Preface

Prion Biology and Diseases has been greatly expanded since the publication of its second edition in 2004. The field has grown so much that I decided to create two new volumes: one devoted primarily to prion biology, with an emphasis on functional or physiological prions (*Prion Biology*), and one devoted to prion diseases (*Prion Diseases*). The new volumes have contributions from more than 120 authors, to whom I am deeply indebted. In the 13 years since the 2004 book was published, much has changed in the prion field. The progress has been truly remarkable.

When the prion concept was first introduced, there was skepticism in the scientific community. I am excited that there is now widespread acceptance of the concept that brain damage in neurodegenerative disease spreads through prion formation and propagation. At the time of this publication, a PubMed query for the term prion produced almost 17,000 results. As set out in *Prion Biology*, many new functional prions have been described in the past decade. Knowledge about pathogenic prions has expanded even more rapidly, as reflected in this companion volume, *Prion Diseases*. It is now highly likely that most, if not all, neurodegenerative disorders, including Alzheimer's and Parkinson's diseases, are caused by prions. These common brain diseases are devastating and invariably fatal—yet no therapeutics have been discovered to date.

Although the term prion is now broadly used, there are still attempts to coin alternative nomenclature. I have listed these various terms in the introduction to this volume, and a comprehensive history of prion research can be found in my recently published book, *Madness and Memory* (2014).

In addition to the authors, Abbie Amadio deserves a huge thank you. She has spent much of the last year assembling and editing the 61 chapters of these volumes. Her contributions have been truly invaluable. I would also like to thank the editorial and production teams at Cold Spring Harbor Laboratory Press. They have been instrumental in completing this extensive work.

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