

# AGING BIOLOGY UPDATE

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UAB NATHAN SHOCK CENTER OF EXCELLENCE  
IN THE BASIC BIOLOGY OF AGING

## Featured

[Alzheimer's vaccine targeting tau protein is safe but does not improve cognition or function in patients with mild AD](#)

## Headline vs study

Headline: [Myelin repairing enzyme may rejuvenate aging brains](#)

Study: [TET1-mediated DNA hydroxymethylation regulates adult remyelination in mice](#)

## Contrary or Null Findings

[No association of frailty and epigenetic clocks in those 105 years old or older](#)

## Energetics/Nutrition

[Exercise reduces circulating cellular senescence biomarkers in humans](#)

[Nicotinamide mononucleotide supplementation improves muscle insulin sensitivity in overweight postmenopausal women](#)

[Ketogenic diet improves immune function in aged male mice infected with a coronavirus](#)

[Interactions of serotonin signaling, metabolic network integrity, and nutrient choice in aging in male fruit flies](#)

[Melatonin supplementation slows weight gain and visceral fat accumulation with age in female mice](#)

[Oleic acid prevents mating-induced mortality in hermaphrodite and female worms](#)

[Obesity accelerates hair thinning by stem cell inflammatory signals in male mice](#)

[Phenylalanine restriction reverses signs of cardiac aging in old, male mice](#)

## Basic Biology

[Overexpression of SIRT6 prolongs life and reduces frailty in mice](#)

[Folate metabolism is altered in multiple worm longevity pathways](#)

[Senolytics reduce pathogen mediated mortality in old mice](#)

[Alterations in metabolism in primary fibroblasts from small and large breed dogs](#)

[Most age-related changes in gene expression in fruit flies depend on the microbiome](#)

[Association of APOE e4 genotypes and delirium in COVID-19 patients](#)

[Review: Inflammatory, epigenetic, and metabolic regulations of aging](#)

[Review: Male and female gonadal aging](#)

[Review: Aging and tissue fibrosis](#)

[Review: Cellular senescence and skin aging](#)

### **Ecology & Evolution**

[Early life environmental conditions influence later life survival in female bighorn sheep](#)

[Is the invariant rate of aging hypothesis correct? Evidence from primates](#)

[Wild mortality rates can be predicted if average maximum lifespan is known](#)

[Antagonistic pleiotropy and the evolution of extraordinary lifespan in eusocial organisms](#)

[Sex differences in life history traits, including female biased longevity, in spider mites](#)

[Female reproductive aging is more variable at the individual than the population level in pied flycatchers](#)

[Review: Reproductive aging in wild animals and its importance to conservation](#)

### **Novel Organisms/ Comparative**

[Zebrafish as models of cardiomyocyte aging](#)

[Coelacanths may live for over 100 years](#)

[Metallothionein \(MT\) expression, but not MT gene number, is associated with species lifespan](#)

[Methylation clocks predict age of toothed whales and dolphins](#)

[Genome sequence of the long-lived American lobster](#)

[Salamanders as models for aging and rejuvenation](#)

[Epigenetic clocks of elephants](#)

[Review: Alternative animal models of aging research](#)

[Review: Fish models of induced osteoporosis](#)

### **Epidemiology/Demography**

[Rural living during adolescence is associated with increased risk of cognitive decline in older age](#)

[Hypertension-reducing diet slows epigenetic aging](#)

**COVID-19 and aging**

[Covid-10 exacerbates US life expectancy disadvantage](#)

[Increase in neuropsychiatric symptoms of dementia patients and their caregivers during COVID-19](#)

[Review: Immune response to COVID-19 in older adults](#)

**Clinical**

[Fear of falling predicts future limitations in daily activities as well as past actual falls](#)

[Review: The anti-aging effects of lithium](#)

[Review: Alterations of the pigmentation system in the aging process](#)

[Review: Alcohol abuse and susceptibility to rare neurodegenerative diseases](#)

**Care-giving**

[Dementia patients with hip fracture improve faster when caregivers receive training immediately after the fracture](#)

**Policy/Ethics**

[The importance of considering age when quantifying wild animals' welfare](#)

**Commentary**

[Menopause, aging and pelvic floor dysfunction: A clinician's view](#)

**Odd and Ends**

[Introduction to geroscience video series](#)

[Healthy, active aging for people and dogs](#)

[Which party does age affect voting behavior most?](#)

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Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Jessica Hoffman, Heather Patterson, Joseph Palmer, and Steven Austad. [Subscribe to this newsletter](#).



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