

# AGING BIOLOGY UPDATE

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

## **Featured**

Preprint: [Do we actually need aging clocks?](#)

[Reframing biological age as risk-equivalent age](#)

## **Basic Biology**

[Male mice fed an H<sub>2</sub>S generating compound display longer life- and health-span](#)

[AI analysis of plasma metabolite patterns predicts interventions which lengthen mouse life](#)

[Mitochondrial RNA cytosolic leakage drives the SASP](#)

[Normalizing aberrant glycolytic interactions eliminates senescent cells in mice](#)

[mRNA treatment improves T-cell function and immune cues in 16-month-old mice](#)

[Reduced IGF-1 signaling alters but does not limit Alzheimer's disease progression in sex-specific fashion in a new rat model of IGF-1R haploinsufficiency](#)

[cGAS-STING pathway protects against inflammatory depletion of ovarian reserve in mice](#)

[Is sympathetic-parasympathetic imbalance a cause of aging?](#)

Review: [Pineal gland senescence](#)

Review: [Recent advances on four major \*C. elegans\* longevity regimens](#)

## **Clinical**

[Use of primary care physicians associates with increased life expectancy for those 65+ even after adjustment for sociodemographic factors](#)

[Fifteen weeks of light-intensity, community-based group exercise improves executive function, upper-limb strength, and endurance in older adults](#)

[Twin study suggests metformin may help prevent osteoarthritis](#)

[Pain has a negative association with intrinsic capacity irrespective of age and sex](#)

[Emergency room screening tool effectively identifies older people at risk for adverse outcomes](#)

[Does low-grade inflammation increase the risk of neurocognitive disorders in older adults?](#)

[A pedagogical and accreditation model for incorporating longevity-related competencies into medical training](#)

### **Epidemiology/Demography**

[Blood-based biomarker suggests higher prevalence of Alzheimer's disease pathology in older Norwegian adults than previously estimated](#)

[Yes, Virginia, despite what you may have heard, Blue Zones really exist](#)

[Assessing which epigenetic clocks are the best predictors of disease and death](#)

[Polygenic links to later life health](#)

[A sex-adjusted 7-biomarker clinical aging clock for translational preventative medicine](#)

[Intrinsic capacity is a reliable predictor of healthy longevity in four cohorts](#)

[Accelerometer study finds taking more than 8000 steps per day is associated with roughly a 60% reduction in mortality relative to fewer than 4000 steps](#)

[Mortality higher nursing homes without air conditioning on during extreme heat days](#)

Preprint: [Rare longevity variants identified in multigenerational long-lived families](#)

### **Women's Health and Aging**

[A National Institute on Aging workshop on the long-term effects of pregnancy on aging](#)

[Vaginal estrogen, an effective treatment of genitourinary syndrome of menopause, is being underutilized](#)

[Chemoendocrine therapy is associated with greater cancer-related cognitive impairment than endocrine therapy alone, irrespective of age](#)

[Older age at first birth and higher estradiol associated with longer lifespan in Mendelian randomization study](#)

### **Energetics/Nutrition**

[Ketone metabolism is not required for the metabolic benefits of long-term calorie restriction in mice](#)

[Eight months of calorie restriction \(CR\) slow ovarian aging in female mice, four months of CR does not](#)

[Unlike laboratory strains, neither caloric nor protein restriction increases the lifespan of outbred male killifish](#)

[Can a microRNA-based biological age model capture the modulation of aging by](#)

[lifestyle and nutrition?](#)

[Tooth loss is a risk factor for decreased intrinsic capacity in late life](#)

### **Evolution/Comparative**

[Two pathways to tree longevity](#)

[Sex- and age-specific differences in select health burdens in wild chimpanzees](#)

Review: [Diapause and aging](#)

### **Novel Organisms**

[Molecular similarities between dog and human aging](#)

[Clinical blood parameters associated with long life in captive ring-tailed lemurs](#)

[Descendants of older stickleback mothers show maternal age-effects in complex, sex-dependent fashion](#)

[Inbreeding increases female, decreases male lifespan, and initiates widespread gene expression changes in a haplodiploid predatory mite](#)

### **Contrary or Null Findings**

[Valacyclovir, an antiviral effective against Herpes simplex virus, fails to slow cognitive decline in those with early Alzheimer's disease](#)

[High fat cheese and cream consumption associated with lower long-term risk of dementia](#)

[GLP-1 drug fails to quell Alzheimer's in Novo Nordisk trials](#)

### **Caregiving**

[Grandparental care of grandchildren accelerates epigenetic aging](#)

### **Policy/Ethics**

[When censorship becomes policy](#)

[Interventions to reduce heat-related risks in care homes are cost-effective](#)

### **Commentary**

[The case for AI-driven, integrated biotechnology ecosystems](#)

[Should clinicians be anti-aging agents?](#)

[Men with prostate cancer need hot flash relief too](#)

Review: [The Make America Healthy Again strategy report](#)

### **Odd and Ends**

[Frequent gardeners had a 22% lower mortality risk over 25 years of follow-up](#)

[Space radiation differentially induces senescent phenotypes in human cells compared to  \$\gamma\$ -irradiation](#)

[The size of life](#)

## Announcements

Have a compound you think could make mice live longer? Get it tested for free by the NIA Interventions Testing Program. [Here's how to do it.](#)

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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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