

# AGING BIOLOGY UPDATE

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

## Featured

[COVID-19 is an emergent disease of aging](#)

## Headline vs study

Headline: [Scientists home in on the mechanism that protects cells from premature aging](#)

Study: [RAD51-dependent recruitment of TERRA lncRNA to telomeres through R-loops](#)

## Contrary or Null Findings

[No association of grandparenthood and mortality risk](#)

[Age-induced mitochondrial DNA point mutations fail to alter metabolism regardless of nutrient regimes in male mice](#)

[RAAS inhibitors do not affect mortality in COVID-19 patients](#)

## Energetics/Nutrition

[Vitamin D insufficiency increases frailty in old male mice](#)

[Lifelong voluntary exercise prevents age- and Western diet-induced vascular health declines in male mice](#)

[Short-term protein restriction improves metabolic health in middle-age male mice](#)

[A randomized controlled trial of exercise combined with resveratrol in older adults is safe and feasible](#)

[Sex-specific plasma lipidomic fingerprints of age and BMI](#)

[Review: From lifespan to healthspan: The role of nutrition in healthy aging](#)

[Review: Acarbose as a calorie restriction mimetic](#)

[Review: Vitamin D and its effects on DNA methylation in aging and disease](#)

## **Basic Biology**

[Small molecules associated with stress resistance increase lifespan in worms and flies](#)

[Lower sirtuin levels in the saliva and hippocampus of Alzheimer's compared to control patients](#)

[Mechanisms of normal mouse cognitive aging using a novel genetic reference panel](#)

[The aged hematopoietic system promotes hippocampal-dependent cognitive decline in male mice](#)

[Sex-specific variation in aging phenotypes across standard inbred mouse strains](#)

[Shared environment is a major contributor to variation in epigenetic aging across the human lifespan](#)

[Plasma proteomic profiles of age, healthspan, and all-cause mortality in older adults](#)

[Predicting brain age with complex networks](#)

[Review: Senolytic drugs extend healthspan by reducing cell viability](#)

[Review: Non-gut microbiomes and age-related diseases](#)

[Review: Molecular basis of reproductive senescence: Insights from model organisms](#)

[Review: Effect of rapamycin on aging and age-related diseases](#)

[Review: Growth hormone and aging](#)

[Review: Age-related changes in intestinal immunity and the microbiome](#)

[Review: Mouse models of growth hormone deficiency](#)

[Review: Thyroid hormones in diabetes, cancer, and aging](#)

[Review: Geroscience and stress](#)

[Review: From geroprotection to rejuvenation](#)

## **Ecology & Evolution**

[Social selectivity in aging wild chimpanzees](#)

[Effect of parental age on offspring fitness in the cooperatively breeding superb fairy-wren](#)

[Early reproduction leads to low late life reproduction with no effect on longevity in female mealworm beetles](#)

## **Novel Organisms/ Comparative**

[Reduced septum neuron activation contributes to age-related cognitive impairment in homing pigeons](#)

[Review: An update on nontraditional systems in aging research](#)

[Review: Aging in non-Drosophila insects](#)

[Review: Targeting metabolic pathways for extended life and health across species](#)

[Review: Feline musculoskeletal aging](#)

### **Epidemiology/Demography**

[Irregular or long menstrual cycles are associated with increased risk of premature death](#)

[Obesity is associated with decreased life expectancy at 50 in Ghana, a low resource country](#)

[Both long and short telomeres associate with increased disease risk](#)

[Bariatric surgery extends life in obese individuals](#)

[APOE2 is associated with longevity independent of Alzheimer's disease](#)

### **Clinical**

[High adiposity with normal BMI is associated with increased risk of osteoporosis and sarcopenia](#)

[Changes in frailty index scores predict mortality in multiple human studies](#)

[The Alzheimer's patient from the dermatologist's point of view](#)

[Review: Advances in geropsychiatric nursing](#)

### **Care-giving**

[Older family caregivers have lower mortality risk than age-matched controls](#)

[Burnout of acute care geriatric facilities workers during COVID-19](#)

### **Policy/Ethics**

[The aging physician and surgeon](#)

[Older Black Americans during COVID-19: Race and age double jeopardy](#)

[Multimorbidity: The case for prevention](#)

[Technology policy innovation to ensure equity and inclusion with aging](#)

### **Commentary**

[Achieving healthy human longevity: A global grand challenge](#)

[The ground zero of organismal life and aging](#)

[The relevance of a sociocultural perspective for understanding learning and development in older age](#)

[In Memory: Edward J. Masoro, PhD \(1924–2020\)](#)

**Odd and Ends**

[Bridging the geroscience chasm between bench and bedside](#)

[Novel microfluidic culture device for aging studies in worms](#)

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



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