

American Aging Association: Current Topics Leading Research in Aging

Event Schedule

Thu, Jun 08, 2023

10:30 AM

NSC Board Meeting

🕒 10:30 AM - 11:30 AM, Jun 8

📍 Route 66

11:00 AM

Registration

🕒 11:00 AM - 5:00 PM, Jun 8

📍 OK Prefunction

[Registrati...](#)

12:30 PM

Nathan Shock Center Symposium

🕒 12:30 PM - 3:00 PM, Jun 8

📍 OK Station

[Session](#)

11 Subsessions

● Introduction

🕒 12:30 PM - 12:35 PM, Jun 8

● Division of Aging Biology (DAB) Scientific Priorities and Available Resources

🕒 12:35 PM - 1:05 PM, Jun 8

● Pilot Grantee Presentation: Jackson Labs; Extending healthy lifespan with 3-hydroxyanthranilic acid

🕒 1:05 PM - 1:15 PM, Jun 8

● Pilot Grantee Presentation: UTHSCSA; Exploring cellular senescence in brain aging and disease

🕒 1:15 PM - 1:25 PM, Jun 8

● Pilot Grantee Presentation: The University of Washington; Targeting methionine metabolism to extend health- and lifespan

🕒 1:25 PM - 1:35 PM, Jun 8

● Pilot Grantee Presentation: University of Alabama, Birmingham; Impact of B12 deficiency on skeletal muscle mitochondrial DNA and function in advanced age

🕒 1:35 PM - 1:45 PM, Jun 8

● Pilot Grantee Presentation: Oklahoma; Skeletal and cardiac muscle protein turnover in right heart failure

🕒 1:45 PM - 1:55 PM, Jun 8

● Pilot Grantee Presentation: Einstein; Modeling reactivated heterochromatin using an aging 3D cell model and progeny of centenarians

🕒 1:55 PM - 2:05 PM, Jun 8

● Pilot Grantee Presentation: San Diego NSC; Elucidating age dependent transcriptional and metabolic changes in the mammalian gut

🕒 2:05 PM - 2:15 PM, Jun 8

● Pilot Grantee Presentation: USC - Buck; Proteome adaptation during dietary protein restriction and aging

🕒 2:15 PM - 2:25 PM, Jun 8

● Panel Discussion and Q&A

🕒 2:25 PM - 3:00 PM, Jun 8

3:30 PM

Trainee Roundtable

🕒 3:30 PM - 5:00 PM, Jun 8

📍 OK Station

Trainee Eve...

Moderators: Agnieszka Borowik, Phd and Gavin Pharaoh, PhD

👤 Speakers



Charlotte Peterson

Professor
University of Kentucky



Cristal Hill

Assistant Professor
University of Southern California



Matt Kaeberlein

Optispan



Arik Davidyan

Assistant Professor
California State University Sacramento



Agnieszka Borowik

Postdoctoral fellow
Oklahoma Medical Research Foundation OMRF



Gavin Pharaoh

Postdoctoral Scholar-Fellow
University of Washington



Bitu Nakhai

Chief, Basic and Translational Sciences (BTSS)
NIH



Christy Carter

NIA

5:15 PM

Special Lecture: What's new in the search for increasing healthy longevity

🕒 5:15 PM - 6:15 PM, Jun 8

📍 OK Station

Special Lectu...

👤 Speaker



Steven Austad

Distinguished Professor and Protective Life Endowed Chair in Healthy Aging Research
University of Alabama at Birmingham

6:30 PM

Welcome Reception

🕒 6:30 PM - 8:30 PM, Jun 8

📍 ScissorTail Terrace

Networking Br...

Fri, Jun 09, 2023

7:30 AM

Breakfast Sponsored by Glenn Foundation For Medical Research

🕒 7:30 AM - 8:00 AM, Jun 9

📍 OK Station

Networking Br...

