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| Nota di contenuto | Introduction -- In vitro modeling of complex neurological diseases -- Aquatic model organisms in neurosciences : the genome editing revolution -- Genome-wide genetic screening in the mammalian CNS -- CRISPR/Cas9-mediated Knockin and Knockout in Zebrafish -- Dissecting the role of synaptic proteins with CRISPR -- Recurrently Breaking Genes in Neural Progenitors: Potential Roles of DNA Breaks in Neuronal Function, Degeneration and Cancer -- Neuroscience research using non-human primate models and genome editing -- Multiscale genome engineering: Genome-wide screens and targeted approaches -- Using Genome Engineering to Understand Huntington's Disease -- Therapeutic gene editing in muscles and muscle stem cells. |
| Sommario/riassunto | This book is open access under a CC BY 4.0 license. Innovations in molecular biology are allowing neuroscientists to study the brain with unprecedented resolution, from the level of single molecules to integrated gene circuits. Chief among these innovations is the CRISPR-Cas genome editing technology, which has the precision and scalability |

to tackle the complexity of the brain. This Colloque Médecine et Recherche has brought together experts from around the world that are applying genome editing to address important challenges in neuroscience, including basic biology in model organisms that has the power to reveal systems-level insight into how the nervous system develops and functions as well as research focused on understanding and treating human neurological disorders.
