

# AGING BIOLOGY UPDATE

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

## Featured

[Sex- and age-dependent genetics of longevity in UM-HET3 mice](#)

[Biological Restraints on Indefinite Survival](#)

## Headline vs Study

Headline: [Eating cheese and drinking red wine can reduce your risk of Alzheimer's, study claims](#)

Study: [Genetic Factors of Alzheimer's Disease Modulate How Diet is Associated with Long-Term Cognitive Trajectories: A UK Biobank Study](#)

Headline: [Urgent warning to anyone who's had common virus over increased risk of stroke](#)

Study: [Zoster-Associated Prothrombotic Plasma Exosomes and Increased Stroke Risk](#)

Headline: [Scary evidence: how a common habit could increase your risk of Alzheimer's and dementia](#)

Study: [Chlamydia pneumoniae can infect the central nervous system via the olfactory and trigeminal nerves and contributes to Alzheimer's disease risk](#)

Headline: [Men age faster than women, study claims](#)

Study: [Do Epigenetic Clocks Provide Explanations for Sex Differences in Life Span? A Cross-Sectional Twin Study](#)

## Contrary or Null Findings

[Under CR, loss of SIRT3 extends lifespan beyond CR alone in male mice](#)

[Large, old Norway spruce \(>400 years\) increase growth throughout their lives](#)

[Delayed effects of radiation in adipose tissue reflect progenitor damage and not cellular senescence in mice and monkeys](#)

[Gamma irradiation reduces fecundity but not lifespan of the stink bug \*Bagrada hilaris\*](#)

[Maternal age, but not maternal rank, correlated with longevity in the spotted hyena \*Crocuta crocuta\*](#)

[Hexosamine pathway activation improves memory but does not extend lifespan in mice](#)

[Inverse Lansing Effect in \*Daphnia magna\*?](#)

## **Energetics/Nutrition**

[Variability in energy expenditure declines with age but remains much greater in males than females](#)

[Multigenerational downregulation of insulin/IGF-1 signaling in adulthood increases fitness in \*C. elegans\*](#)

[11 \$\beta\$ -HSD1 contributes to metabolic decline in aging male mice](#)

[Systemic lipolysis increases physiological fitness but not lifespan in \*Drosophila melanogaster\*](#)

Review: [Mitochondria, metabolomics and sarcopenia](#)

Review: [Dietary vitamin B-complex in human nutrition throughout life](#)

## **Basic Biology**

[Human centenarian variant of SIRT6 enhances genome stability](#)

[Single-cell RNA-seq reveals early heterogeneity during aging in yeast](#)

[p16-positive senescent cell clearance partially restores immune cells to younger levels in aging mouse brain](#)

[Rapamycin plus acarbose and captopril extend lifespan in UM HET3 mice in a sex-dependent manner](#)

[Dietary restriction fails to extend life in \*Drosophila\* in stressful environments](#)

[G-quadruplexes, methylation instability in aging and cancer](#)

[French centenarians slow epigenetic aging](#)

[Tissue-specific impacts of aging on human gene expression patterns](#)

[Senolytics rescue the function of muscle stem cells in a mouse model of progeria](#)

[Polygenic risk scores for age-related diseases lower in long-lived Germans \(>94 yrs.\)](#)

Review: [Skeletal muscle aging, metabolites and mitochondria](#)

Review: [Sex differences in cellular senescence](#)

Review: [Inhibiting RAS signaling to extend health- and life-span](#)

Review: [Associations of the hallmarks of aging and human frailty](#)

Review: [Renin-angiotensin system and aging in \*C. elegans\*, \*Drosophila\*, rodents, and humans](#)

Review: [Sex differences in basal mRNA synthesis](#)

Review: [FoxO3, aging and age-related diseases](#)

## **Ecology & Evolution**

[Phenotypic plasticity correlated with lower longevity in male eastern chipmunks](#)

## **Novel Organisms/Comparative**

[Sick as a dog: canine diseases inform human medicine](#)

[Longevity and the gut microbiome in queen and worker honeybees](#)

[Evidence of maternal and paternal age effects on speed in thoroughbred racehorses](#)

## **Epidemiology/Demography**

[A retrospective analysis of the age-at-death distribution across 18 OECD countries](#)

[Inequalities in life expectancy and lifespan variation by race/ethnicity and urbanicity in the US](#)

[Individual stochasticity in the life history strategies of animals and plants](#)

[Physical activity phenotypes and mortality in older adults](#)

## **Clinical**

[Geriatric frailty is associated with accumulation and defective repair of DNA double-strand breaks](#)

[Growing older with HIV: A supplemental issue of the International AIDS Society.](#)

[Denial and behavioral disengagement associated with reduced lifespan](#)

[Alzheimer's disease pattern similarity scores may also measure brain aging](#)

[Why and when older people lose their teeth](#)

[Strength plus endurance exercise reduce mortality better than either alone](#)

Review: [Handgrip strength measurement protocols and mortality outcomes](#)

Review: [Human frailty and physical activity from a physiological perspective](#)

Review: [Nuclear Factor-Erythroid Factor 2 \(Nrf2\) in aging and neurodegenerative disease](#)

## **Care-giving**

[Using technology to provide support to caregivers of people with dementia](#)

[Promoting social connectedness of people with dementia and their caregivers](#)

## **Policy/Ethics**

[Age-friendly urban design principles can promote resilience and healthy aging](#)

[Research priorities for homecare for older British people](#)

## **Commentary**

["En attendant Godot": waiting for the answer to obesity and longevity](#)

[Eggs and chickens: early menopause and epigenetic biomarkers of aging](#)

[Perspective on metabolomics aging, healthspan and targets for intervention](#)

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Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Kathleen Fischer, Jessica Hoffman, Heather Patterson, and Steven Austad.  
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