

# AGING BIOLOGY UPDATE

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

## Featured

[Plasma from aged exercised mice improves neurogenesis and cognition in older sedentary mice](#)

## Headline vs study

Headline: [Scientists are one step closer to delaying aging](#)

Study: [A programmable fate decision landscape underlies single-cell aging in yeast](#)

Headline: [The answer to anti-aging therapies may lie in your aging dog](#)

Study: [Quantitative translation of dog-to-human aging by conserved remodeling of the DNA methylome](#)

## Energetics/Nutrition

[Genetic and metabolomic architecture of variable lifespan response to dietary restriction in flies](#)

[Fast-mimicking diet and hormone therapy induce breast cancer regression in mice](#)

[Novel screening platform to study natural products affecting metabolism and survival in worms](#)

[Review: Intermittent fasting and metabolic health](#)

[Review: Calorie restriction, inflammaging, and FoxO signaling](#)

## Basic Biology

[Late-life restoration of mitochondrial function reverses cardiac dysfunction in old mice](#)

[Transfer of young eosinophils to old mice reduces adipose tissue inflammation](#)

[Organ specific transcriptomic profiling of mice across the lifespan](#)

[Single cell transcriptomic atlas of the aging mouse](#)

[A brainwide atlas of synapses across the mouse lifespan](#)

[Older molecular brain aging in severe mental illness](#)

[A bacteria-derived metabolite, methylglyoxal, can modulate worm longevity](#)

[Genomic scan for novel loci in human longevity](#)

[GDF15 protects against aging-mediated inflammation in mice and humans](#)

[A-beta and tau drive early Alzheimer's disease decline while glucose hypometabolism drives late decline](#)

[Extracellular proteostasis prevents aggregation during pathogenic attack in worms](#)

[Metabolic signatures of longevity regulation by sex peptide and mifepristone/RU486 in mated female fruit flies](#)

[Healthspan pathway maps in worms and humans](#)

[Metabolomics and lipidomics of long-lived Ames dwarf mice](#)

[Lactic acid bacteria supplementation improves health in a fruit fly model of Alzheimer's](#)

[Endoplasmic reticulum stress precedes mitochondrial dysfunction in aging mouse hearts](#)

[Parental longevity is associated with brain structure in areas important for memory and motor function](#)

[Genetics of extreme human longevity to guide drug discovery for healthy aging](#)

[Review: Astaxanthin as a putative geroprotector](#)

[Review: Senolytic drugs: From discovery to translation](#)

[Review: The roles of lifespan extending interventions on neurodegenerative diseases](#)

[Review: Is CpG density the link between epigenetic aging and lifespan?](#)

[Review: Cellular senescence in vivo: from cells to tissues to pathologies](#)

## **Ecology & Evolution**

[Epidemics as an adaptative driving force determining lifespan setpoints](#)

[Survival, but not reproductive, senescence seen in a short-lived bird](#)

## **Novel Organisms/ Comparative**

[Six new genomes of long-lived bats](#)

[Comparative genomics between long- and short-lived bats](#)

Geriatic [reptiles and amphibians](#), [invertebrates](#), and [hedgehog](#) pets

[Insights into natural cancer resistance by long-coding RNAs in long-lived mammals](#)

[Prevalence of disease and age-related behavioral changes in cats](#)

[Rapid assessment of age-related behavioral changes in dogs](#)

[Biomarkers of senescence in adipose tissue of female African green monkeys](#)

[Genes associated with cancer mortality and longevity in dog breeds](#)

[Leaf senescence contributes to plant survival under drought stress](#)

[Perspective: Inflammation and longevity in bats](#)

### **Epidemiology/Demography**

[How much does education increase longevity?](#)

[Frailty predicts death in COVID-19 patients better than age or comorbidities](#)

[Preventative statin use is associated with decreased risk of mortality in older U.S. Veterans](#)

[Diversification in causes of death seen in low-mortality countries from 1994-2017](#)

[Meta-analysis: Novel loci associated with stroke in individuals of African descent](#)

### **Clinical**

[Muscle strength and gait speed rather than lean mass are better indicators of poor cognitive function in older men](#)

[Low lipoprotein A is associated with better cognitive performance in men but not women](#)

### **Care-giving**

[Caring for caregivers during COVID-19](#)

[Allowing visitors back in the nursing home during the COVID-19 crisis](#)

### **Policy/Ethics**

[The effects of social adversity, discrimination, and health risk behaviors on the accelerated aging of African Americans](#)

[Health equity in aging for transgender people](#)

[Bullying in old age](#)

## **Commentary**

[Lack of consensus on an aging biology paradigm?](#)

[COVID-19 emphasizes the need for increased investment in geroscience](#)

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Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Jessica Hoffman, Steven Austad, Ashley Turner, Heather Patterson, Katelynn Corder, and Ana Sogorovic. [Subscribe to this newsletter.](#)



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