

UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

AGING BIOLOGY UPDATE

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

Featured

[Pilot phase 1 clinical trial of rapamycin for Alzheimer's disease finds no rapamycin in CSF and an increase in some markers of Alzheimer's disease](#)

[Prolonged fasting promotes systemic inflammation and platelet activation in humans](#)

Basic Biology

[Aging promotes loss of X-chromosome inactivation in mice](#)

[Atf3 + senescent chondrocytes mediate meniscus degeneration in aging laboratory rodents](#)

[Sex-specific insights into drug-induced lifespan extension and weight loss in mice](#)

[Electron transport complex activity in baboon prefrontal cortex declines with age in male baboons only](#)

[Synaptic vesicle-omics captures signatures of aging in mice](#)

[Our data illustrate conserved features of population dynamics of blood in mice](#)

[NF- \$\kappa\$ B-mediated developmental delay extends lifespan in flies](#)

[Exercise-induced CLCF1 attenuates age-related muscle and bone decline in male mice](#)

[Perturbed P-selectin engagement involved in hematopoietic stem cell aging in mice](#)

[Time-restricted feeding promotes healthy longevity without adverse effects in flies](#)

Review: [Region- and sex-specificity in extracellular matrix cardiac aging](#)

Review: [Menopause and gastrointestinal health](#)

Review: [Sestrin2 is a central regulator of mitochondrial stress responses in aging](#)

Clinical

[Metformin initiation in women 60+ years with type 2 diabetes increased exceptional](#)

[longevity compared with sulfonylurea](#)

[Age-, sex-, and race-specific reference intervals suggest thyroid disease is over diagnosed](#)

[Cancer pain treatment in older adults—less-safe and less-effective?](#)

[RSV vaccination of older patients is safe and effective](#)

[Can difficulty lifting five kilograms predict age-related disorders in adults 50 and older?](#)

[Cross-sectional study links age and sex hormones to women's declining neuromuscular function](#)

[Cyborg manifesto revisited](#)

[Cellular homeostasis genes associated with longevity—a case control study](#)

Review: [Exercise regulates SASP and alleviates osteoporosis](#)

Review: [The complexities of metformin use in prediabetic peri-menopausal women](#)

Epidemiology/Demography

[A limited number of causes appear to account for most life expectancy disparities](#)

[Late-life \(75+\) suicide trends differ across countries and increased between 1990-2022 in the US](#)

[Seasonality in mortality and its impact on life expectancy across Europe](#)

[We're gob-smacked! Wealth has strongest association with frailty-free and frail life English expectancies](#)

[Decomposing Gompertz](#)

[Olfactory deficits signal mortality risk in older adults, with mediators shifting over time](#)

[Exposure to wildfire smoke pollution associated with an increased hospitalization for respiratory disease in older adults](#)

[Women living in high vulnerability neighborhoods experience menopause at an earlier age](#)

[Dementia incidence decreases while prevalence increases among US Medicare beneficiaries, 2015-21](#)

[Proximity to golf courses associated with increased risk of Parkinson Disease](#)

[High self-rated health cometh before a fall for older men but not older women](#)

[Indian women live longer more disabled lives than men](#)

[Pentraxin-3 and C-reactive protein plasma levels predict survival in older adults](#)

[Fast and steady wins the aging race?](#)

[Sex and age differences in nine chronic diseases among older Indian adults](#)

[Chronic care needs are strongly correlated with aging and far exceed acute care needs globally](#)

[The challenge of access to healthcare services in sparsely populated rural areas](#)

Energetics/Nutrition

[Ultra-processed food intake associated with cardiovascular disease but not mortality](#)

[Ratio of polyunsaturated fats to total fat intake decreases mortality risk](#)

[Longitudinal twin studies show bidirectional trends between BMI and functional aging in older \(>74 years\) adults](#)

[Intake of high-quality carbohydrates and dietary fiber were associated with positive health status in older adulthood in Nurses Health Study](#)

Review: [Protein-restricted diets, metabolic health and aging](#)

Review: [Iron metabolism and muscle aging](#)

Contrary or Null Findings

[No consistent associations between the sex hormones and epigenetic clocks in Berlin aging study](#)

[ApoE \$\epsilon\$ 4 is not associated with cognitive impairment after a stroke](#)

[Gut metagenomes are not rejuvenated by calorie restriction in genetically diverse mice](#)

[Senolytics do not prevent chemotherapy-related bone mass loss in female mice](#)

Evolution/Comparative

[Germ cell mutation rates are inversely correlated with generation time](#)

[Is longevity a corollary of birds' and mammals' adaptations to marine life?](#)

[Glucose is positively correlated with glycation levels and lifespan in birds](#)

[Selection for early reproduction is associated with accelerated aging and metabolic remodeling in flies](#)

Review: [Antagonist pleiotropy and the origins of osteoarthritis](#)

Review: [Transposable elements and aging](#)

Review: [Epigenetic clocks in wildlife research](#)

Novel Organisms

[DNA replication stress leads to robust up-regulation of ribosome biogenesis genes and a markedly reduced activation of the P53 signaling pathway in cells from a long-lived bat](#)

[Genomic, transcriptomic and epigenomic signatures of aging in an Antarctic infaunal clam](#)

[Sex-specific effects of telomere maintenance on lifespan in sand lizards](#)

[Are long-lived birds better adapted to urban environments?](#)

[Gut microbiota variations over the lifespan and longevity in rabbit's maternal lines](#)

[Climatic differences shape the balance between maximum lifespan and life expectancy in Japanese tree species](#)

[Persian tree squirrels, a model for extended longevity?](#)

Review: [Anti aging](#)

Review: [Flower Power: Plant secondary metabolites provide health benefits for bees](#)

Caregiving

[Hospital in the Home: a model for managing patients outside of acute care beds](#)

[Canadian caregivers form compound care chains](#)

[Study suggests caregiving is associated with lower brain age in humans](#)

Policy/Ethics

[NIH says it will restore funding to Women's Health Initiative](#)

[Fear and self-censorship in US science](#)

[Recommendations for advanced care planning in dementia](#)

Commentary

[Conundrum of obesity management and preservation of muscle mass in older adults](#)

[The NIA survey data infrastructure provides a scientific foundation for policy and practice](#)

[How to strengthen science—the Brazilian Reproducibility Initiative](#)

[White House Office of Management and Budget proposes cuts to rural healthcare funding](#)

Odd and Ends

[Too ill to live, too well to die: an update on the lifespan versus health span debate](#)

[Colorful insights into Medel's pea genes](#)

[Aged \(>20 months\) mice learned to self-administer opioids faster and more accurately than young mice](#)

[Is short sleep duration associated with disease? It depends...](#)

[Until death we do spark](#)

[Broadband noise increases survival and fecundity in lab-raised *Daphnia*](#)

Book Review: [What's stats got to do with it?](#)

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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