



A unified model of Dementias and age-related Neurodegeneration: With an innovative and effective point of intervention

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Abstract

Both animal research and human clinical trials on age-related CNS diseases have suffered from the lack of a unified systems model. One result has been the failure of animal studies to translate into successful human trials, as well as the uniform failure of clinical trials aimed at targets such as amyloid, tau, etc. A unified model of age-related CNS dysfunction needs to offer a framework for not only age-related human CNS diseases – including Alzheimer's and other age-related human dementias – but for age-related CNS dysfunction in animals as well. The model detailed here, focusing on cell senescence and the concomitant changes in gene expression, encompasses both human and animal disease and suggests a novel point of clinical intervention. It reviews the ten key questions required of such a model and offer potential answers to those questions. This model has excellent data support and predictive validity, precisely predicting previous trial results. In addition, the model is moving to FDA human trials to validate its effectiveness as a feasible intervention.



Biography

Fossel has an MD and a PhD (in neurobiology) from Stanford University where he taught neurobiology and research methods. A clinical professor of medicine for almost 3 decades, he is considered the world foremost expert on telomeres, aging, and age-related disease. He is the author of the only medical textbook in this field, *Cells, Aging, and Human Disease*, by Oxford University Press. He has authored more than 100 books, chapters, and articles, including *The Telomerase Revolution*, which was praised by the *Wall Street Journal* as one of the five best science books of the year. He is now president Telocyte, a biotech firm taking telomere therapy to FDA human trials to cure Alzheimer's, as well as the author of "A Unified Model of Dementias and Age-Related Neurodegeneration", which generated more than 500 reprint requests in the first two weeks.

Publications

1. Cell Senescence, Telomerase, and Senolytic Therapy
2. Telomerase and the Aging Cell: Implications for Human Health
3. Cell senescence in human aging and disease

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