

# Age-Related Disease: Moving Toward a Cure

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## Abstract

 $\mathbf{P}_{\mathrm{rogress}}$  in curing age-related diseases has suffered from a lack of understanding of the fundamental aging process at the cellular and genetic levels. As Leonard Hayflick, the discoverer of cell aging points out, "The cause of aging is ignored by the same people who argue that aging is the greatest risk factor for disease." A unified model of age-related disease needs to offer a framework for not only age-related human diseases including the dementias age-related vascular disease, osteoarthritis, etc. - but for age-related dysfunction in other species as well. The model detailed here, focusing on cell senescence and the concomitant changes in gene expression and cell function, encompasses both human and animal disease and is consistent with all known clinical and research data, and is predictively valid. More to the point, it offers a novel point of clinical intervention that is feasible and has proven effective in human cells, human tissues, and in animals.



#### **Biography:**

Dr. Fossel has an MD and a PhD in neurobiology from Stanford University where he taught neurobiology and research methods. A clinical professor of medicine, he is considered the world foremost expert on telomeres, aging, and age-related disease. He gave the first talk at the NIH on reversal of human aging, published the first articles on the potential of telomeres as a clinical intervention, and authored the only medical textbook in this field, Cells, Aging, and Human Disease, by Oxford University Press. He was editor-in-chief of Rejuvenation Research and the director of the American Aging Association, and as well as the Editor-in-Chief OBM Geriatrics. He has authored more than 100 books, chapters, and articles, including The Telomerase Revolution, which the Wall Street Journal praised as one of the best science books of the year. He is president Telocyte, a biotech firm taking telomere therapy to FDA human trials, as well as author of "A Unified Model of Dementias and Age-Related Neurodegeneration", published in Alzheimer's & Dementia: the Journal of the Alzheimer's Association in January of 2020, which generated more than 600 reprint requests in the first two weeks.

#### Speaker Publications:

1. "Telomerase and Human Disease: The Beginnings of the Ends?

2. "Telomerase and the Aging Cell: Implications for Human Health"

3. "Cell senescence in human aging: A review of the theory"

4. "The Ethics of Embryonic Stem Cells—Now and Forever, Cells Without End"

5. "A unified model of dementias and age-related neurodegeneration"

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