WILEY SERIES IN PROTEIN AND PEPTIDE SCIENCE Vladimir N. Uversky, Series Editor



PROTEIN AND PEPTIDE FOLDING, MISFOLDING, AND NON-FOLDING

EDITED BY Reinhard Schweitzer-Stenner







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WILEY SERIES IN PROTEIN AND PEPTIDE SCIENCE

VLADIMIR N. UVERSKY, Series Editor

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INTRODUCTION TO THE WILEY SERIES ON PROTEIN AND PEPTIDE SCIENCE

Proteins and peptides are the major functional components of the living cell. They are involved in all aspects of the maintenance of life. Their structural and functional repertoires are endless. They may act alone or in conjunction with other proteins, peptides, nucleic acids, membranes, small molecules, and ions during various stages of life. Dysfunction of proteins and peptides may result in the development of various pathological conditions and diseases. Therefore, the protein/peptide structure–function relationship is a key scientific problem lying at the junction point of modern biochemistry, biophysics, genetics, physiology, molecular and cellular biology, proteomics, and medicine.

The Wiley Series on Protein and Peptide Science is designed to supply a complementary perspective from current publications by focusing each volume on a specific protein- or peptide-associated question and endowing it with the broadest possible context and outlook. The volumes in this series should be considered required reading for biochemists, biophysicists, molecular biologists, geneticists, cell biologists, and physiologists as well as those specialists in drug design and development, proteomics, and molecular medicine, with an interest in proteins and peptides. I hope that each reader will find in the volumes within this book series interesting and useful information.

First and foremost I would like to acknowledge the assistance of Anita Lekhwani of John Wiley & Sons, Inc. throughout this project. She has guided me through countless difficulties in the preparation of this book series and her enthusiasm, input, suggestions, and efforts were indispensable in bringing the *Wiley Series on Protein and Peptide Science* into existence. I would like to take this opportunity to thank everybody whose contribution in one way or another has helped and supported this project. Finally, a special thank you goes to my wife, sons, and mother for their constant support, invaluable assistance, and continuous encouragement.

VLADIMIR UVERSKY September 9, 2008