

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**

February 2024 ABU

Featured

[Telomere dynamics of human induced pluripotent stem cells resemble those of embryonic stem cells](#)

[DNA methylation rates scale with maximum lifespan across mammals](#)

Basic Biology

[Depletion of SAM leading to loss of heterochromatin drives muscle stem cell ageing](#)

[Mouse muscle aging differs between sexes and is distinct from humans](#)

[HDAC1/2 inhibitor therapy improves multiple organ systems in aged mice](#)

[GIMAP5: ceramides meet immune senescence](#)

[Neurons in the hypothalamus counteract aging in male mice](#)

[Social isolation, inflammation, and cognitive function in middle-aged male mice](#)

[DNA methylation and chromatin accessibility predict age in dogs](#)

[Immunity and redox clocks measure biological age in mice](#)

[Lysosomal heterogeneity in association with longevity](#)

[Biologically informed deep neural network model for epigenetic aging clocks](#)

[Metformin treatment in juvenile mice affects aging-related phenotypes in sex- and genetics-dependent manners](#)

[Dog size and disease patterns across the age spectrum](#)

[Mathematical recapitulation of the end stages of human ovarian aging](#)

[Aging and lifespan in mice regulated through hypothalamic-adipose inter-tissue](#)

[communication](#)

[Mucosal TLR5 activation controls healthspan and longevity in mice](#)

[HKDC1, a target of TFEB, maintains mitochondrial and lysosomal homeostasis](#)

[Proteomic signatures of reproductive longevity in women](#)

[Senolytic treatment improves muscle force generation in a mouse model of oxidative stress-induced muscle frailty](#)

Review: [Distinguishing between driver and passenger mechanisms of aging](#)

Review: [Human trials exploring anti-aging medicines](#)

Preprint: [The germline regulates longevity and somatic repair in a sex-specific manner in the turquoise killifish](#)

Preprint: [Polygenic prediction of human longevity](#)

Contrary or Null Findings

[No effect of a music-based caregiving intervention on pain intensity in nursing home patients with dementia](#)

[No aging-related increase in fiber type grouping in male, sprint-trained masters runners](#)

[These reassuring findings suggest that there are no long-term detrimental effects of egg consumption on multiple cognitive function domains](#)

Energetics/Nutrition

[OXR1 maintains the retromer to delay brain aging under dietary restriction in flies](#)

Review: [Ketone bodies in cell physiology and cancer](#)

Epidemiology/Demography

[Interpreting changes in life expectancy during temporary mortality shocks](#)

[Stability of health-risk behaviors as English people age](#)

[Longevity, demographic characteristics, and socio-economic status are linked to triiodothyronine levels](#)

[Climate migration amplifies demographic change and population aging in USA](#)

[Convergence and divergence in mortality: A global study from 1990 to 2030](#)

[Early-life pesticide exposure and later-life male mortality](#)

[The Gompertz Law emerges from the inter-dependencies of sub-components in complex organisms](#)

[The influence of in utero exposure to the Dust Bowl environment on old-age longevity](#)

[Human lifespan and sex-specific patterns of resilience to disease in Catalonia, Spain](#)

[Epigenetic age accelerated in women experiencing stressful life events](#)

[Poorer blood lipid profile associated with increased risk of dementia among postmenopausal women](#)

[A blood biomarker of the pace of aging is associated with brain structure: replication across three cohorts](#)

Clinical

[Accelerated immune aging is associated with COVID-19 disease severity](#)

[Healthy behaviors in old age are associated with better intrinsic capacity ten years later](#)

[One-leg standing time is a simple measure for loss of skeletal muscle mass](#)

[The impact of an aging population on future increases in hip fracture burden in Scotland](#)

[Announcing the Semmelweis Study: a longitudinal occupational cohort study of healthy aging](#)

[Improving sexual health through integrated care in obstetrics and gynecology](#)

[Early growth, stress, and socioeconomic factors as predictors of the rate of multimorbidity accumulation across the life course](#)

[How do previous falls affect subsequent fracture risk?](#)

Review: [Diagnostic accuracy of waist-to-height ratio, waist circumference, and BMI in older adults](#)

Review & call for action: [The impact of reproductive milestones on women's cardiovascular disease risk](#)

Evolution/Comparative

[A trade-off between population growth rate and dauer yield in worms](#)

[The rate of epigenetic drift scales with maximum lifespan across mammals](#)

[Misalignment of plastic and evolutionary responses of lifespan to novel carbohydrate diets in *Drosophila serrata*](#)

Meta-analysis: [Inconsistent evidence for senescence in male ejaculate traits across 157 species of animals](#)

Novel Organisms

[Sex and early-life conditions shape telomere dynamics in the sand lizard, *Lacerta agilis*](#)

[Can the heat dissipation limit \(HDL\) theory explain reproductive aging in bank voles?](#)

[New platypus longevity records in the wild and in captivity](#)

Caregiving

Meta-analysis: [Effectiveness of promoting self-care behaviors among informal caregivers of older patients](#)

Policy/Ethics

[Should the European Medicines Agency consider aging a disease?](#)

[The Decade of Healthy Aging?](#)

[Redistribution of wealth in US could extend population longevity by 2+ years](#)

[Addressing longevity inequality: making retirement age fair](#)

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[Dog Aging Project likely to lose NIA funding](#)

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[Spatial memory and hippocampal remapping: who will age well?](#)

[Emergency medicine and population aging: a call to action](#)

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[The hidden cost of unpaid caregiving is less money for retirement](#)

[Going to the dogs: longevity drugs for canine companions move closer to market](#)

[Good friends make for good health](#)

Book Review: [How we age—a celebration of worms and flies](#)

Call for Papers

[Journals of Gerontology Series A: Special Joint Issue: The impact of climate change and air quality on human aging](#)

[GeroScience: 50 years of Aging Research: Celebrating the NIA: a call for papers](#)

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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