Visit: [Glenn Foundation for Medical Research](#)



8:00 AM

Opening Remarks: 2023 AGE President

🕒 8:00 AM - 8:15 AM, Jun 9

📍 OK Station

🗣️ Speaker



Holly Van Remmen

Member
Oklahoma Medical Research Foundation

8:15 AM

Session 1. Exercise and Inter-Organ Communication

🕒 8:15 AM - 10:00 AM, Jun 9

📍 OK Station

Session

🗣️ Speakers



Benjamin Miller

Oklahoma Medical Research Foundation



Agnieszka Borowik

Postdoctoral fellow
Oklahoma Medical Research Foundation OMRF

5 Subsessions

● **Intra- and inter-organ cell-cell communication in response to mechanical overload of skeletal muscle.**

🕒 8:15 AM - 8:40 AM, Jun 9

📍 OK Station

● **Connecting muscle and brain: considerations for exercise in Alzheimer's Disease**

🕒 8:40 AM - 9:05 AM, Jun 9

📍 OK Station

● **Liver metabolism, exercise, and healthy brain aging**

🕒 9:05 AM - 9:30 AM, Jun 9

📍 OK Station

● **Measuring cell-type-specific individual protein turnover in the brain during exercise**

🕒 9:30 AM - 9:45 AM, Jun 9

📍 OK Station

● **A drug-like molecule engages a nuclear hormone receptor to regulate mitophagy and promote mitochondrial mediated lifespan extension**

🕒 9:45 AM - 10:00 AM, Jun 9

📍 OK Station

10:00 AM

Break Sponsored by Nathan Shock Centers (NSC's)

🕒 10:00 AM - 10:30 AM, Jun 9

📍 OK Station

Networking Br...

Visit: [Nathan Shock Centers](#)



**NATHAN SHOCK CENTERS
OF EXCELLENCE IN THE
BASIC BIOLOGY OF AGING**

10:30 AM

Session 2. Resilience: From theory to practice in aging biology

🕒 10:30 AM - 12:15 PM, Jun 9

📍 OK Station

Session

Authors: Cohen, Alan A

Aging is increasingly understood not just as a linear decline in the function of various biological components, but as an integrative phenomenon that has non-linear impacts on functionality. Viewed in this light, one important manifestation of aging is a loss of resilience, i.e., the ability to bounce back after a challenge. Resilience is often distinguished from robustness, or the ability to maintain a steady state despite a challenge, though in fact the two are tightly intertwined. Complex systems theory, particularly around ecosystem function, has given us formal mathematical definitions of resilience that can be extracted from time series data. Resilience is gaining increasing attention in aging research at multiple levels of analysis, from cellular resilience through to health systems resilience. Resilient systems are thought to both be aging more slowly, and to be resistant to the impacts of aging. There are many emerging questions about how to measure resilience at these various levels, how to link it to underlying mechanisms, and how to integrate across levels. In many cases, the time series data required are not readily available in all biological contexts, and there is a search for proxies. There are also questions as to whether resilience is a simple converse of frailty, or something else. Here, five presentations will present new work on resilience at levels ranging from basic biology to clinical practice.

🚩 Speakers



Alan Cohen

Associate Professor, Chair in Biological Complexity and Healthy Longevity
Columbia University



Nyssa Morgan

Graduate Student Researcher
Emory Musculoskeletal Institute

4 Subsessions

● **Physical Resilience as a Predictor of Lifespan and Late-Life Health in Genetically Heterogeneous Mice**

🕒 10:30 AM - 10:55 AM, Jun 9

📍 OK Station

● **Dynamic markers of resilience: Theory and application**

🕒 10:55 AM - 11:20 AM, Jun 9

📍 OK Station

● **Pollutant exposure alters age-associated immunogenomic landscape in companion dogs.**

🕒 11:20 AM - 11:45 AM, Jun 9

📍 OK Station

● **Tachykinin mediates the effect of microbiota on lifespan and metabolism**

🕒 11:45 AM - 12:00 PM, Jun 9

📍 OK Station

12:15 PM

Harman Award Lunch: OMG! 30 years and counting: Where did the time go?

