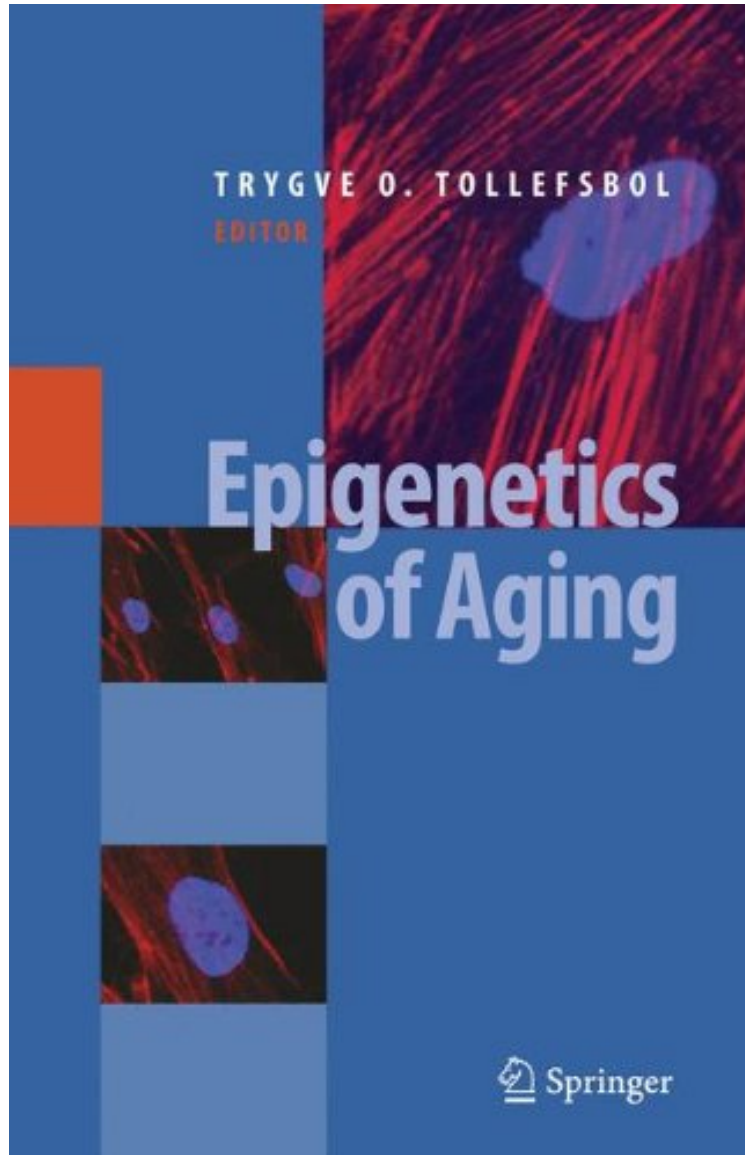


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Epigenetics of Aging

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From Springer : Epigenetics of Aging before purchasing it in order to gage whether or not it would be worth my time, and all praised Epigenetics of Aging:

0 of 0 people found the following review helpful. I wrote a chapter.By Ruben AgreloI wrote a chapter. This is one of the two booksdevoted to this important subjectIn my opinion this is "the book " if you want to understand thebasics of aging epigenetics

Recent studies have indicated that epigenetic processes may play a major role in both cellular and organismal aging. These epigenetic processes include not only DNA methylation and histone modifications, but also extend to many other epigenetic mediators such as the polycomb group proteins, chromosomal position effects, and noncoding RNA. The topics of this book range from fundamental changes in DNA methylation in aging to the most recent research on intervention into epigenetic modifications to modulate the aging process. The major topics of epigenetics and aging covered in this book are: 1) DNA methylation and histone modifications in aging; 2) Other epigenetic processes and aging; 3) Impact of epigenetics on aging; 4) Epigenetics of age-related diseases; 5) Epigenetic interventions and aging; and 6) Future directions in epigenetic aging research. The most studied of epigenetic processes, DNA methylation, has been associated with cellular aging and aging of organisms for many years. It is now apparent that both global and gene-specific alterations occur not only in DNA methylation during aging, but also in several histone alterations. Many epigenetic alterations can have an impact on aging processes such as stem cell aging, control of telomerase, modifications of telomeres, and epigenetic drift can impact the aging process as evident in the recent studies of aging monozygotic twins. Numerous age-related diseases are affected by epigenetic mechanisms. For example, recent studies have shown that DNA methylation is altered in Alzheimers disease and autoimmunity. Other prevalent diseases that have been associated with age-related epigenetic changes include cancer and diabetes. Paternal age and epigenetic changes appear to have an effect on schizophrenia and epigenetic silencing has been associated with several of the progeroid syndromes of premature aging. Moreover, the impact of dietary or drug intervention into epigenetic processes as they affect normal aging or age-related diseases is becoming increasingly feasible.

From the reviews: This nearly 500-pages thick book covers almost everything around the topic of how aging and age-related diseases might be affected by epigenetic processes. Understanding the drifting and stochastic nature of aging is crucial for making any use of the epigenetic pathways to intervention, and for developing future directions in research. I surely recommend this book, which will help to open up many doors towards achieving that. (Suresh I. S. Rattan, *Biogerontology*, Vol. 12, 2011)

From the Back Cover: Revealing the molecular basis of aging has been one of the most challenging aspects of medical science, and now the epigenetics of aging is in a Renaissance phase. This seminal work covers the fascinating role of epigenetics in aging, ranging from basic epigenetic processes of aging to epigenetic drugs that may intervene in allow aging and age-related diseases. *Epigenetics of Aging* presents in-depth analyses of DNA methylation, histone modifications, RNA alterations, and chromosomal defects that impact the aging process. It also includes detailed essays describing the impact of epigenetics on aging, the epigenetics of age-related diseases, and future directions and perspectives on the epigenetics of aging. With chapters authored by leading researchers in the field, this seminal book on the epigenetics of aging:

- Ranges from basic science to clinical practice
- Describes the importance of epigenetics in numerous diseases of aging such as cancer, Alzheimers disease, immune defects, and osteoporosis
- Includes the role of epigenetics in premature aging diseases such as progeria
- Highlights emerging aspects of epigenetics in aging, such as polycomb group genes and noncoding RNAs
- Covers sirtuins, chromatin alterations, and the role of epigenetic drift in aging
- Describes the impact of the environment and diet in modulating epigenetic processes during aging

Epigenetics of Aging is the first book in this exponentially expanding field, and will be an indispensable source of information for those with interests in epigenetics and/or aging. This authoritative core textbook for advanced students or medical scientists and practitioners details the fascinating and revolutionary field of the epigenetics of aging and covers the most recent advances that impact the longevity of living organisms.