Preface

This volume of Methods in Molecular Biology is intended as a follow-up to the MiMB volume on “PROTEIN MISFOLDING AND DISEASE”. It is thus not an update of the previous volume but rather an addition containing new content that may be used in combination with the previous content. The major focus of the previous volume was on how and why certain proteins misfold and how this is linked to many disease processes. In this current volume, prime emphasis is given to concepts and methods to determine the molecular effects of protein misfolding at a cellular level and to delineate the impacts and cellular reactions that play a role in pathogenetic mechanisms, and possible manipulations and treatment strategies that can counteract, modify, or delay the consequences of misfolding.

In the first part of the new volume (Chaps. 1–8), concepts and approaches that have been developed in the recent past are discussed in overview chapters. We have also included a connection to the research fields of aging, where the concepts of protein misfolding disease mechanisms have been shown to be relevant because misfolding diseases can be conceived as premature aging processes. The second part of the volume (Chaps. 9–22) contains detailed descriptions of protocols for relevant experimental approaches. We believe that the current volume can be of value for researchers working in the field, as well as for medical professionals and molecular biologists, who wish to get an overview of the recent developments in this active research area.

We hope that the chapters gathered in this volume prove useful for shaping and performing research related to protein misfolding and that they encourage many new researchers to work in this intriguing research field.

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