🕒 12:15 PM - 1:45 PM, Jun 9

📍 OK Station

Special Eve...

🚩 Speaker



Rafael de Cabo

Chief, Translational Gerontology Branch
NIA-NIH

1:45 PM

Mentorship Award Presentation

🕒 1:45 PM - 2:00 PM, Jun 9

📍 OK Station

Special Eve...

2:00 PM

Women in AGE Mentoring Award

🕒 2:00 PM - 2:05 PM, Jun 9

📍 OK Station

Special Eve...

2:05 PM

George Martin Memorial

🕒 2:05 PM - 2:25 PM, Jun 9

📍 OK Station

Special Eve...

2:30 PM

Session 3. Novel model systems and comparative biology of aging

🕒 2:30 PM - 4:15 PM, Jun 9

📍 OK Station

Session

👤 Speakers



Kristin Gribble

Associate Scientist
Marine Biological Laboratory



Jessica Hoffman

Assistant Professor
Augusta University

5 Subsessions

● **Evolutionary Ecology of Aging**

🕒 2:30 PM - 2:55 PM, Jun 9

📍 OK Station

● **Session 3. Mechanisms of longevity in the naked mole rat**

🕒 2:55 PM - 3:20 PM, Jun 9

📍 OK Station

● **Advanced maternal age causes declines in offspring lifespan, health, and mitochondrial homeostasis**

🕒 3:20 PM - 3:45 PM, Jun 9

📍 OK Station

● **Aging Fly Cell Atlas**

🕒 3:45 PM - 4:00 PM, Jun 9

📍 OK Station

● **Social environmental effects on gene regulation and aging in a large cohort of companion dogs.**

🕒 4:00 PM - 4:15 PM, Jun 9

📍 OK Station

4:15 PM

Poster Pitches I (20 at one min each)

🕒 4:15 PM - 4:45 PM, Jun 9

📍 OK Station

Poster Pitch...

19 Subsessions

● **1. Single-cell Mayo Map (scMayoMap): an easy-to-use tool for cell type annotation in single-cell RNA-sequencing data analysis for the aging study**

🕒 4:15 PM - 4:16 PM, Jun 9

📍 OK Station

● **2. Hypothalamic transcriptomic remodeling by Canagliflozin: A strategy to mimic caloric restriction in aged mice**

🕒 4:16 PM - 4:17 PM, Jun 9

📍 OK Station

● **3. Age-related changes in the murine ovarian transcriptome at single-cell resolution.**

🕒 4:17 PM - 4:18 PM, Jun 9

📍 OK Station

● **4. Ghrelin receptor-mediated neuroinflammation in Alzheimer's disease**

🕒 4:18 PM - 4:19 PM, Jun 9

📍 OK Station

● **5. Skeletal muscle mitochondrial dynamics of old mice are slower than young mice in vivo.**

🕒 4:19 PM - 4:20 PM, Jun 9

📍 OK Station

● **6. Skeletal muscle oxylipin profile in sarcopenic obese mice**

🕒 4:20 PM - 4:21 PM, Jun 9

📍 OK Station

● **7. The role of necroptosis effector MLKL in steatosis and metabolism**

🕒 4:21 PM - 4:22 PM, Jun 9

📍 OK Station

● **8. Periodic restricted feeding in Rhesus macaques results in significant microbiome and metabolic changes associated with weight loss and hematopoietic homeostasis**

🕒 4:22 PM - 4:23 PM, Jun 9

📍 OK Station

● **9. Targeting the Atypical NF-κB Pathway to Reduce Senescence and Improve Healthspan**

🕒 4:23 PM - 4:24 PM, Jun 9

📍 OK Station

● **10. Multi-omics analysis reveals FOXO3 pioneer-factor activity in proliferating and senescent-like human cells**

