

AGING BIOLOGY UPDATE

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

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Featured

[Sex-, cell-type- and tissue-specific changes in chaperone-mediated autophagy during mouse aging](#)

[German longevity study reveals rare pro-longevity alleles in mTOR signaling network](#)

Basic Biology

[Brazilians living in endemic infectious disease areas show accelerated epigenetic aging and greater inflammation than those living in control areas](#)

[Mitochondrial dysfunction promotes mTORC1-dependent skeletal aging](#)

[Sirt2 deficiency aggravates intramuscular adipose tissue infiltration and impairs myogenesis with aging in male mice](#)

[Lifelong muscle-specific PGC-1 \$\alpha\$ overexpression exacerbates declines in mitochondrial biomarkers in the aging male mouse hippocampus](#)

[A computational framework for assessing inter-tissue molecular coordination associated with aging](#)

[Human pluripotent stem cell-derived neurons engineered to evade the immune system ameliorate motor symptoms in a rat model of Parkinson's disease](#)

[Human skeletal muscle disuse atrophy negatively affects the muscle metabolome and lipidome](#)

[Results in dogs align with human age-related immune and metabolic alterations](#)

Review: [Promoting health and survival through lowered body temperature](#)

Review: [Marine algae: a source of anti-aging compounds?](#)

Clinical

[A hospital-based special care unit for dementia improved outcomes across medical wards](#)

[Translational genomics of osteoarthritis](#)

[Can AI improve clinicians' diagnostic reasoning and accuracy in challenging cases?](#)

[Utility of frailty assessment in emergency departments](#)

[Mechanism by which attenuating mTORC1 signaling may boost vaccine responses in older individuals](#)

[Orthostatic hypotension symptoms and drugs affecting autonomic function increase odds of frailty in people > 80](#)

[We're shocked, shocked: Wealthy people live longer in the US and Europe](#)

Op-ed: [Reframing sarcopenia and frailty](#)

Review: [Enhancing immunity during aging by targeting interactions within the tissue environment](#)

Epidemiology/Demography

[Cohort life expectancy in the South, especially among females, changed little for those born between 1900 and 2000](#)

[Health follows wealth: Swedes from higher income groups adopt healthy lifestyle habits faster, helping explain their greater gain in life expectancy](#)

[Influenza vaccination rates increased among older Black and Hispanic adults and decreased among rural, poorly educated Whites during COVID-19 pandemic](#)

[Identifying and modeling disease interactions to understand mortality risk in patients with chronic heart disease](#)

[Immune resilience critical to healthy aging](#)

[Alzheimer's disease subtypes show sex-specific differences in disease progression](#)

[One year of low-dose, intermittent rapamycin is relatively safe in healthy adults and was associated with improvements in lean tissue mass and pain in women](#)

[APOE variants have somewhat different dementia risk profiles among Hispanics/Latinos from different countries](#)

[Having a spouse to confide in reduces mortality in older adults](#)

[People living in rural areas within a state that has not expanded Medicaid report worse health](#)

Energetics/Nutrition

[Distinct adipose progenitor cells drive age-associated expansion of visceral adipose tissue in mice](#)

[Dietary restriction does not rejuvenate the microbiome and other findings in genetically diverse mice](#)

[Low methionine diet started at 18 months, improved mouse health without affecting an](#)

[epigenetic clock](#)

[Not everything is better with butter: butter and plant-based oils intake and mortality](#)

[Periodic exclusion of animal products induces metabolic reprogramming in humans](#)

[A gut hormone affects food choice and lifespan in mated female flies](#)

RCT: [Three-month study finds pomegranate extract improves inflammation cardiometabolic risk factors in older adults?](#)

[Higher coffee consumption found to be associated with decreased frailty](#)

Review: [Potential drawbacks to caloric restriction](#)

Contrary or Null Findings

[Neither environmental- or socioeconomic burden significantly influenced the impact of extreme exposures to heat and PM2.5 on mortality in California](#)

[No evidence for a trade-off between reproduction and survival in a meta-analysis across birds](#)

[Drug decriminalization did not change drug-related fatal traffic crashes in Oregon](#)

[DNA methylation patterns are not associated with age in *Daphnia magna*](#)

Evolution/Comparative

[Grandmother effect revisited twenty-two years later](#)

[Variable gene copy number in cancer-related pathways is associated with cancer prevalence, but not longevity, in mammals](#)

[Killifish species show better association between brain gene expression profiles and life history traits than liver gene expression profiles](#)

Review: [Mitochondria as a regulator of cellular oxidative homeostasis](#)

Review: [The Hippo pathway: a molecular bridge between environmental cues and pace of life?](#)

Review: [Aging, metabolomics, and paleoanthropology](#)

Review: [Why some hearts heal, and others don't](#)

Novel Organisms

[Sex-specific effects of *Wolbachia* infection on lifespan, egg size and development in azuki bean beetles](#)

[DNA methylation dynamics consistent with sex and status differences in polygynous spear-nosed bat mortality rates](#)

[Mortality and life table analysis in a cohort of pet cats \(> 9 years old\) in the UK](#)

Review: [Water loss and dog aging](#)

Caregiving

[Forecasting informal family caregiving burden in Europe, 2000-2050](#)

[Barriers to dying in the community in England](#)

[Nature nurtures older people in assisted living facilities](#)

[Needs of people caring for people with dementia](#)

[Animal-assisted activities mitigate loneliness in older adults](#)

Review: [Burdens and benefits of caregiving for older adults](#)

Policy/Ethics

[Medicaid prescription denials may result in higher overall healthcare costs](#)

[Purge of U.S. health agency leaders and others eviscerates NIH](#)

[“Wholesale assault on U.S. science”](#)

Commentary

[Type 2 diabetes and accelerated aging in skeletal muscle](#)

[Autophagy does not always decline with aging](#)

[Can metformin actually slow the aging process?](#)

[The costs of standing still: NIH funding stagnant since 2003](#)

[Increasing out-of-pocket drug spending despite declining net drug prices](#)

[Veterans' Affairs research jeopardized](#)

[International PhD students make emergency plans in fear of US immigration raids](#)

[Science's big problem is a loss of influence, not a loss of trust](#)

[Now is not the time for despair](#)

[The pattern of research cuts at the NIH](#)

Odd and Ends

[Motherhood at 100—who says you can't teach an old tortoise new tricks?](#)

[Taming transposons to treat aging?](#)

[How Europe aims to woo US scientists and protect academic freedom](#)

[75% of US scientists who answered Nature poll consider leaving](#)

[Financial literacy in older adults associated with vocabulary knowledge and semantic memory independent of education level](#)

[Mine! Mine, Mine, Mine!!! AlphaFold is running out of data — so drug firms are building their own proprietary version](#)

[Tariffs hit science labs through increasing supply costs](#)

[Should Mpox be squirrel pox \(Spox\)?](#)

[154 million lives and counting](#)

[Adult age differences in the integration of values for self and other](#)

Announcements

[Applications Open: Statistical Methods, Developments, and Challenges in Geroscience Meeting, June 16-18, Indianapolis.](#)

RCCN Workshop: AI and Health Behaviors in Healthy Aging (Virtual). June 24-25.
[Register here.](#)

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



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