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| Collana | The handbooks of aging |
| Altri autori (Persone) | MasoroEdward J AustadSteven N. <1946-> |
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| 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 SignalingIV. 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) MappingVI. 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
