are characterized by the presence of protein deposits, or amyloid fibrils, which gather in the intracellular and/or extracellular spaces in a variety of tissues. Unchecked, the process of amyloidogenesis leads to proteotoxicity, cell loss, and eventually organ dysfunction, and causes such well-known and devastating diseases as Alzheimer's, Parkinson's, and Mad Cow.

Employing a diversity of research approaches, including chemical and biophysical, cellular, and animal models, the authors investigate various amyloid diseases and outline progress made in understanding them in this important book. Included are novel strategies to combat a wide variety of degenerative diseases. With a systematic overview, *Protein Misfolding Diseases:*

- Emphasizes therapeutics in an amyloid disease context, which helps bridge the gap between basic science and pharmaceutical applications to protein misfolding diseases
- Provides a comprehensive survey of many of the topics surrounding the universal biological aspects of protein misfolding
- Includes a Foreword by R. John Ellis, International Gairdner Award Winner 2004
- Is coedited by Jeffery W. Kelly and Christopher M. Dobson, leaders in the field of protein biochemistry

Protein Misfolding Diseases uses the latest medical data from expert scientists and protein misfolding clinicians to launch a multi-targeted assault on the process of amyloid fibril formation. Fresh insight into the etiology of these maladies helps researchers gain a thorough understanding of the bases of these diseases and offers guidance in designing therapeutic strategies to build on promising new findings—and bring hope one step closer to reality.

MARINA RAMIREZ-ALVARADO is an Assistant Professor of Biochemistry and Molecular Biology at the Mayo Clinic. Despite being a young investigator, she is already a world leader in the study of molecular determinants of light chain amyloidosis, a rare misfolding disease.

JEFFERY W. KELLY is a Professor of Chemistry and Molecular and Experimental Medicine at the Scripps Research Institute. He is one of the leading authorities in the field of protein misfolding, with over 250 publications to his credit.

CHRISTOPHER M. DOBSON is a Professor in the Department of Chemistry at the University of Cambridge. Dr. Dobson is a leading researcher studying the structural and biochemical bases of protein misfolding diseases and has over 500 publications.

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