Record Nr. UNINA9910813617403321 **Titolo** Neurodegeneration: exploring commonalities across diseases: workshop summary / / Miriam Davis and Clare Stroud, rapporteurs; Forum on Neuroscience and Nervous System Disorders, Board on Health Sciences Policy, Institute of Medicine of the National Academies Pubbl/distr/stampa Washington, District of Columbia:,: National Academies Press,, [2013] ©2013 **ISBN** 0-309-28570-4 0-309-28568-2 Descrizione fisica 1 online resource (107 p.) Disciplina 616.804 Soggetti Nervous system - Degeneration Biology - Research Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Note generali Description based upon print version of record. ""Front Matter""; ""Reviewers""; ""Contents""; ""1 Introduction""; ""2 Nota di contenuto Rationale for Exploring Commonalities Across Neurodegenerative Diseases""; ""3 Protein Aggregation""; ""4 Transmissibility""; ""5 Mitochondrial Pathology""; ""6 Errors in RNA""; ""7 Closing Remarks""; ""Appendix A: References""; ""Appendix B: Statement of Task""; ""Appendix C: Workshop Agenda""; ""Appendix D: Registered Attendees"" Sommario/riassunto "Neurodegeneration: Exploring Commonalities Across Diseases is the summary of a workshop hosted by the Institute of Medicine's (IOM's) Forum on Neuroscience and Nervous System Disorders in Spring 2012 to explore commonalities across neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS), and frontotemporal dementia (FTD). Participants from academia; pharmaceutical and biotechnology industries; government agencies such as the National Institutes of Health and the U.S. Department of Veterans Affairs (VA); patient advocacy groups; and private foundations presented and identified potential opportunities for collaboration across the respective research and development communities. This

report identifies and discusses commonalities related to genetic and cellular mechanisms, identifies areas of fundamental science needed to facilitate therapeutics development, and explores areas of potential collaboration among the respective research communities. Neurodegenerative diseases, such as Alzheimer's disease, Parkinson's disease, ALS, and FTD, are becoming increasingly prevalent in the United States due to an aging population. Implications are grave for quality of life and health care costs. Research on neurodegenerative diseases has expanded greatly over the past four decades. Nevertheless, fundamental questions remain about the biology of these diseases, and further insights into the mechanisms of these diseases would help to inform the development of effective means to prevent and to efficiently treat them. Recent findings have revealed certain commonalities in genetic and cellular mechanisms across neurodegenerative diseases. These findings suggest that it might be valuable - at least in some cases - to change the traditional way of studying these diseases by no longer seeing each as an independent entity, but rather as clinical variants of common cellular and molecular biological defects. This approach could help enhance basic scientific understanding of neurodegenerative disease, and could help with the development of biomarkers and new therapeutics."