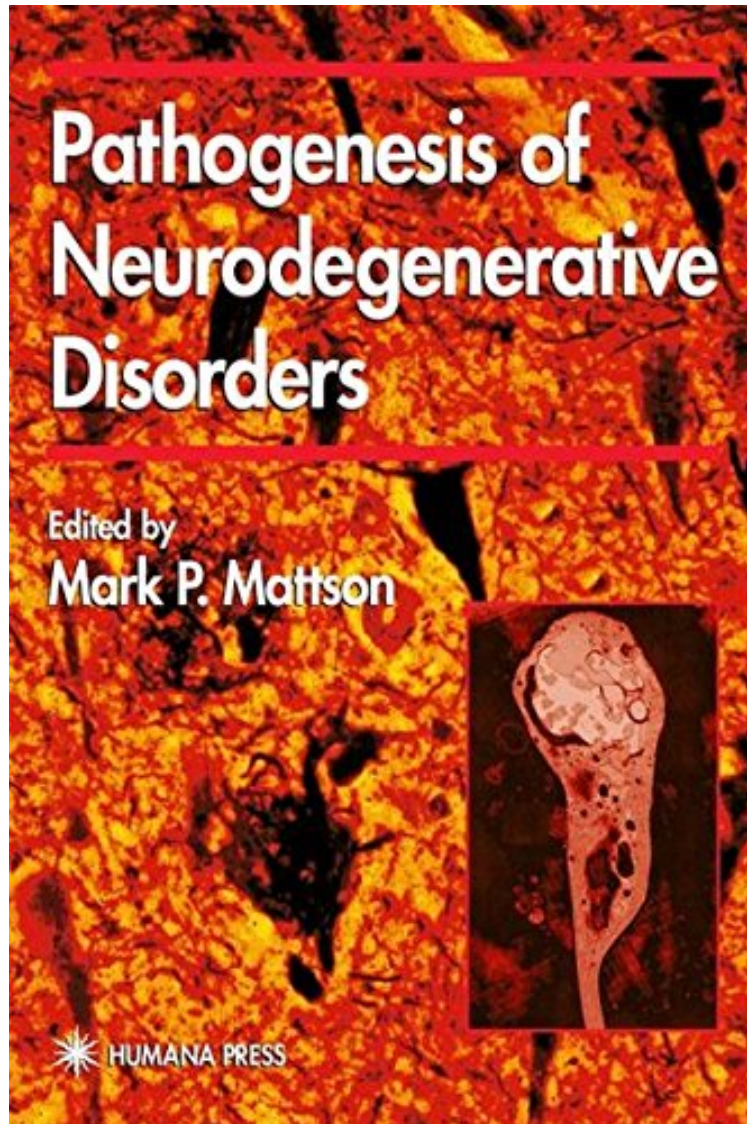


(Ebook pdf) Pathogenesis of Neurodegenerative Disorders (Contemporary Neuroscience)

# Pathogenesis of Neurodegenerative Disorders (Contemporary Neuroscience)

*From Brand: Humana Press*

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**From Brand: Humana Press : Pathogenesis of Neurodegenerative Disorders (Contemporary Neuroscience)**  
before purchasing it in order to gauge whether or not it would be worth my time, and all praised Pathogenesis of Neurodegenerative Disorders (Contemporary Neuroscience):

