

AGING BIOLOGY UPDATE

BROUGHT TO YOU BY THE
UAB NATHAN SHOCK CENTER OF EXCELLENCE
IN THE BASIC BIOLOGY OF AGING

Featured

[What rockfish genomics can tell us about aging.](#)

[Endogenous retrovirus reactivation contributes to cellular senescence](#)

[T-cells trash the Hayflick limit](#)

Headline vs Study

Headline: [For longevity, muscle strength may be as important as aerobic exercise](#)

Study: [Dose-response association of aerobic and muscle-strengthening physical activity with mortality: a national cohort study of 416 420 US adults](#)

Energetics/Nutrition

Concept: [Metabolism, homeostasis, and aging.](#)

[miR-22 regulates obesity-induced white adipose tissue senescence and metabolic disorders in middle-aged mice.](#)

Basic Biology

[Partial reprogramming lengthens life when started in old mice](#)

[Partial reprogramming restores functions in inducible mouse progeria](#)

[Mechanism of metformin activity in mitochondria](#)

[A clinically used PI3K p110 \$\alpha\$ inhibitor extends the lifespan of male and female mice](#)

[Random allelic expression in the adult human body has implications for age-related diseases](#)

[Stromal niche inflammation mediated by IL-1 signaling drives hematopoietic aging](#)

[Do viruses actively distort human aging?](#)

[Reactivation of endogenous retroviruses during aging reinforces senescence](#)

[How mutant and wild-type mitochondria might stably co-exist with implications for aging](#)

[The impact of aging on mitochondrial respiration in a wide range of organs in male and female rats](#)

[A new AMPK isoform mediates glucose-restriction induced longevity in *C. elegans*](#)

[Dietary stress remodels the genetic architecture of lifespan variation in outbred *Drosophila*](#)

[Sex-specificity of the *C. elegans* metabolome](#)

[Genome-wide RNA polymerase stalling shapes the transcriptome in aging mice](#)

[Small heat shock proteins operate as molecular chaperones in the mitochondrial intermembrane space](#)

[Broad sex differences in CBA/CaJ mice, a model of age-related hearing loss, across the lifespan](#)

[X chromosome factor Kdm6a enhances cognition in the aging male XY brain independent of demethylase function](#)

[Cell-cell metabolite exchange extends lifespan in yeast](#)

Review: [Hallmarks of aging expanded](#)

Review: [Meta-analysis of the hallmarks of aging and cancer](#)

Review: [Are lifespan-extending compound interventions conserved across model animal species?](#)

Review: [Emerging roles of tRNA-associated processes in aging](#)

Review: [Role of autophagy in aging](#)

Review: [Fasting and fasting mimicking diets in cancer prevention and therapy](#)

Review: [Rapamycin, not dietary restriction, improves resilience against pathogens in mice](#)

Review: [The evolution of sirtuin genes in vertebrates](#)

Ecology & Evolution

[Is the evolution of sociality and longevity correlated in mammals?](#)

[The evolution of aging in cooperative breeders](#)

[Eusocial ants and rodents may share some longevity phenotypes](#)

[Transcriptional and mutational signatures of the *Drosophila* ageing germline](#)

[Age-specific effects of deletions: implications for aging theories](#)

[Raising chicks accelerates aging if you're an Atlantic puffin](#)

Review: [Evolution of autophagy and longevity in mammals](#)

Novel Organisms/Comparative

[Sex-dependent effects of parental age on offspring lifespan in mouse lemurs](#)

[Sex-dependent effects of parental age on offspring lifespan in Seychelles Warblers](#)

[Freshwater Chinese alligators take a bite out of aging with alternative telomere maintenance](#)

[Reproductive & bone biomarkers associated with osteoarthritis in aging African and Asian elephants](#)

[Morbidity and mortality in 269 elderly dogs based on necropsies](#)

[How size and genetic diversity shape lifespan across breeds of purebred dogs](#)

Review: [Immunosenescence and inflammaging in the aged horse](#)

Epidemiology/Demography

[After midnight snacks might shorten your life](#)

[FOXO3A-short is associated with human longevity](#)

[Reduced prevalence of dementia and mild cognitive impairment in indigenous Bolivian forager-horticulturalists](#)

[GWAS of 2304 extreme longevity cases reveals novel longevity variants](#)

[Has early-life immune challenge played a role in current Sardinian "Blue Zone" longevity?](#)

[Reduced COVID-19 mortality in a "Blue Zone"](#)

[Bayesian framework linking physiological network to Gompertzian survival function](#)

[No global sex-differences in dementia incidence but Alzheimer's prevalence is higher for women](#)

[Do mathematical constraints inherent in survival curves indicate a limit on maximum human lifespan?](#)

[Race, polygenic risk and their association with incident dementia among older US adults](#)

[Changes in Italian patterns of life expectancy and lifespan inequality from 1960 to 2015](#)

[Adult mortality contributes substantially to lineage extinction in Northern Swedish families](#)

[Sex differences in quality of life and depressive symptoms among middle-aged and elderly Europeans](#)

[Sex and gender in Alzheimer's disease and related disorders from a global perspective](#)

[Genetic impact on late life frailty](#)

Clinical

[Factors associated with poor outcomes in older patients attending ER departments](#)

[Lifespan changes in human postural control](#)

[Use of landmarks to aid personal navigation declines across the human lifespan](#)

Review: [Cellular senescence interventions offer opportunities for healthy longevity](#)

Review: [Insomnia, frailty, and the hallmarks of aging](#)

Caregiving

[Positive aspects of caregiving in incident and long-term caregivers](#)

Review: [Home modifications to promote healthy longevity](#)

Review: [Malnutrition in older adults](#)

Policy/Ethics

Tag: [Japan presages the demographic future of Europe and America](#)

Tag: [How COVID-19 has changed public policy for healthy living](#)

Commentary

[Growing pains: Aging Cell is 20](#)

Review: [Female reproductive senescence and healthy longevity](#)

Odds and Ends

[How to avoid fraudulent longevity supplements](#)

Announcements

Do you have questions about intellectual property, technology transfer, or the commercialization process? Learn more about the ways in which [the Bill L. Harbert Institute for Innovation and Entrepreneurship](#) can support your work.

UAB's [Darwin Day 2023](#) will take place on Feb. 16 at 6:00 p.m. at the Hamilton Ballroom, UAB Hilton. The event will feature a lecture from Dr. Jay Phelan titled, "Why do we want (and do) so many things that are bad for us? – A Darwinian perspective on behavior can improve our lives." Visit the [UAB Campus Calendar](#) to learn more about the event.

Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Kathleen Fischer, Jessica Hoffman, Heather Patterson, and Steven Austad.

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