🕒 4:24 PM - 4:25 PM, Jun 9

📍 OK Station

● **11. Characterizing senescent oligodendrocyte progenitor cells in the aged mouse brain**

🕒 4:25 PM - 4:26 PM, Jun 9

📍 OK Station

● **12. Mitochondrial metabolism and epigenetic crosstalk in senescent cells: novel targets for interventions during aging and age-related disease.**

🕒 4:26 PM - 4:27 PM, Jun 9

📍 OK Station

● **13. Qualitative and quantitative assessment of neoplastic diseases in the Study of Longitudinal Aging in Mice (SLAM).**

🕒 4:27 PM - 4:28 PM, Jun 9

📍 OK Station

● **15. Age-specific NMN metabolite accumulation drives kidney inflammation that is ameliorated by mito-protective elamipretide**

🕒 4:29 PM - 4:30 PM, Jun 9

📍 OK Station

● **16. Quantitative birefringence microscopy maximally preserves and identifies intact and degraded myelin in non-human primate brain sections**

🕒 4:30 PM - 4:31 PM, Jun 9

📍 OK Station

● **17. Pharmacological restoration of Ca²⁺ homeostasis through SERCA activation as an intervention for cardiac aging**

🕒 4:31 PM - 4:32 PM, Jun 9

📍 OK Station

● **18. Identification of natural variants that influence metabolite and phenotypic responses to dietary restriction.**

🕒 4:32 PM - 4:33 PM, Jun 9

📍 OK Station

● **19. Lipolysis as a Regulatory Focus in Geroprotective Dietary Interventions**

🕒 4:33 PM - 4:34 PM, Jun 9

📍 OK Station

● **20. Metabolic benefits of 17β-estradiol in male mice occurs through ERα in hepatocytes**

🕒 4:34 PM - 4:35 PM, Jun 9

📍 OK Station

5:00 PM

Poster Session I Sponsored by Presbyterian Health Foundation

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

Poster Sessio...

Visit: [Presbyterian Health Foundation](https://www.presbyterianhealthfoundation.org/)



