Featured: COVID-19 and Aging

Geroscience and the coronavirus pandemic

A geroscience perspective on COVID-19 mortality

The dilemma of COVID-19, aging, and cardiovascular disease

COVID-19 in older adults: Expectations on pathogenesis, immune responses, and outcomes

Headline vs Study

Headline: Molecules identified that reverse cellular aging process
Study: Small-molecule PAPD5 inhibitors restore telomerase activity in patient stem cells

Headline: Natural compound may support healthy aging
Study: Sirtuins transduce STACs signals through steroid hormone receptors

Contrary or Null Findings

Randomized clinical trial: L-dopa does not improve learning under cognitive training in older adults

Genetic variation in the angiotensin-converting enzyme is not associated with longevity in a Peruvian population

Caloric restriction decreases bone quality in aging rats

Energetics/Nutrition

Probiotic cocktail derived from human infants prevents metabolic and physical dysfunction in old mice fed high-fat diet

Lifestyle mediates the role of nutrient sensing pathways in cognitive aging

Early changes in sugar metabolism in Alzheimer’s disease brain
Review: Metformin attenuates multiple hallmarks of aging

Review: Ketogenic diets and Alzheimer’s disease

Review: SIRT1 regulation in aging and obesity

**Basic Biology**

Mitochondrial translation and dynamics extend lifespan in worms

The Y chromosome may contribute to sex-specific aging in Drosophila

Elimination of senescent cells via a prodrug improves health in old mice

Loss of circadian clock genes extends life in male fruit flies only

Genetic association between longevity and male age at puberty

Rare damaging genetic variants account for 0.4-1.3 years of lost life and health

Aged mice exhibit severe exacerbations of dry eye disease

Blocking LRP1 stops spread of tau in mouse brains

Computer simulations find that shorter life and reduced fecundity can increase C. elegans colony fitness

Loss of individual heterochromatic histone methyltransferase genes fails to affect hematopoietic aging

Moderation of mitochondrial respiration mitigates metabolic syndrome of aging

Review: Age related human proteomics changes and a novel proteomics clock

Estrogen impact on germline stem cells differentiation contributes to female reproductive aging

Review: Current perspectives on the cellular and molecular features of epigenetic aging

Review: Aging clocks and biomarkers of aging

Review: Insights from in vivo studies of cellular senescence

New book: Reviews on new drug targets in age-related disorders

**Ecology & Evolution**

Perceived predation risk fails to affect Daphnia aging.

Review: Evolutionary conservation of transcription factors affecting longevity
Review: The exposome in human evolution: Implications for inflammation and longevity

Novel Organisms/Comparative
Wild chimpanzees exhibit humanlike aging of glucocorticoid regulation

Immune system aging in the common marmoset

FGF21 replenishment increases lifespan in female but not male silkworms

Review: Zebrafish models of sarcopenia

Review: Aging in clonal animals

Epidemiology/Demography
Healthy aging may lengthen life in HIV-infected patients

A global metric for quality of life

Increasing global heterogeneity in life expectancy at older ages

Clinical
Age modifies the cognitive effects of statins

Mortality in the oldest-old increases with longer sleep duration independent of other health conditions

Premature menopause and postmenopausal hormone treatment associated with increased risk for depression

Handgrip strength asymmetry informative about functional disability

Care-giving
Informal caregivers have poorer cognitive performance compared to non-caregivers independent of stress level

Two thirds of family caregivers report moderate or severe loneliness

Policy/Ethics
How are employers responding to an aging workforce?

Developing future public health leaders trained in long-term care administration

Odd and Ends
Music Making and Neuropsychological Aging: A Review

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.