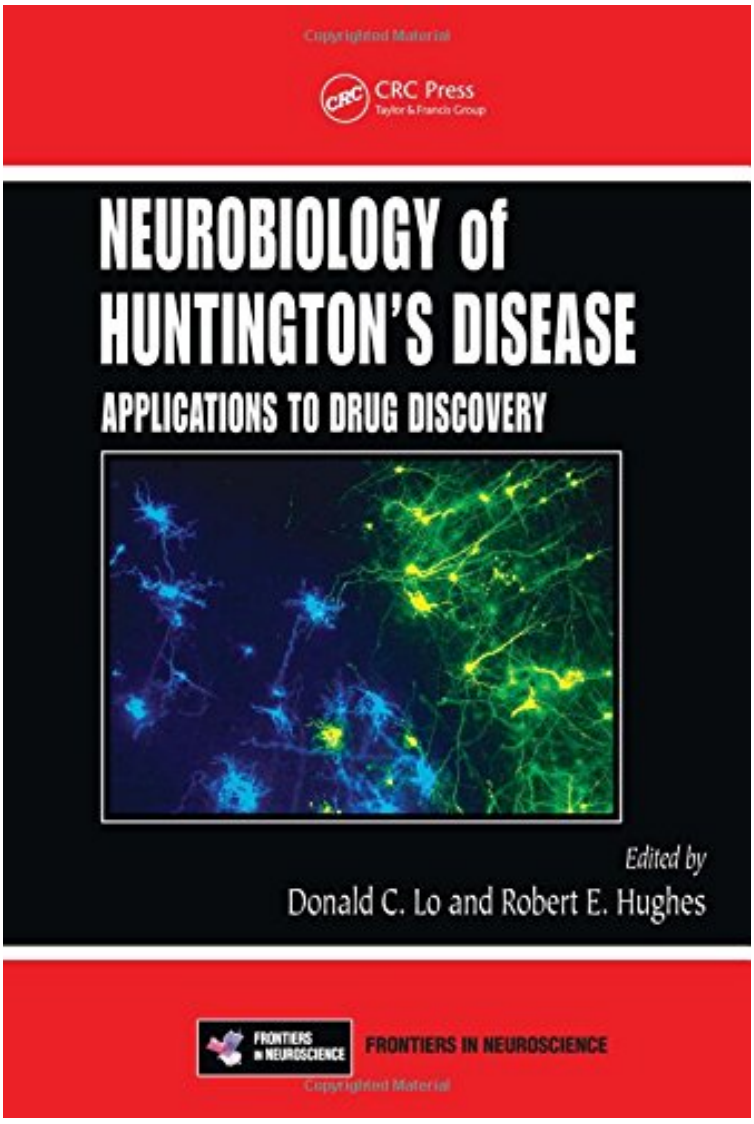
Neurobiology of Huntingtons Disease: Applications to Drug Discovery (Frontiers in Neuroscience)



#4019333 in Books 2010-07-02Original language:EnglishPDF # 1 9.30 x .90 x 6.10l, 1.35 #File Name: 0849390001338 pages | File size: 28.Mb

From CRC Press : Neurobiology of Huntingtons Disease: Applications to Drug Discovery (Frontiers in Neuroscience) before purchasing it in order to gage whether or not it would be worth my time, and all praised Neurobiology of Huntingtons Disease: Applications to Drug Discovery (Frontiers in Neuroscience):

In 1993, the genetic mutation responsible for Huntingtons disease (HD) was identified. Considered a milestone in human genomics, this discovery has led to nearly two decades of remarkable progress that has greatly increased our knowledge of HD, and documented an unexpectedly large and diverse range of biochemical and genetic perturbations that seem to result directly from the expression of the mutant huntingtin gene. Neurobiology of Huntingtons Disease: Applications to Drug Discovery presents a thorough review of the issues surrounding drug discovery and development for the treatment of this paradigmatic neurodegenerative disease. Drawing on the expertise of key researchers in the field, the book discusses the basic neurobiology of Huntingtons disease and how its monogenic nature confers enormous practical advantages for translational research, including the creation of robust experimental tools, models, and assays to facilitate discovery and validation of molecular targets and drug candidates for HD. Written to support future basic research as well as drug development efforts, this volume: Covers the latest research approaches in genetics, genomics, and proteomics, including high-throughput and high-content screening Highlights advances in the discovery and development of new drug therapies for neurodegenerative disorders Examines the practical realities of preclinical testing, clinical testing strategies, and, ultimately, clinical usage While the development of effective drug treatments for Huntington's disease continues to be tremendously challenging, a highly interactive and cooperative community of researchers and clinical investigators now brings us to the threshold of potential breakthroughs in the quest for therapeutic agents. The impressive array of drug discovery resources outlined in the text holds much promise for treating this devastating disease, providing hope to long-suffering Huntingtons disease patients and their families.

The book is written lucidly by authorities in their respective fields, covering clinical features, pathogenic mechanisms, protein interactions, preclinical models, biomarkers, small molecules and other approaches (eg, recombinant antibodies), screening strategies, and drug development. Informative figures and tables are provided, and reproduction of key figures as a set of colour plates provides a useful centrepiece. One unifying message is that the polyglutamine xpansion leads to a complex cascade of diverse molecular and cellular events, the progress of which is difficult to slow or halt. Innovative approaches described, such as the target validation process of the Cure Huntington's Disease Initiative (CHDI) Foundation, will be of interest to those studying other neurological diseases.--Anthony J Hannan, writing in The Lancet Neurology, March 2011About the AuthorDuke University Medical Center, Durham, North Carolina, USA Buck Institute for Age Research, Novato, California, USA