Presbyterian Health Foundation

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⌚ 5:00 PM - 7:00 PM, Jun 9
📍 OK Station
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⌚ 5:00 PM - 7:00 PM, Jun 9
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- **15. Age-specific NMN metabolite accumulation drives kidney inflammation that is ameliorated by mito-protective elamipretide**
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🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **21. Contrasting Effects of Diet Composition and Social Status on Iliac and Carotid Arteries Gene Expression in Premenopausal Nonhuman Primates**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **23. Pharmacological activation of the longevity factor C/EBP-beta improves mitochondrial function and suppresses symptoms of mitochondrial disease in mice.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **24. Elimination of senescent cells reverses whole brain irradiation-induced blood-brain barrier disruption in the mouse brain**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **25. Effect of in utero programming on later life mitochondrial function in baboon liver**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **27. Combination of glycation lowering compounds improves healthspan in PEPCK-bGH transgenic mice**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **29. Nutrition, insulin and female reproductive ageing**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **30. Cellular metabolic pathways of aging in dogs: could p53 and SIRT1 be at play?**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **31. Effects of a long-term chronic Methionine restriction (MR) diet feeding in the Gut Microbiota composition and physiology in male mice**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **32. Multi-omic clocks for the prediction of phenotypic age, frailty, and lifespan in mice**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **33. Lifestyle interventions as modulators of chemotherapy**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **34. Innate immune-mediated regulation of senescent cells.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **35. Suppression of mitochondrial oxidative stress normalizes mitochondrial NAD⁺ decline in the aging heart**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **36. Modulation of cellular senescence by polyamines: Implications for Alzheimer's Disease.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **37. The ability of XJB-5-131, a mitochondria-targeted free radical scavenger, to improve stem cell function**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **40. Unacylated Ghrelin Protects Against Age-associated Loss of Muscle Mass and Function.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **41. Senescent alveolar macrophages promote early onset lung cancer**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **42. Preservation of mitochondrial membrane potential mediates longevity from dietary restriction.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **43. Cytochrome b5 reductase-3 overexpression induces sex-specific metabolic adaptations in skeletal muscle from transgenic mice**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **44. Microbiome modulators in the prevention and mitigation of cancer treatment-induced accelerated aging biology**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **45. mTOR Inhibition Blocks Neurovascular Dysfunction in a Mouse Model of Tauopathy**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **46. Effects of aging on microtubule-associated protein tau (MAPT) expression are conserved and associate with age-related decline in muscle function.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **47. 3-MonothioPomalidomide (3-MT-Pom): a new anti-inflammatory immunomodulatory imide drug (IMiD) for neurodegenerative disorders**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **48. The Rapid-Rapa Checklist: Cost-effective screening for TOR1 inhibition indications in a population with Homer Simpsons as distinct from Robber Barons alone.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **49. Stress evolved microbes: A potential tool for improving host stress tolerance and lifespan**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **50. The profile of serum exosomal miRNAs in postmenopausal mice**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **52. The effects of microbiome transplants on Drosophila melanogaster lifespan.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **53. The highly conserved nature of ATF4 and its link to aging**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **54. Dementia exacerbates periodontal bone loss in females**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **56. JHU-Mayo-NIA Murine Senescence Mapping Program**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **57. Identifying Clinically Approved Drugs that Target mTOR using a Drug Sensitized Yeast Model**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **58. Aches, age, and influenza: A pathway to muscle loss and disability**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **59. Cerebral small vessel disease pathology in COVID-19 patients: a systematic review**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **60. Impaired endothelial dysfunction as a mechanism of cognitive deterioration in COVID-19.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **61. Dietary restriction of isoleucine increases healthspan and lifespan of genetically heterogeneous mice**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **62. Investigating urinary physiology in genetically diverse, aged mice: a prospective study.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **63. Mitochondrial calcium uniporter deficiency in dentate granule cells remodels neuronal metabolism and impairs reversal learning**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **64. B cells promote inflammation and metabolic dysfunction in aged adipose tissue during endotoxemia and sepsis**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **65. Age-dependent protective role of neutral ceramidase in periodontal lesions**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **66. The social frailty index: a behavioral assessment for impaired social functioning in aging mice.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **67. Mechanisms of anti-aging effects by thioredoxin down-regulation in both the mitochondria and cytosol in mice**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **68. Repeated exposure to stress leads to accelerated aging and permanent molecular and functional changes.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **69. Early-Life thymectomy results in premature hepatic memory T cell accumulation and increased liver size in mice**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **70. Metabolic Rewiring of Aged Myoblasts Restores Regenerative Potential of Progeric Skeletal muscle**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **71. 17 α -estradiol and 17 β -estradiol elicit divergent effects on metabolic parameters in male aromatase knockout mice**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **72. Nanoscale imaging of pT217-tau in aged rhesus macaque: Trans-synaptic propagation and seeding of tau pathology in entorhinal cortex**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **75. Thyroid Hormone and the Hexosamine Biosynthesis Pathway**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **76. The impact of glucocorticoids during pregnancy on adult offspring skeletal muscle in primates**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **77. The impact of under nutrition during development on adult offspring skeletal muscle metabolism in primates**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **78. Primate skeletal muscle lipid profiles differ between young and old adult baboons**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **79. Myeloid Cell Senescence Associates with Age-Related Stiffening of the Proximal Pulmonary Arteries in Humans**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **80. Global Next-Generation Metabolomics for Pathway Analysis on Serum and Liver of ApoE Knockout Rat.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **81. Large scale screening of lifespan extending drug combinations in *C. elegans***

