LAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

AGING BIOLOGY UPDATE

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

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Featured

How to restore a youthful immune system

Partial reprogramming restores niche-specific neuronal progenitors

Headline vs Study

Headline: 6 exercises that address an often overlooked key to longevity

Study: Thresholds of handgrip strength for all-cause, cancer, and cardiovascular mortality: A systematic review with dose-response meta-analysis

Basic

A human senescence program works through activation of placenta-specific gene

Ergothioneine increases longevity in worms and short-lived male mice

<u>Mitochondria-tau association promotes cognitive decline and hippocampal bioenergetic</u> deficits in aging mice

Senescence and aging differentially alter key metabolic pathways in murine brain microglia

Mutation of tp53 abrogates premature aging of tert $^{-/-}$ zebrafish

Transcriptional changes coupled to chromatin reorganization during cellular aging

<u>Integrated analysis of gut metabolome, microbiome, and brain function reveal the role of gut-brain axis in longevity</u>

<u>Preprint: 17a-estradiol protects against APOE4-associated aging phenotypes in male mice</u>

Review: <u>Do somatic mutations drive aging?</u>

Review: Lost in translation—protein homeostasis in aging

Epidemiology/Demography

Plasma proteomic signature of human longevity

Food insecurity associated with premature mortality in the US

<u>Increasing inequalities in life expectancy at age 65 among Italian workers</u>

Cell biological associations of the FOXO3 longevity allele in Okinawans

<u>Association of different polygenic longevity scores with parental lifespan and disease in the UK Biobank</u>

The influence of fear of falling on the control of upright stance across the lifespan

<u>Inverted U-shaped relationship between sleep duration and phenotypic age in US adults</u>

Measuring the "grandmother effect" over the Finnish demographic transition

Longer parental lifespans associated with older age at first births in men and women

Development and validation of an intrinsic capacity score in the UK Biobank study

Energetics/Nutrition

Low-inflammatory diet associated with a lower risk of death

<u>Time-restricted feeding restores metabolic flexibility in adult mice with excess adiposity</u>

<u>Survey data find men need more physical activity than women for lowering all-cause and cardiovascular mortality</u>

Antagonistic pleiotropy: IgG drives adipose tissue aging in mice

Whole grain intake associated with increased life and healthspan

Review: Micronutrient requirements during caloric restriction and fasting

Clinical

Aging men have aging sperm

The missing hallmark of health

Special issue: The Lancet series on menopause

Special Issue: <u>Balance-controlling mechanisms and fall-prevention</u>

Review: Interventions to sustain independence in older people

Evolution/Comparative Biology

Early life and maternal effects on fitness and longevity of female ground squirrels

<u>Shelterin proteins as potential mediators of life history variation among populations of tree swallows</u>

The effect of the demographic history on the evolution of senescence

A unified framework for evolutionary genetic and physiological theories of aging

<u>Mitochondrial background associated with variable costs of fly immune deployment on lifespan</u>

Novel Organisms

Social life results in social stress protection and exceptional aging plasticity in social insects

Environmentally-cued polyphenism affects senescence of tiger salamanders in nature

Review: The translational potential of studying bat immunity

Review: Immune aging in annual killifish

Contrary or Null Findings

Polr3b heterozygosity in mice affects healthspan but not lifespan

Low or moderate alcohol intake is not associated with all-cause mortality risk

Review: Polypharmacy is associated with multimorbidity, except when it isn't

Opinion

On standardization of controls in lifespan studies

Aging, Race, and Health Disparities: Recommendations from the Research Centers Collaborative Network

Addressing the gaps in new drug evaluation for older adults

Obituary: Judith Campisi (1948 - 2024)

Commentary: Health and Wealth in America

Odds and Ends

How a cheap, generic drug became a darling of longevity enthusiasts

Number of teenage pregnancies associated with higher premature mortality

Impact of population aging on future temperature-related mortality

End-of-life visions

Book Review: Venki Ramakrishnan's Why We Die

Meeting Report: The quest to legitimize longevity medicine

Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Kathleen Fischer and Steven Austad. <u>Subscribe to this newsletter.</u>









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