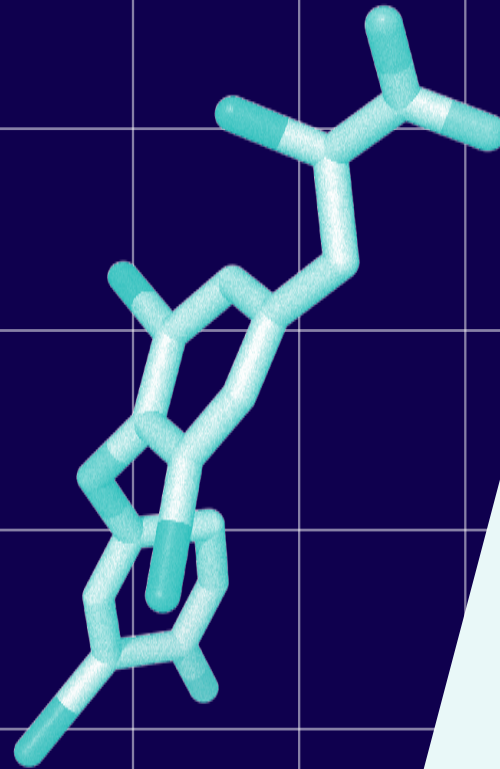


# The Alvin Taurog Lectureship in Pharmacology

in conjunction with the University Lecture Series



## Previous Taurog Lecturers

- 2006 David Eisenberg, Ph.D.
- 2005 Jack Dixon, Ph.D.
- 2004 Roderick MacKinnon, M.D.
- 2003 Michael Brown, M.D. and Joseph Goldstein, M.D.
- 2002 Joan Brugge, Ph.D.
- 2000 Sir Michael Berridge, Ph.D.
- 1999 Marc Kirschner, Ph.D.
- 1998 Keith Yamamoto, Ph.D.
- 1997 Melvin Simon, Ph.D.
- 1996 Ronald Evans, Ph.D.

## *From Worms to Mammals: Genes and Cells That Control the Rate of Aging*

Cynthia Kenyon, Ph.D.

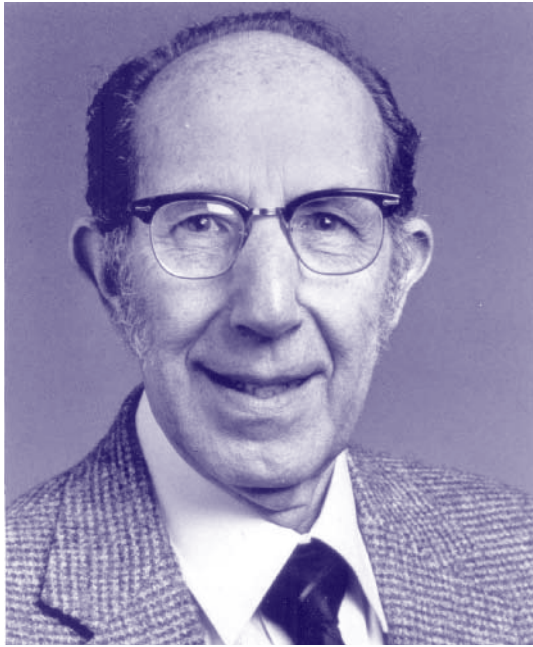
Professor

Department of Biochemistry & Biophysics  
American Cancer Society Research Professor  
Director, Hillblom Center for the Biology of Aging  
University of California, San Francisco

**UT** SOUTHWESTERN  
MEDICAL CENTER

sponsored by the  
Department of Pharmacology

4:00 P.M.  
January 30, 2008  
Excellence in Education Auditorium, NB2.101



After fifty years of active laboratory research, Dr. Alvin Taurog retired from his position as Professor of Pharmacology at UT Southwestern where thirty six of those years were spent. To honor Dr. Taurog's many scientific contributions and his loyalty and dedication to UT Southwestern and the Department of Pharmacology, the Alvin Taurog Annual Lectureship was established in 1996.

Dr. Taurog's career was devoted to endocrine research, particularly involving the biosynthesis of thyroid hormone. From early

work elucidating the pituitary-thyroid axis, to basic studies of iodine metabolism, to later work purifying and characterizing the critical enzyme thyroid peroxidase and the mechanism of action of antithyroid drugs, his research contributions were exemplary for their integrity and durability. His career epitomized the pursuit of valuable scientific knowledge for its own sake.

Dr. Taurog was appointed Professor Emeritus on his retirement and remained an active and valuable member of the department until his death in March of 2006.



In 1993, Cynthia Kenyon and colleagues' discovery that a single-gene mutation could double the lifespan of *C. elegans* sparked an intensive study of the molecular biology of aging. Aging had long been assumed to be a passive consequence of molecular wear and tear. Instead, Kenyon's discoveries have led to the realization that the aging process is subject to exquisite hormonal and transcriptional regulation in many species, including mammals. By manipulating genes and cells, Dr. Kenyon and her colleagues have now been able to extend

the lifespan of healthy, active *C. elegans* by six fold. They have found that signals from the reproductive system and from sensory neurons influence the lifespan of *C. elegans*, and these processes, too, appear to be evolutionarily conserved. These signals affect lifespan, at least in part, by controlling expression of a wide variety of genes, including antioxidant, stress response, antimicrobial, and metabolic genes, whose activities act in a cumulative fashion. Some of these subordinate genes can also influence the progression of age-related disease. In this way, this hormone system couples the natural aging process to age-related disease susceptibility.

Cynthia Kenyon graduated valedictorian in chemistry and biochemistry from the University of Georgia in 1976. She received her PhD from MIT in 1981, where, in Graham Walker's laboratory, she was the first to look for genes solely on the basis of their expression profiles, discovering that DNA damaging agents activate a battery of DNA repair genes in *E. coli*. She then did postdoctoral studies with Nobel laureate Sydney Brenner at the MRC Laboratory of Molecular Biology in Cambridge, UK, studying the development of *C. elegans*. Since 1986 she has been at the University of California, San Francisco, where she was the Herbert Boyer Distinguished Professor and is now an American Cancer Society Professor. Dr. Kenyon has received many honors and awards for her findings. She is a member of the US National Academy of Sciences, the American Academy of Arts and Sciences, and the Institute of Medicine and she is a past president of the Genetics Society of America. She is now the director of the Hillblom Center for the Biology of Aging at UCSF. Dr. Kenyon lives in the country near San Francisco, and loves animals, sailing and horseback riding.