1.	Record Nr.	UNINA9910373907803321
	Titolo	Insights into Human Neurodegeneration: Lessons Learnt from Drosophila / / edited by Mousumi Mutsuddi, Ashim Mukherjee
	Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
	ISBN	981-13-2218-X
	Edizione	[1st ed. 2019.]
	Descrizione fisica	1 online resource (470 pages)
	Disciplina	595.774
	Soggetti	Neurosciences
		Developmental biology
		Animal models in research
		Stem cells
		Post-translational modification
		Developmental Biology
		Animal Models
		Stem Cells
		Posttranslational Modification
		Neurociències
		Llibres electrònics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Chapter 1. Introduction to Drosophila as a model organism -- Chapter 2. Methods for creating fly models in order to understand molecular mechanism of neurological diseases -- Chapter 3. Neurodegeneration: Lessons learnt from forward genetic screens in Drosophila -- Chapter 4. Drosophila neural stem cells, a primer for understanding mammalian neurobiology -- Chapter 5. Understanding motor disorders using flies -- Chapter 6. Metabolic alterations amalgamated with neurodegenerative diseases -- Chapter 7. Notch signalling in neurodegenerative disease -- Chapter 8. Drosophila model of neurofibrillar tangles -- Chapter 9. Unraveling Alzheimer's disease using Drosophila -- Chapter 10. Modelling Human Parkinson's disease in fly -- Chapter 11. Post-translational modifications: A mystery to

unravel Huntington's disease -- Chapter 12. Understanding the pathogenicity of non-coding RNA expansion associated neurodegenerative disorders -- Chapter 13. Expanding roles of RNA binding proteins in neurodegeneration -- Chapter 14. Hereditary Spastic Paraplegia Disease in Drosophila -- Chapter 15. Drosophila as a model system for the identification of pharmacological therapies in neurodegenerative diseases.

Sommario/riassunto	This book is aimed at generating an updated reservoir of scientific endeavors undertaken to unravel the complicated yet intriguing topic of neurodegeneration. Scientists from Europe, USA and India who are experts in the field of neurodegenerative diseases have contributed to this book. This book will help readers gain insight into the recent knowledge obtained from Drosophila model, in understanding the molecular mechanisms underlying neurodegenerative disorders and also unravel novel scopes for therapeutic interventions. Different methodologies available to create humanized fly models that faithfully reflects the pathogenicities associated with particular disorders have been described here. It also includes information on the exciting area of neural stem cells. A brief discussion on neurofibrillary tangles, precedes the elaborate description of lessons learnt from Drosophila about Alzheimer's, Parkinson's, Spinomuscular Atrophy, Huntington's diseases, RNA expansion disorders and Hereditary Spastic Paraplegia. We have concluded the book with the use of Drosophila for identifying pharmacological therapies for neurodegenerative disorders. The wide range of topics covered here will not only be relevant for beginners who are new to the concept of the extensive utility of Drosophila as a model to study human disorders; but will also be an important contribution to the scientific community, with an insight into the paradigm shift in our understanding of neurodegenerative disorders. Completed with informative tables and communicative illustrations this book will keep the readers glued and intrigued. We have comprehensively anthologized the lessons learnt on neurodegeneration from Drosophila and have thus provided an insight into the multidimensional aspects of pathogenicities of majority of the neurodegenerative disorders.