

# AGING BIOLOGY UPDATE

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

## **Featured**

[Why we can thrive past 75: in favor of extending the human lifespan](#)

[Is inflammaging a product of modern life?](#)

## **Basic Biology**

[Multinucleated giant cells modulate the mouse and primate ovarian immune landscape during aging](#)

[miR-106b-5p selectively eliminates senescent cells in old male mice](#)

[Immunoglobulin heavy constant mu is a tissue-level aging biomarker in mice](#)

[Human lymphocytes from men and women respond differently to the decline of genomic stability with age](#)

[Aged cells, where is thy STING? A noncanonical cGAS–STING pathway drives human cellular aging and extend life of progeroid mice](#)

[Breakdown of neuronal glycogen mitigates tauopathy in flies and human iPSC-derived neurons](#)

[Multiple sources of evidence link acyl-CoA-binding protein to mouse pathological aging](#)

[Mitochondria found to transfer reactive oxygen species directly to peroxisomes in cultured human cells](#)

[Deer me: Regenerating antler progenitor cells reverses some aging phenotypes in mice and macaques](#)

[Senescence-resistant human stem cells slow aspects of aging in older macaques](#)

Review: [Rapamycin outperforms metformin in extending life in nonhuman vertebrates](#)

Review: [Hallmarks of stem cell aging](#)

Review: [Emerging uncertainty on the anti-aging potential of metformin](#)

Review: [A critical appraisal of glymphatic dysfunction's role in Alzheimer's disease](#)

Review: [Identifying molecular hallmarks of male reproductive aging](#)

### **Clinical**

[A practical guide to wearable devices to monitor cardiovascular function of healthy adults](#)

[Older stroke patients have better survival with planned, collaborative care by neurologists and geriatricians](#)

[Goldilocks effect: metanalysis indicates that too little and too much sleep associated with increased mortality risk](#)

RCT: [Reducing the risk of treatment-related hypoglycemia in older patients by deprescribing](#)

Review: [Sex-specific mechanisms of postoperative cognitive dysfunction](#)

### **Epidemiology/Demography**

[Epigenetic speedometer links pace of biological aging to cancer and the modulating effect of physical activity](#)

[Youthful proteomic brain and immune system associated with longer life in UK Biobank](#)

[HealthAge: an approach to evaluating changes intrinsic capacity with age across multiple species including humans](#)

[The exposome of healthy and accelerated aging across 40 countries](#)

[US life expectancy has not returned to pre-Covid 19 pandemic levels](#)

[Low bone density and muscle mass associated with mortality risk for older men](#)

[Economic distress and educational inequity associated with disparities in US life expectancy.](#)

[Immune aging impacts mortality risk in older adults across populations sexes and ethnicities](#)

[White respondents had higher epigenetic aging than Black respondents for measures trained on chronological age, whereas the opposite was true for measures trained on physiological age](#)

[APOE  \$\epsilon\$ 4 is a risk factor for multiple age-related neurodegenerative diseases](#)

### **Energetics/Nutrition**

[Three months of early life swimming exercise enhances aspects of later life health but does not extend life in mice of both sexes](#)

[Higher pre-lesion energy demand and shorter life only in females of a transgenic Alzheimer's mouse model](#)

[Betaine an exercise mimetic for geroprotection in healthy males?](#)

[Gestational ketogenic diet shortens life of male, but not female mouse offspring](#)

[Body weight trajectory at midlife, but not older ages, associated with late-life cognitive decline](#)

### **Evolution/Comparative**

[Trade-offs, hyperfunction, and mismatch: an evolutionary perspective on aging and disease](#)

[New comparative analysis of avian longevity highlights shared mechanisms and new key genomic players](#)

Comment: [Defending Peto's paradox](#)

### **Novel Organisms**

[Evaluating aging in the Archaea](#)

[Adult survival of Leach's Storm-Petrel covaries with the long cycles of sea temperature](#)

[Variability in tool use changes with advancing age in a wild population of chimpanzees](#)

[Plasma glucose and glycation levels positively correlated with lifespan in birds](#)

[Age-related inflammation and oxidative stress in two species of captive lemurs](#)

### **Resource**

[A DNA methylation database for aging biology.](#)

### **Contrary or Null Findings**

[Interventions to address inappropriate prescribing for older patients reduces prescription number but fails to affect hospitalizations or mortality.](#)

[Sleep, mood, and quality-of-life unaffected by circadian timing of time-restricted eating by overweight or obese adults](#)

[Weighted vest use fails to prevent weight loss-associated bone loss at the hip](#)

[Genetically blocking IL6R fails to reduce chronic disease risk or longevity in postmenopausal women](#)

[Small clinical trial finds human plasmapheresis may increase, not decrease, epigenetic age](#)

### **Caregiving**

[As the US ages, the Caring for Caregivers model at Rush University's health system improves outcomes for both caregivers and care recipients](#)

[Love hurts: Positive experiences of caregiving associated with higher post-loss depressive symptoms and prolonged grief symptoms](#)

[Emergency Department stays for older US adults have gotten longer](#)

[Older adults frequently don't know their partners' end-of-life preferences](#)

### **Policy/Ethics**

[Unintelligent design: Identifying an explosion of AI generated research articles.](#)

[inappropriate study designs, and false discoveries using NHANES database](#)

Preprint: [Pulp fiction: papermills produce misleading and implausible findings](#)

### **Commentary**

[Senolytics under scrutiny in the quest to slow aging](#)

[Clinical Frailty Scale but not multi-morbidity found to associate with adverse outcomes in a perioperative setting](#)

[Is living longer necessarily better?](#)

[Great expectations: some easy fixes for increasing US life expectancy](#)

[Contaminated data and medical AI](#)

[Transformational science: healthy aging with HIV](#)

### **Odd and Ends**

[Bone-marrow-like hematopoietic stem cell niche found in adult mollusk shells](#)

[Cost-effective but unaffordable: local budgets can't pay for health promotion activities for frail older adults](#)

[Beware the kleptosome, my son! The slugs that bite, the corals that catch!](#)

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Aging Biology Update is brought to you by the **UAB Nathan Shock Center** and compiled ***without AI***, by Kathleen Fischer and Steven Austad. [Subscribe to this newsletter](#).



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