Featured
The latest on extending human life

Billionaires discover mortality...and don't like it.

Resolving some controversies over naked mole-rat biology

Contrary or Null Findings
Epigenetic clock unaffected by rapamycin supplementation in marmosets

No acceleration of epigenetic clocks in COVID-19 patients

Lithium affects health but not lifespan in mice

No sex differences in cognitive decline with age in outbred rats

Whole-body synthesis of NAD+ is not impaired, but NAD+ consumption increases and NAD+ levels decrease, in aged mice

Meta-analysis: Vegetarian diet does not decrease risk of incident stroke

Energetics/Nutrition
Lower fasting blood glucose is associated with decreased mortality in humans and monkey but increased mortality in mice

Early life weight gain, but not later life weight, is associated with longevity in genetically variable mice fed a high fat diet

Two years of walnut consumption leads to improved lipoprotein profiles in healthy older adults

Genetically determined visceral adipose tissue accumulation is negatively associated with longevity

Caloric restriction in aged male mice improves metabolic health with only minor negative effects on sleep

Review: Molecular mechanisms of dietary restriction promoting health and longevity
Review: Autophagy in metabolic diseases and aging

Review: Nutrition, obesity, and cellular senescence

Review: Impact of caloric restriction mimetics

Review: Intermittent fasting and cancer prevention

**Basic Biology**

*Transient reprogramming of cardiomyocytes leads to their replication and possible heart repair*

*Old flies living with young flies live longer*

*Reducing daf-2 late in life leads to extreme longevity extension in worms*

*Mutation in ribosomal protein improves proteostasis and extends lifespan in yeast, worms, and flies*

*Immune dysfunction promotes skeletal aging*

*Deficiency of REST transcription factor leads to cell senescence in mouse neurons*

*Age-related cognitive decline in rats is sex- and context-dependent*

**Special Issue: Cell stress in development, aging, and disease**

Review: Host and microbiota metabolic signals in aging and longevity

Review: Role of sex, hormones, and oxidative stress in neurodegenerative diseases

Update on mitochondrial impact on Alzheimer’s disease development and progression

Review: Is there a common signature of cellular senescence?

Review: NAD+ precursors in health, disease, and aging

Review: Autophagy and the hallmarks of aging

Review: Inflammaging

*Is aging too much of a good thing?*

**Ecology & Evolution**

*Evolution of flower longevity in unpredictable pollination environments*

*Hypothesis: Similar mechanisms of aging in worms and Pacific salmon*

Review: The evolution of the hallmarks of aging

Review: Link between female reproductive aging and survival

Review: Evolution, chance, and aging

**Novel Organisms/ Comparative**
Epigenetic clock of the domestic cat

Age-related cognitive decline in the degu, a social rodent

Genome of a long-lived cave salamander

Epidemiology/Demography
Life expectancy at birth declined in 25 of 27 European countries in 2020

Excess mortality nearly 50% higher in Guatemala than the official COVID-19 death count

Olympic athletes in sports with repeated shocks to the head show more neurodegenerative disease in later life

More rare variants identified in centenarians

Centenarians harbor more intestinal antibiotic resistance genes than younger people

Clinical
Recovery time from the common cold as an indicator of physical resilience

Can the benefits of exercise be mimicked by electrical muscle stimulation?

Review: Bridging geriatric medicine, clinical pharmacology, and aging biology to understand later life health

Perspective: The COVID-19 pandemic reignites the need for person-centered gerontological approach

Review: Sex differences and vascular dementia

Care-giving
Use of primary care liaisons can increase the use of local area resources by older adults and their caregivers

Reduced mental health in grandparents, especially grandfathers, who are primary caregivers of grandchildren

Policy/Ethics
Age discrimination at work and home and how it impacts healthy aging

Older surgeons: Balancing public safety and practical necessity

Commentary
Roundtable: Race in medicine: Genetic variation, social categories, and paths to health equity

Creativity to maintain health into old age

Odd and Ends
Studying at a university in later life slows cognitive decline

Older adults remember more positive aspects of the COVID-19 pandemic

Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled