

AGING BIOLOGY UPDATE

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

Featured

[Single transfusion of old blood ages young mice unless the old mice are pre-treated with senolytics](#)

[Old blood reduces lifespan in young mice](#)

[Special Issue of JGBS devoted to the impact of FOXO3 \(aka DAF16\) variants in worms to humans](#)

[What nature can teach us about living longer, healthier lives](#)

Headline vs Study

Headline: [Study finds loss of 'youth' protein may drive aging in eye](#)

Study: [PEDF Deletion Induces Senescence and Defects in Phagocytosis in retina of mice of undetermined sex](#)

Headline: [Scientists Discover Postbiotic May Combat Age-Related Muscle Decline](#)

Study: [Effect of Urolithin A Supplementation on Muscle Endurance and Mitochondrial Health in Older Adults: A Randomized Clinical Trial](#)

Headline: [Cells become zombies when the ends of their chromosomes are damaged – a tactic both helpful and harmful for health](#)

Study: [Telomeric 8-oxo-guanine drives rapid premature senescence in the absence of telomere shortening](#)

Headline: [A 'Reversible' Form of Death? Scientists Revive Cells in Dead Pigs' Organs.](#)

Study: [Cellular recovery after prolonged warm ischaemia of the whole body](#)

Headline: [Stress of climate change is aging lizards before they're even born](#)

Study: [Lizards from warm and declining populations are born with extremely short telomeres](#)

Headline: [COVID-19 infection in crucial brain regions may lead to accelerated brain aging](#)

Study: [SARS-CoV-2 and the central nervous system: Emerging insights into hemorrhage-associated neurological consequences and therapeutic considerations](#)

Contrary or Null Findings

[Long COVID risk increases with decreasing age](#)

[Vitamin D3 supplementation fails to reduce fracture risk in healthy midlife and older adults](#)

[CR and IF fail to improve late-life cognition in genetically diverse mice, despite lifespan increase](#)

[Older and younger runners exhibit comparable gait adaptations to fatigue](#)

[Phase II trial: Anti-Tau Antibody Fails to Slow Alzheimer Disease](#)

[Longevity shorter in large-brained fishes](#)

[25-year study fails to detect senescent decline in survival or reproduction in a cooperatively breeding bird](#)

[Even with wounding or infection larval diet affects adult fly reproduction, but not survival](#)

[Serum syndecan-4 correlates with age-related cardiovascular alterations but not proinflammatory markers in healthy older women](#)

[Number but not intensity of daily steps associated with lower mortality rates among middle-aged Black and White men and women.](#)

[Thermal stress during development does not affect life span and age-dependent mortality in seed beetles](#)

[Much anticipated new treatment provides no benefit in people with the AD Paisa mutation](#)

[Physical activity is not associated fall or fracture risk in older adults](#)

Energetics/Nutrition

[Sarcopenia associated with serum IGF-1 levels in elderly men but not elderly women](#)

Review: [Do cell extracts of intestinal probiotics convey health benefits in age-associated neurodegenerative diseases?](#)

Basic Biology

[Hypermutable in the brain associated with age.](#)

[Sex Differentially Alters Secretion of aging-related Brain Extracellular Vesicles in mice](#)

[Cells cultured from osteoarthritis \(OA\) patients find connexin 43 promotes senescence](#)

[An X-specific condensin complex affects lifespan and tolerance to proteotoxic stress in *C. elegans*](#)

[Aging desexualized the *Drosophila* brain transcriptome](#)

[Male *C. elegans* show greater stress resistance than hermaphrodites](#)

[Adipocyte-specific growth hormone receptor disruption improves insulin sensitivity with marginal effects on mouse longevity](#)

[Cellular senescence associated with long COVID-19 pulmonary complications](#)

[Brain aging differs with cognitive ability regardless of education](#)

[Analysis of high-throughput sequencing of nuclear-encoded mitochondrial genes in centenarians versus normal-lived controls reveals a genetic signature of exceptional human longevity](#)

[Canagliflozin increases lifespan in male, but not female, genetically heterogenous mice](#)

[New gene set predicts senescence-associated pathways across tissues and species](#)

[Sex difference found in candidate longevity genes on life expectancy in human cohort study](#)

[Methods for efficient construction of accurate epigenetic clocks](#)

Protocol: [Beyond parabiosis, small animal blood exchange](#)

Review: [The role of the heat shock transcription factor 1 \(HSF1\) in proteostasis and longevity in worms.](#)

Review: [Cellular senescence: the good, the bad and the unknown](#)

Review: [The role of extracellular vesicles in cellular senescence](#)

Review: [Mitochondrial-to-nuclear communication in aging: an epigenetic perspective](#)

Review: [Cellular senescence and senolytics: the path to the clinic](#)

Review: [An important distinction: GH and GHR vs IGF-1 and Insulin](#)

Review: [Mutation rate and lifespan](#)

Review: [Mitochondrial Epigenetics Regulating Inflammation in Cancer and Aging](#)

Ecology & Evolution

[The extension of foundress life span in the Hymenoptera](#)

[Effects of selection for stress tolerance in *D. melanogaster*: trade-offs and commonalities.](#)

[Genetic and social contributions to sex differences in lifespan in *Drosophila serrata*](#)

[Semelparous death: aging along the iteroparous continuum](#)

[Model suggests unguarded X effects are too small to explain observed sex differences in life span](#)

Review: [Evolution of the hallmarks of aging since the Last Universal Common Ancestor](#)

Review: [Experimental evolution of aging and longevity](#)

Review: [Mutual antagonism between AhR/HIF-1 \$\alpha\$ signaling affects aging](#)

Novel Organisms/Comparative

[Axolotl longevity and anti-aging mechanisms suggest model for aging studies.](#)

[A comprehensive map of the naked mole-rat blood system reveals resilience phenotypes](#)

[Cold catfish live long, slow lives in Sweden](#)

[Krill oil extends mean and maximum lifespans of aged male *Nothobranchius guentheri*](#)

[Tissue-specific differences in mitochondrial function in aged zebra finches, *Taeniopygia guttata*](#)

[Dehorning does not affect lifespan in Namibian populations of the black rhinoceros \(*Diceros bicornis bicornis*\).](#)

[Are medically extended lifespans responsible for cancer in dogs and humans?](#)

Epidemiology/Demography

[Life expectancy gap by income level increased during the first 2 years of the COVID-19 pandemic in California](#)

[Age-adjusted dementia incidence rates differ based on race and ethnicity in large VHA study.](#)

[Exercise: how much, not how often, linked with all-cause and cause-specific mortality](#)

[BMI decline accelerates years before death in community-dwelling older adults](#)

[Epigenetic clock acceleration is correlated with Parkinson's Disease age at onset](#)

[Residents of Brazilian areas with endemic leprosy show accelerated epigenetic age compared with age-matched Italians](#)

Clinical

[Can appropriate dental care take a bite out of frailty and cognitive decline?](#)

[Physiological aspects of pain perception and management in older humans](#)

[Changes in frailty status but not risk of death modulated by sarcopenia](#)

[Women may be at higher BP-related risk than estimated by cuff measurements](#)

[Person-Centered Memory Care Through Montessori for Dementia and Ageing: A Quality Improvement Study](#)

[Frailty: understanding the difference between age and ageing](#)

[A leg to stand on: balance performance and fall risk](#)

Care-giving

[Family stigma associated with a higher risk of caregiver burden](#)

Policy/Ethics

[Childhood socioeconomic factors associated with odds of multimorbidity in older age](#)

[Does private equity investment in nursing homes decrease quality and increase cost?](#)

[Healthy aging and inequity](#)

[Incarceration exposure and perceived neighborhood crime accelerate epigenetic aging](#)

Commentary

[Blots on a field](#)

[Study finds overconfidence associated with anti-scientific views](#)

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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