

1. Record Nr.	UNINA9910811457103321
Titolo	Handbook of the biology of aging // editors, Edward J. Masoro and Steven N. Austad
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier Academic Press, c2006
ISBN	1-280-92693-7 9786610926930 0-08-049140-5
Edizione	[6th ed.]
Descrizione fisica	1 online resource (681 p.)
Collana	The handbooks of aging
Altri autori (Persone)	MasoroEdward J AustadSteven N. <1946->
Disciplina	612.6/7 571.878
Soggetti	Aging - Physiological aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes bibliographical references and indexes.
Nota di contenuto	Front Cover; Handbook of The Biology of Aging; Copyright Page; Contents; Contributors; Foreword; Preface; About the Editors; Section I. Conceptual and Technical Issues; Chapter 1. Reliability Theory of Aging and Longevity; I. Introduction; II. General Overview of the Reliability Theory Approach; III. Mortality, Failure, and Aging in Biological and Technical Systems; IV. Explanations of Aging Phenomena Using Reliability Theory; V. The Idea of High Initial Damage Load: The HIDL Hypothesis; VI. Reliability Models of Aging for Biological Systems; VII. Evolution of Species Reliability VIII. ConclusionsReferences; Chapter 2. Are Age-Associated Diseases an Integral Part of Aging?; I. Introduction; II. Concepts of Biological Gerontology; III. Age-Associated Diseases; IV. Primary Aging, Secondary Aging, and "Normal Aging"; V. Evolutionary Theory and Age-Associated Diseases; VI. Analysis of Two Major Age-Associated Disease Processes; VII. Summary and Conclusions; References; Chapter 3. Dietary Restriction, Hormesis, and Small Molecule Mimetics; I. Introduction; II. Key Discoveries; III. Physiological Effects of DR on Mammals; IV. Mechanisms of DR; V. Small-Molecule CR Mimetics VI. ConclusionsReferences; Chapter 4. Hematopoietic Stem Cells, Aging,

and Cancer; I. Stem Cells; II. Stem Cell Aging; III. Stem Cells and Cancer; IV. Conclusions; References; Chapter 5. Mitochondria: A Critical Role in Aging; I. The Mitochondrion; II. Evidence for Increased Oxidative Damage to Mitochondrial Components with Age; III. Mitochondrial Dysfunction and Aging; IV. Mitochondrial Dysfunction and Age-Associated Disease; V. Conclusions; References; Chapter 6. p53 and Mouse Aging Models; I. Introduction to p53; II. p53 and Cellular Senescence III. Linkage of IGF-1, Sir2, and p53 Signaling IV. Mouse Models of Aging; V. Mouse Models of Accelerated Aging; VI. Mouse Models of Delayed Aging; VII. Links to p53 in Mouse Aging Models; VIII. Mutant Mouse p53 Models, Aging, and Cancer; IX. Influence of p53 on Longevity in Humans; X. How Might p53 Influence Organismal Aging?; References; Chapter 7. Complex Genetic Architecture of Drosophila Longevity; I. Introduction; II. Genome Scan for Quantitative Trait Loci (QTLs); III. Deficiency Complementation Mapping; IV. Complementation Tests to Mutations at Positional Candidate Genes V. Linkage Disequilibrium (LD) Mapping VI. Conclusions and Future Prospects; References; Chapter 8. Evolutionary Biology of Aging: Future Directions; I. Introduction; II. Genetics of Senescence; III. From Physiology to Demography; IV. Parasites and Immune Function; V. Sex, Sexual Selection, and Sexual Conflict; VI. Genetic Variation in Natural Populations; VII. Conclusions; References; Chapter 9. Senescence in Wild Populations of Mammals and Birds; I. Introduction; II. Evidence of Senescence in Wild Populations; III. Patterns of Senescence IV. Methodological Difficulties in Evaluating Senescence in Wild Populations

Sommario/riassunto

The Handbook of the Biology of Aging, Sixth Edition, provides a comprehensive overview of the latest research findings in the biology of aging. Intended as a summary for researchers, it is also adopted as a high level textbook for graduate and upper level undergraduate courses. The Sixth Edition is 20% larger than the Fifth Edition, with 21 chapters summarizing the latest findings in research on the biology of aging. The content of the work is virtually 100% new. Though a selected few topics are similar to the Fifth Edition, these chapters are authored by new contributors with new info
