Featured
bioRXiv: Understanding dietary restriction requires dietary reaction norms

Headline vs Study
Headline: Running a marathon could help you live longer
Study: Training for a first-time marathon reverses age-related aortic stiffening

Headline: Study reveals a new way that stress and aging lead to Alzheimer’s
Study: The epichaperome is a mediator of toxic hippocampal stress and leads to protein connectivity-based dysfunction

Contrary or Null Findings
Intestinal barrier function is maintained in healthy older adults

The dietary supplement and creatine analog β-guanidinopropionic acid fails to lengthen life in worms

Lack of reproducibility of 3 biomarkers of Alzheimer’s disease

No effect of walnut consumption on cognitive decline: Two year randomized controlled trial

Every other day feeding exacerbates neuronal deficits in an Alzheimer’s mouse model

Energetics/Nutrition
Acarbose supplementation improves survival of Apc +/− min male mice

Ten days of bed rest leads to impaired mitochondrial energetics in older adults

Nrf2 knockout male mice are shorter lived than wildtype animals when ad lib fed, but calorie restriction restores longevity to wildtype level

Calorie restriction induced changes in metabolism play a role in delayed skeletal muscle aging in rhesus monkeys
Supplementation of probiotic protects against alpha-synuclein aggregation in worms

Review: Genes required for lifespan-extending effects of calorie restriction

Review: mTOR in nutrition, growth, aging, disease

**Basic Biology**

*Intestinal stem cell aging is driven by mTORC1*

*Age-associated mitochondrial dysfunction accelerates plaque buildup in arteries in mice*

*Cysteine toxicity drives age-related mitochondrial decline in yeast*

*Glial cells can regulate endoplasmic reticulum stress resistance and longevity in worms*

**bioRXiv: Blood-based biomarker of aging of mice**

*Activation of the neuronal endoplasmic reticulum unfolded protein response increases lifespan in worms independently from chaperone induction*

*Novel loci associated with human healthspan*

*Proteomic atlas of senescence associated secretory markers in human cells*

*Celsr1a knockdown displays an early aging phenotype in zebrafish*

*Four distinct aging modules determined by longitudinal changes in multiple “omics” markers*

**Review: Targeting tryptophan metabolism to promote longevity and healthspan**

**Review: Neuroendocrine aging of non-human primates**

**Review: Bring back the rat!**

**Ecology & Evolution**

*Male sparrows respond less aggressively to the songs of old versus young males*

*Number of CD33rSIGLEC genes strongly correlates with reproductive lifespan across species*

**Novel Organisms/ Comparative**

*Naked mole rats maintain mRNA splicing regulation throughout their lifespan*

*Red-crowned crane genomics identifies multiple genes under positive selection associated with longevity and metabolism*

*Longevity of surfclams*
No sex differences in survival in meerkats

Longevity mechanisms of the ginkgo tree

Review: Non-human primates as models of Alzheimer’s disease

Epidemiology/Demography
Cancer deaths have declined 29% from 1991-2017

Alcohol related deaths increased 51% from 1999-2017

Menopause before age 40 is associated with increased risk of multimorbidity in later life

Low socioeconomic status and poor health condition in childhood are associated with late-life frailty

Exposure to nature may reduce the risk of cognitive impairment in non-APOE e4 carriers

Vegans don’t live longer, it just seems that way

Review: Air pollution and skin aging

Clinical
Weak predictive power of a mid-life dementia risk score

Sleep tight, stay healthy

Care-giving
Older homeless adults as caregivers

Commentary
Older people need geriatricians: Where will they come from?

Odd and Ends
Podcast: The aging clinician

Cognitive testing of older clinicians prior to recredentialing

The joy of gardening in later life

Could changes in body temperature drive increases in longevity? Mean body temperature has decline significantly over the last 150 years

Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Jessica Hoffman, Steven Austad, Ashley Turner, Heather Patterson, Katelynn Corder, and Ana Sogorovic. Subscribe to this newsletter.