

# Contents

|  |     |
|--|-----|
| <b>Widening Spectrum of Prions Causing Neurodegenerative Diseases</b> . . . . .  | 1   |
| Stanley B. Prusiner  |     |
| <b><math>\beta</math>-Amyloid Fibril Structures, In Vitro and In Vivo</b> . . . . .  | 19  |
| Robert Tycko   |     |
| <b>Structure-Activity Relationship of Amyloids</b> . . . . .   | 33  |
| Jason Greenwald and Roland Riek  |     |
| <b>Seeding and Cross-seeding in Amyloid Diseases</b> . . . . .   | 47  |
| Per Westermark and Gunilla T. Westermark   |     |
| <b>The Prion-Like Aspect of Alzheimer Pathology</b> . . . . .  | 61  |
| Sarah K. Fritschi, Bahareh Eftekharzadeh, Giusi Manfredi, Tsuyoshi Hamaguchi, Götz Heilbronner, Amudha Nagarathinam, Franziska Langer, Yvonne S. Eisele, Lary Walker, and Mathias Jucker |     |
| <b>Amyloid-<math>\beta</math> Transmissibility</b> . . . . .   | 71  |
| C. Duran-Aniotz, R. Morales, I. Moreno-Gonzalez, and C. Soto   |     |
| <b>Prion-Like Properties of Assembled Tau Protein</b> . . . . .  | 87  |
| Florence Clavaguera, Markus Tolnay, and Michel Goedert   |     |
| <b>Accumulating Evidence Suggests that Parkinson's Disease Is a Prion-Like Disorder</b> . . . . .  | 97  |
| Nolwen L. Rey, Elodie Angot, Christopher Dunning, Jennifer A. Steiner, and Patrik Brundin  |     |
| <b>Propagation and Replication of Misfolded SOD1: Implications for Amyotrophic Lateral Sclerosis</b> . . . . .   | 115 |
| Anne Bertolotti  |     |

|  |            |
|--|------------|
| <b>Development of Drugs That Target Proteopathic Seeds Will Require Measurement of Drug Mechanism in Human Brain . . . . .</b> | <b>123</b> |
| Peter T. Lansbury Jr   |            |
| <b>The Role of Functional Prions in the Persistence of Memory Storage . . . . .</b>  | <b>131</b> |
| Eric R. Kandel, Irina Derkatch, and Elias Pavlopoulos  |            |
| <b>Index . . . . .</b>   | <b>153</b> |