As the average life expectancy of many populations throughout the world increases, so to does the incidence of such age-related neurodegenerative disorders as Alzheimer's, Parkinson's, and Huntington's diseases. Rapid advances in our understanding of the molecular genetics and environmental factors that either cause or increase risk for age-related neurodegenerative disorders have been made in the past decade. The ability to evaluate, at the cellular and molecular level, abnormalities in postmortem brain tissue from patients, when taken together with the development of valuable animal and cell-culture models of neurodegenerative disorders has allowed the identification of sequences of events within neurons that result in their demise in specific neurodegenerative disorders. Though the genetic and environmental factors that promote neurodegeneration may differ among disorders, shared biochemical cascades that will ultimately lead to the death of neurons have been identified. These cascades involve oxyradical production, aberrant regulation of cellular ion homeostasis and activation of a stereotyped sequence of events involving mitochondrial dysfunction and activation of specific proteases. Pathogenesis of Neurodegenerative Disorders provides a timely compilation of articles that encompasses fundamental mechanisms involved in neurodegenerative disorders. In addition, mechanisms that may prevent age-related neurodegenerative disorders are presented. Each chapter is written by an expert in the particular neurodegenerative disorder or mechanism or neuronal death discussed.

"...a timely collection of 12 papers authored by 26 experts...mechanisms combined with specific molecular genetic and environmental factors are responsible for the development of the diseases that are covered in a concise...manner in subsequent chapters...The chapter on "Trinucleotide Repeat Disorders" provides fascinating reading...The 12 chapters are balanced in length, are all well referenced, and provide a state of the art summary for those who are only tangentially involved in studying these disorders or treating patients suffering from any of them. On the other hand, for those whose main interest lies in research related to any of these diseases, it is a refreshing, well-written, and well-edited overview of a field that evolves and changes at unprecedented speed....With the help of well-known experts in the relevant fields, several basic pieces of the puzzle are provided that with the appropriate intellectual efforts can be sewn together. The result is the emergence of an overall view, the "Big Picture."...the overall value of the book is undeniable, and it is beyond doubt that it will serve as a major reference source for neurologists, neuropathologists, and residents training in the respective fields." - Modern Pathology "A wide range of conditions and illnesses are covered, including ALS, muscular dystrophy, Parkinson's, Huntington's, Alzheimer's, Down's, stroke, and spinal cord trauma. Whole articles are devoted to neurogenetic mechanisms, oxidative processes, excitotoxicity, and apoptosis. From the viewpoint of a general clinical neurologist, the best feature of this book is that it is, for the most part, an understandable summary and update of the neuroscience that was not yet discovered a few years ago. The illustrations are of good quality...This book is good for a clinician because it broadens one's horizons and gives the clinician a better ability to help patients understand their problems. It would be good for a researcher or a graduate student because it summarizes what is being done in many fields." -Doody's Health Sciences Book Journal "This handy pocket guide will be useful for many residents and clinicians, especially in those specialties that treat Alzheimer's disease. It is a worthy addition to departmental and hospital libraries and, predictably, will be used quite frequently." - The Canadian Journal of Neurological Sciences

Recent scientific advances have dramatically expanded our understanding of the molecular, genetic, and environmental factors that either cause or contribute to a wide variety of age-related neurodegenerative disorders. In Pathogenesis of Neurodegenerative Disorders, leading experts detail the cellular and molecular cascades that cause selective degeneration of neuronal populations, and illuminate those factors that are critical to the facilitation or suppression of these neuropathologic processes. Working from studies of human patients, as well as from cell culture and animal models, the authors demonstrate a heretofore unrecognized convergence of the causative pathogenetic mechanisms for many clinically distinct neurological disorders. At center stage are the biochemical and molecular cascades that will ultimately lead to neuronal death-cascades involving oxyradical production, aberrant regulation of cellular ion homeostasis, activation of specific proteases, and activation of a stereotyped sequence of events involving mitochondrial dysfunction. Individual chapters examine how these mechanisms-along with genetic and environmental factors-operate in Alzheimer's and Parkinson's diseases, Down's syndrome, amyotrophic lateral sclerosis, ischemic stroke, spinal cord injury, and Duchenne muscular dystrophy. Pioneering and richly insightful, Pathogenesis of Neurodegenerative Disorders offers a critical and integrative summary of the cutting-edge research findings that illuminate the common genetic, cellular, and molecular bases of many neurological disorders today that promise powerful new preventive and treatment approaches in future.