1.	Record Nr.	UNINA9910349465503321
	Titolo	Progranulin and Central Nervous System Disorders / / edited by Hideaki Hara, Masato Hosokawa, Shinsuke Nakamura, Takayoshi Shimohata, Masugi Nishihara
	Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
	ISBN	981-13-6186-X
	Edizione	[1st ed. 2019.]
	Descrizione fisica	1 online resource (VII, 183 p. 37 illus., 13 illus. in color.)
	Disciplina	611.01816
	Soggetti	Medical genetics
		Molecular biology
		Proteins
		Neurosciences
		Gene Function
		Molecular Medicine
		Protein Science
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Chapter 1. Molecular and Functional Properties of Progranulin -- Chapter 2. Progranulin as a biomarker for neurodegenerative diseases -- Chapter 3. PGRN and FTLD -- Chapter 4. PGRN and neurodegenerative diseases other than FTLD -- Chapter 5. Progranulin Regulations of Lysosomal Homeostasis and its Involvement in Neurodegenerative Diseases -- Chapter 6. Molecular and Functional Properties of Progranulin -- Chapter 7. PGRN and neuroinflammation -- Chapter 8. Neural Stem/Progenitor Cells and Progranulin -- Chapter 9. Generation and phenotyping of progranulin-deficient mice -- Chapter 10. Pleiotropic protective effects of progranulin in the treatment of ischemic stroke -- Chapter 11. New therapeutic approaches against ocular diseases.
	Sommario/riassunto	This book presents the latest knowledge on the roles of progranulin (PGRN) in normal physiology and pathology and explores the emerging significance of PGRN as a therapeutic target and biomarker in various CNS disorders, including frontotemporal lobe degeneration and other

neurodegenerative diseases. Following initial recognition of the importance of PGRN in sexual differentiation of the developing brain and adult neurogenesis, it was subsequently discovered that PGRN acts as a chaperone of lysosomal enzymes and plays a crucial role in maintaining cellular protein homeostasis. It has also been found that sex steroids modulate the expression of PGRN and its trophic effects in the developing CNS and that PGRN directly or indirectly influences neural stem and progenitor cells. Against this background, deeper understanding of the molecular and functional properties of PGRN would provide fresh impetus for the development of mechanism-based therapeutic approaches for multiple disorders. Medications targeting the recovery of lysosomal function appear to hold particular promise in patients with neurodegenerative diseases resulting from PGRN insufficiency. In examining multiple aspects of this fascinating field, the book will be of high value for researchers and graduate students.