

AGING BIOLOGY UPDATE

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

February 2025 ABU

Featured

[Mommy dearest: Active maternal X chromosome impairs cognition and accelerates brain aging in female mice](#)

Basic Biology

[C57BL/6 sub-strain differences in aging-related behaviors](#)

[Differentiation of human iPSCs into Leydig-like cells with long-term stable secretion of testosterone](#)

[Aging of ovarian blood vessels implicated in mid-life fertility decline in mice](#)

[This old mouse: Exosomal micro-RNA reverses proliferative arrest of senescent cells and rejuvenates aging mice](#)

[Accumulation of autophagosomes in aging human photoreceptor cell synapses](#)

[Reduced mTOR signaling reduces protein aggregation during heat stress and aging in yeast](#)

[Key pathways and hub genes altered by aging and caloric restriction in rat muscle](#)

[Menopause-induced 17 \$\beta\$ -estradiol and progesterone loss increases senescence markers and degeneration in middle-aged mouse cartilage](#)

[Mutation accumulation drives long, slow death of neurons in Huntington's disease](#)

[Molecular responses to heat stroke differ in an age-specific pattern](#)

[Age is correlated with a global decline in splicing fidelity across human introns](#)

[Prediction of healthy aging and age-related diseases in late middle-aged Chinese adults using blood protein biomarkers](#)

[The “androgen clock” is an epigenetic predictor of long-term male hormone exposure in mice and sheep](#)

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Clinical

[Healthy lifestyle slows late life cognitive decline regardless of genetic susceptibility](#)

[Early menopause associated with development of type 2 diabetes](#)

[Benefits generally outweigh risks of GLP-1 receptor agonists in men](#)

[RSV vaccination effective in preventing RSV-related illness in older \(>60 yo\) men](#)

[Aging and inflammation limit immune response in severe COVID-19](#)

[Overtreatment of prostate cancer among men with limited longevity?](#)

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Epidemiology/Demography

[ADHD associated with shorter lifespans](#)

[Ten-question assessment of biomedical dataset quality and trustworthiness](#)

[Unique methylome of long-lived men](#)

[Weak handgrip strength and slow timed up-and-go independently associated with increased hospitalization costs](#)

[Number of children and dementia risk](#)

[Life expectancy gap as a function of educational attainment continues to increase](#)

[Alzheimer's and related dementias among Medicare beneficiaries aged \$\geq 65\$ years in rural America](#)

[Adult physical activity and all-cause mortality; a prospective twin study](#)

[Impaired chewing capacity associated with accelerated aging and higher mortality risk](#)

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

[Infertility is associated with clear cell and endometrioid ovarian cancer but not other ovarian tumor types](#)

Energetics/Nutrition

[Pharmacological reduction of lipid hydroperoxides preserves muscle function in aged female mice](#)

[Degree of food processing associated with all-cause and cause-specific mortality](#)

[Association of cardiovascular fitness, age, and sex with adult cortical thickness and gray matter](#)

[Skeletal muscle metabolic response to contraction is age- and sex-dependent](#)

Review: [Characterizing the effects of dietary protein on health across the lifespan](#)

Review: [Caloric restriction in heart failure with preserved ejection fraction](#)

Review: [The role of mitochondria in repurposed diabetes drugs for off-label health benefits](#)

Evolution/Comparative Biology

[How flight helped bats become resistant to viruses](#)

[Island population of snake-eyed skinks mature earlier and live longer than a mainland population](#)

[Maternal effect senescence and caloric restriction interact to affect lifespan and fitness via life history timing in a rotifer](#)

[Evolutionary history and role of reactive oxygen species in regeneration](#)

[Female reproductive aging in chacma baboons and geladas](#)

[Evolution of host-microbiome/holobiont symbionts, host lifespan and host fecundity](#)

Review: [Age estimation methods in non-avian reptiles](#)

Novel Organisms

[X*Y females exhibit more rapid reproductive senescence than XX or X*X females in African pygmy mice](#)

[Tree shrew: a new animal model for musculoskeletal disorders and aging?](#)

[Zebrafish model of Werner syndrome identifies a potential antiaging drug](#)

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[Providing end-of-life care support is associated with higher end-of-life health literacy](#)

[Caught between kids and ill older family members, caregivers experience physical and mental health declines](#)

[Small study identifies needs of young caregivers whose parent has dementia](#)

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[Homecare yields greatest systemwide cost savings among community-dwelling older adult](#)

[Residential greenness is associated with epigenetic aging in adults](#)

[Telemedicine for people covered by Medicare may be dropped](#)

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[Deep learning and generative artificial intelligence in aging research and healthy longevity medicine](#)

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[Clinical practice in an age of medical misinformation and conspiracy theories](#)

[NIA Resource Centers for Minority Aging Research: Development, evolution, and impact](#)

Odds and Ends

[Death, where is thy sting?](#)

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Contrary/Null Results

[Heterochronic microbiome transplants fail to increase longevity in fruit flies](#)

[No significant differences between a health system-based vs a community-based care intervention nor between either active intervention vs a usual care control group in patient behavior and caregiver strain](#)

[Geriatrics-focused primary care did not increase time measures of self-reported health or integration of care within the first 18 months in the VA Health Care System](#)

[Self-reported traumatic brain injury fails to predict Alzheimer's disease neuropathology and dementia](#)

[Klotho mutation fails to accelerate intervertebral disc aging in 8-week-old mice](#)

[Scant evidence of benefit from "senior-friendly" hospitals](#)

Announcements

Is this position for you? [Section Chief, Comparative Medicine](#)

Conference: [Human Dietary Protein Needs and Benefits: A Critical Assessment of Postulated Propositions, February 25, 2025 – February 26, 2025](#)

Nathan Shock Center Pilot Awards: Active RFAs

[Albert Einstein College of Medicine Nathan Shock Center 2024 Pilot & Feasibility Project Awards for Core Use](#) Rolling Deadline

[USC-Buck Nathan Shock Center Pilot Awards](#) Rolling Deadline

[San Antonio Nathan Shock Center Pilot Project Grants](#) Deadline: February 15, 2025

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



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