

AGING BIOLOGY UPDATE

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

Featured

[Aligning caloric restriction with circadian rhythms can lead to an even greater increase in lifespan in male mice](#)

[Intranasal and injectable gene therapy with telomerase and follistatin dramatically lengthens life in female mice](#)

Headline vs Study

Headline: [Fecal transplants are latest anti-aging hack: 'poo pill' study](#)

Study: [Fecal microbiota transfer between young and aged mice reverses hallmarks of the aging gut, eye, and brain](#)

Headline: [Eating sea squirts may reverse the signs of aging](#)

Study: [Plasmalogens eliminate aging-associated synaptic defects and microglia-mediated neuroinflammation in mice](#)

Headline: [Male pheromones may be the fountain of youth for aging females' eggs](#)

Study: [A male pheromone that improves quality of the oogenic germline \(in worms\)](#)

Contrary or Null Findings

[No association of season of birth and depression symptoms in older adults](#)

[Short telomeres associate with delayed and slowed reproduction in female Eastern chipmunks only](#)

[Chloroquine, an autophagy inhibitor, in drinking water lengthens life of middle-aged male mice](#)

[Protein sequence analysis indicates no overall difference in proteome-wide aggregation propensity between the mouse and long-lived naked mole-rat](#)

Energetics/Nutrition

[Effects of amino acids on longevity in fruit flies vary by specific diet and genetic background](#)

Role of [age on activity level](#) and [feeding frequency on overall health in the Dog Aging Project](#)

[Intermittent methionine restriction produces similar health benefits to continuous methionine restriction](#)

[Urolithin A supplementation improves strength and exercise in middle-aged humans](#)

Review: [Protein restriction and branched-chain amino acid restriction promote geroprotective shifts in metabolism](#)

Review: [Nutrition, longevity, and disease](#)

Review: [Diets, caloric restriction, and exercised-induced hormesis](#)

Review: [Nutritional geometry across the life course](#)

Basic Biology

[Combination of rapamycin, acarbose, and phenylbutyrate improves markers of health in older mice more than individual drug treatments](#)

[Mitochondrial thioredoxin system required for increased longevity in mitochondrial worm mutants](#)

[4-phenyl butyrate administration improves learning and memory in older male mice](#)

[Young-to-old cerebrospinal fluid transplants improves cognition in male mice](#)

[Longevity impact of rapamycin in flies is dependent on genotype and solvent used](#)

Reviews on resilience in the biology of aging: [one](#), [two](#)

[Sex differences in genetics underlying resilience to brain lesions associated with Alzheimer's disease](#)

[Reduced IGF-I signaling in cardiomyocytes reduces cardiac function in young, but improves it in older male mice](#)

Review: [Safe interventions to slow aging and extend healthy lifespan](#)

Review: [Methylomes and aging](#)

Review: [Mitochondrial-derived peptides in aging and healthspan](#)

Review: [Targeting NAD+ to delay heart aging](#)

Review: [The gut microbiome as a modulator of healthy aging](#)

Review: [The aging immune system](#)

Ecology & Evolution

[Reduced survival of offspring born to the oldest mothers across species of primates](#)

[Sex specific body mass aging trajectories in adult Asian elephants](#)

[Individual variation explains aging patterns in the long-tailed tit](#)

[Ant eusociality and queen longevity rapidly evolved under positive selection within the last 20 million years](#)

Novel Organisms/Comparative

[The short-lived killifish as a model of age-related osteoporosis](#)

[Comparative transcriptomics of 26 mammalian species suggests novel gene networks associated with maximum longevity](#)

[DNA methylation clocks for dogs and horses](#)

[Northern-most population of Wels catfish is the longest-lived](#)

[Glucose tolerance predicts survival in old zebra finches](#)

[New framework for canine geriatric syndrome](#)

Epidemiology/Demography

[Countries with higher income inequality had a higher burden of COVID-19 infections and death](#)

[Analgesic use in older adults is associated with increased frailty risk over a 10 year follow up](#)

[Living in areas with high green space coverage is associated with improved cognition in older adults](#)

[Extreme heat is associated within increased mortality in the United States](#)

[Duration of night shift work reduces healthy aging in the Nurse's Health Study](#)

Clinical

[Older females have increased titer response to the COVID-19 vaccine compared with old males](#)

[Cognitive impairment increases long-term after breast cancer diagnosis compared to controls in older women](#)

Caregiving

[Positive association between days spent transporting care recipients and total caregiving hours for caregivers](#)

Policy/Ethics

[Policy content evaluation of serving rural older adults across all 50 states](#)

Commentary

[Aging in prisons: How older generations fight for dignity and release](#)

Odd and Ends

[Professional soccer players have lower mortality rates than the general population but have increased dementia mortality](#)

[Not Too Old for TikTok: How Older Adults Are Reframing Aging](#)

[Prolonged adversity slightly increased longevity of men living through 1930's Great Plains drought](#)

Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Jessica Hoffman, Heather Patterson, Joseph Palmer, and Steven Austad. [Subscribe to this newsletter.](#)



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