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Nota di contenuto	Solving the puzzle of neurodegeneration / Michael S. Wolfe -- Prion diseases / Robert C.C. Mercer, Alex J. McDonald, Erin Bove-Fenderson, Cheng Fang, Bei Wu and David A. Harris -- Alzheimer's Disease: toward a quantitative biological approach in describing its natural history and underlying mechanisms / Colin L. Masters, Ben Gu, Simon Laws, Yen Y Lim, Blaine Roberts, Victor L. Villemagne and Konrad Beyreuther -- Neurodegeneration and the ordered assembly of tau / Michel Goedert -- Amyotrophic lateral sclerosis and other TDP-43 proteinopathies / Jorge Gomez-Deza and Christopher E. Shaw -- Parkinson's disease and other synucleinopathies / Mark R. Cookson -- Huntington's disease and other polyglutamine repeat diseases: molecular mechanisms and pathogenic pathways / Audrey S. Dickey and Albert R. La Spada -- Prion-like propagation in neurodegenerative diseases / Wouter Peelaerts, Veerle Baekelandt and Patrik Brundin -- Neurodegenerative diseases as protein folding disorders / Jermey D. Baker, Jack M. Webster, Lindsey B. Shelton, John Koren, III, Vladimir N. Uversky, Laura J. Blair and Chad A. Dickey -- Heat shock proteins and protein quality control in Alzheimer's disease / Fred W. Van Leeuwen and Harm H. Kampinga -- Neurodegenerative diseases and autophagy / Angeleen Fleming, Mariella Vicinanza, Maurizio Renna, Claudia Puri, Thomas Ricketts, Jens Fullgrabe, Ana Lopez, Sarah M. De Jager, Avraham Ashkenazi, Mariana Pavel, Floriana Licitra, Andrea Caricasole, Stephen P. Andrews, John

Skidmore and David C. Rubinsztein -- Neurodegenerative Diseases and axonal transport / Lawrence S. Goldstein and Utpal Das -- Mitochondrial function and neurodegenerative diseases / Heather M. Wilkins, Ian Weidling, Scott Koppel, Xiaowan Wang, Alex Von Schulze and Russell H. Swerdlow -- Non-cell autonomous degeneration: role of astrocytes in neurodegenerative diseases / Sarah E. Smith and Azad Bonni -- Neurodegenerative diseases and RNA-mediated toxicity / Tiffany W. Todd and Leonard Petrucelli -- Neuroinflammation in are-related neurodegenerative diseases / Kathryn P. MacPherson, Maria E. De Sousa Rodrigues, Amarallys F. Cintron and Malu G. Tansey -- Neurodegenerative diseases and the aging brain / Stephen K. Godin, Jinsoo Seo and Li-Huei Tsai -- Index.

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Sommario/riassunto

The Molecular and Cellular Basis of Neurodegenerative Diseases: Underlying Mechanisms presents the pathology, genetics, biochemistry and cell biology of the major human neurodegenerative diseases, including Alzheimer's, Parkinson's, frontotemporal dementia, ALS, Huntington's, and prion diseases. Edited and authored by internationally recognized leaders in the field, the book's chapters explore their pathogenic commonalities and differences, also including discussions of animal models and prospects for therapeutics. Diseases are presented first, with common mechanisms later. Individual chapters discuss each major neurodegenerative disease, integrating this information to offer multiple molecular and cellular mechanisms that diseases may have in common. This book provides readers with a timely update on this rapidly advancing area of investigation, presenting an invaluable resource for researchers in the field.

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