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Nota di contenuto	Chapter 1: An Update On The Molecular Pillars Of Aging -- Chapter 2: Age-related Neurodegenerative Diseases: An Update -- Chapter 3: Molecular Aspects Of Hippocampal Aging -- Chapter 4: Mitochondrial Function in Aging -- Chapter 5: Genomic Tools Used in Molecular Clinical Aging Research -- Chapter 6: Molecular Biomarkers of Aging Studies in Humans -- Chapter 7: Alternative Splicing and Aging -- Chapter 8: Epigenetics and Aging -- Chapter 9: Microbiome Research and Aging -- Chapter 10: Molecular Basis of Progeroid Diseases -- Chapter 11: Applications of CRISPR-Cas in Aging Research -- Chapter 12: Pharmacological Treatment for Aging: Are We There? -- Chapter 13: Integrative Outlooks About Clinical and Biomedical Research in Aging.
Sommario/riassunto	The world population is rapidly aging—it is estimated that by 1950, around 17% of the population will be elderly. In this context, aging involves several physiological, psychological and highly complex social processes that vary from one person to another. For a long time, medical care for older adults has focused on treating chronic, age-

related diseases and their associated consequences. Recently, biomedical research brings a novel point of view to develop more effective interventions by targeting the aging process itself rather than separate conditions. There is a growing number of reports indicating that aging is driven by several interconnected mechanisms and biological components referred to as the molecular pillars of aging. Interfering with these mechanisms could help to treat, prevent, and understand the development of age-related diseases and associated syndromes. This book provides a clinical perspective and general update on biomedical and genetic research in aging, moving from an update in the molecular pillars of aging to a perspective of the most recent pharmacological, clinical, and diagnostic applications using genomic approaches and techniques. While this book focuses on the specifics of genetics and genomics, it also adopts a clinical perspective of geroscience, which seeks to understand the genetic, molecular and cellular mechanisms that make aging an important risk factor and, sometimes, a determining factor in the diseases and common chronic conditions of older people. Additionally, *Clinical Genetics and Genomics of Aging* is a significant contribution to support aging research, as it shows that collaboration across disciplines is relevant to progress in the field. As more and more people benefit from increased longevity, clinician and researchers will be empowered by this knowledge to contribute to the progress of aging research.
