

AGING BIOLOGY UPDATE

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

Featured

[The multi-omics of GLP-1R antagonism in male mice](#)

[Life-extending interventions in mice fail to compress morbidity and may reduce healthspan in older animals](#)

Basic Biology

[Partial mechanism of peripheral neuropathy](#)

[Supplement of collagen with specific amino acid composition lengthens life in worms and improves aspects of health in worms, aged male mice, and possibly humans](#)

[The need for careful selection of epigenetic clocks and technology-specific adjustments when optimizing for accuracy and reproducibility](#)

[Chromosome duplication causes premature aging via defects in ribosome quality control in yeast](#)

[Female-specific benefits to removing senescent cells in aging mice](#)

[Some epigenetic clocks suggest that individuals with XXY chromosomes age more slowly than individuals with other sex chromosome anomalies](#)

[Anti-PD-L2 immunotherapy is efficacious against melanoma in aged, but not young, mice](#)

[Blocking nuclear receptor Nr4a3 mitigates cellular senescence and enhances cardiac reprogramming](#)

[Mitochondrial supercomplex assembly factor extends life in male, but not female, mice](#)

[Putrescine as a metabolic checkpoint in replication stress-induced senescence](#)

[Epigenetic mechanism alters mitochondrial protease Lonp1 expression in the hippocampus of older accelerated aging SAMP8 female mice](#)

[PRDX1 promotes testosterone synthesis and attenuates gonadal aging in male mice](#)

Energetics/Nutrition

[Age- and diet specific improvements in male mouse hepatic and peripheral insulin sensitivity from long-term dietary restriction](#)

[Sustained Athlete Fitness Exam \(SAFE\): measuring fitness in older athletes](#)

[How to design sustainable physical activity programs for older adults](#)

Review: [Dietary protein requirements for healthy aging](#)

Epidemiology/Demography

[Adversity-related growth stunting associated with higher later life mortality](#)

[Physical activity in mid- and late life protects against dementia](#)

[A new method for identifying the timing and magnitude of life-extending interventions](#)

[Half of avoided hospitalizations of adults >65 due to flu vaccination of younger age groups](#)

[Anemia \(Hb < 130 g/L\) in older adults associated with mild cognitive impairment over 3 years](#)

[Fathers' compulsory education associated with sons' increased lifespans](#)

[The prevalence and incidence of severe periodontitis show age, sex and regional differences in the US](#)

[Having daughters is associated with improved cognitive health in aging parents](#)

[Widowed women show improved cognitive function when working, widowed men do not](#)

Review: [Mitophagy in skeletal muscle—aging, exercise and disuse](#)

Clinical

[A tool for calculating the 30-Year cardiovascular risk in comparison with peers](#)

[Longitudinal study shows association of pain, sleep disturbance and depression with functional decline in older adults](#)

[Older adults' functional status improves over five years following cardiac surgery, but preoperative cognitive decline persists](#)

[Assessing what matters most in older emergency department patients is feasible and varies with age](#)

Review: [What are appropriate outcome measures for older multimorbid adults?](#)

Women's Health and Aging

[On And On: Older women endure and self-manage elder abuse and rarely seek help](#)

[Sedentary behavior in post-menopausal women associated with increased mortality](#)

[Early age at menarche and menopause associated with reduced healthy life expectancy](#)

[Urinary exosomal microRNAs as biomarkers distinguish primary ovarian insufficiency, pre- and post-menopause status in women](#)

[Age-related decline in testosterone is transient and is not correlated with menopause stage](#)

[The role of masturbation in relieving symptoms associated with menopause](#)

Commentary: [The role of FSH in menopause and metabolism](#)

Negative or Null Results

[Once again, no effect of multivitamin supplementation on human health](#)

[Exposure to gestational intermittent hypoxia doesn't alter metabolic function or aging in Wistar rats](#)

Evolution/Comparative

[Elevated DNA damage without signs of aging in the short-sleeping Mexican cavefish](#)

[Multi-omics molecular data from 30 tissues in 17 female rhesus macaques age 3 to 27 years](#)

[Uncoupled timing in the emergence of amyloid plaques and neurofibrillary tangles in four primate species: a challenge to the amyloid cascade hypothesis in Alzheimer's disease?](#)

Novel Organisms

[Bigmouth buffalo fish populations in demographic crisis with 90% >75 years old](#)

[An epigenetic clock for common dolphins](#)

[The smell of dead conspecifics changes female spider mites' lifespan](#)

[Ovarian morphology and transcriptomic profiles are influenced by age, caste, and presence/absence of a queen in red harvester ants](#)

[De novo genome assembly of a male Ansell's mole-rat](#)

Resources

New Nathan Shock Centers of Excellence in the Basic Biology of Aging:

[Minnesota](#)

[Wisconsin](#)

[Upstate New York](#)

[An updated version of NanoSeq: somatic mutation detection of single DNA molecules](#)

[The *Hydractinia* Genome Project Portal: multi-omic annotation and visualization of *Hydractinia* genomic datasets](#)

[scGeneBank: cross-species screening of functional gene sets at single-cell resolution](#)

Caregiving

[What role do medical professionals have supporting caregivers?](#)

[Family caregivers' coordination with medical professionals is experienced as weak](#)

Review: [Incorporating activities of daily living during hospital stays may help older adults at risk of functional decline](#)

Review: [A comparative analysis of long-term care resilience across nations](#)

Policy/Ethics

[Trends in private equity acquisitions of assisted living facilities](#)

[The old and the cold](#)

[Inclusive research with aging individuals with intellectual disabilities who are at risk for dementia](#)

[The need for research on displaced persons to evaluate transgenerational impacts of conflict and displacement trauma across the lifespan](#)

Commentary

[Loss of molecular resilience as the ultimate outcome of aging](#)

[Consequences of grant termination in clinical trials](#)

[An intervention manqué: the convergence of chronic pain and suicide in older adults](#)

Odd and Ends

[Oops, he's done it again: human mutations and clonal expansions in spermatogonia](#)

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.](#)



NATHAN SHOCK CENTERS
OF EXCELLENCE IN THE
BASIC BIOLOGY OF AGING



Copyright © 2025 The University of Alabama at Birmingham, All rights reserved.
1701 2nd Ave S, Birmingham, AL, 35294 US

[Privacy Policy](#) | [Terms of Use](#) | [uab.edu](#)