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **82. Uncovering single-cell isoform dynamics in the aging mouse brain using long-read nanopore sequencing**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **84. The role of *C. elegans* fmo-1 in stress resistance and longevity**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **85. Deep phenotyping and network analysis of life course trajectories within the Study of Longitudinal Aging in Mice**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **87. The role of senescence duration in the senescence associated secretory phenotype and paracrine senescence.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **91. A Complex I deficiency induces tau aggregation and iron accumulation in mitochondrial disease**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **92. DNA damage as an early marker of senescence in tauopathies**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **94. Characterizing the metabolome of mitochondrial metabolism pathways in the genetically heterogenous rat model (OKC-HETB/W) for aging research**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **95. Machine intelligence in the basic research of aging**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **96. Studying the relationship between cellular senescence and cancer in a mouse model of accelerated aging.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **97. The curious case of copper: protective effects of copper in combined stress**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **98. Intermittent fasting regulates myeloid cells in the circulation and peripheral tissues**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **99. Increased susceptibility to arrhythmias in aged mice is associated with mitochondrial dysfunction and decreased NAD/NADH ratio.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **100. Cerebral Microhemorrhages: Morphology and Prevention**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **101. The effects of a western diet on fertility and the protective role of senolytics**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **102. The role of ovarian-derived factors in dementia.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **103. Modulating tryptophan metabolism to extend *Drosophila* lifespan**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **104. Aldehyde dehydrogenase 2 polymorphism in aging and Alzheimer's disease**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **105. Intact glucocorticoid response is required for dietary restriction-induced longevity.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **106. Female-biased microglial senescence in the aging mouse hippocampus.**

⌚ 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **107. Localized Induction of Oxidative Stress and Development of Salivary Gland Dysfunction in Sjögren's Syndrome.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **108. The RapidRapa Checklist: Cost-Effective Screening for TOR1 Inhibition Indications in a Population with Homer Simpsons as Distinct From Robber Barons Alone.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **109. A ketogenic diet improved some measures of memory in the APOE4 mouse model of Alzheimer's disease.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **110. Inflamm-aging is associated with pro-inflammatory programming of innate immune cells in the colon**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **111. Selection of miRNA candidates for the treatment of sarcopenia using network-based analysis and differential expression scoring**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **112. Cardiac aging increases severity of a 2-hit stress model of heart failure with preserved ejection fraction by exacerbating proteostatic imbalance.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **113. Age-specific decreases in sarcomeric acetylation modulates myofilament function in skeletal and cardiac muscle**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **114. Exploring the resources for aging research supported by the NIA Division of Aging Biology.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **115. Dietary restriction drives OXR1 expression to stabilize the endolysosomal network, delay neurodegeneration, and extend lifespan.**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **116. Alamandine restores the gut barrier integrity in aging by regenerating intestinal stem cells**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **117. CD34+ Stem Cell-Derived Exosomes of Older Adults Impair Mitochondrial Bioenergetics in the Cerebrovascular Endothelial Cells**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **118. A unique gut microbiome signature in nonhuman primates confer radioprotection and overlap with human longevity**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **119. Comparison of walking speed to stair climb speed in physical function evaluation of aging nonhuman primates**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **120. The interaction of mitochondrial APP and PGAM5 in neural function**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **146. Alzheimer's disease and chronic hypertension are associated with endothelial changes in the brain**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **223. The role of alternative splicing in aging**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

● **243. Major depressive disorder in older adults is associated with DNA markers of cellular senescence in immune cell subsets**

🕒 5:00 PM - 7:00 PM, Jun 9

📍 OK Station

7:00 PM

Trainee/ Faculty Mixer Sponsored by Glenn Foundation for Medical Research

🕒 7:00 PM - 8:00 PM, Jun 9

📍 ScissorTail Terrace

Trainee Eve...

Visit: [Glenn Foundation for Medical Research](#)



Sat, Jun 10, 2023

7:00 AM

Breakfast Sponsored by Nathan Shock Centers

🕒 7:00 AM - 8:00 AM, Jun 10

📍 OK Station

Networking Br...

Visit: [Nathan Shock Centers](#)



**NATHAN SHOCK CENTERS
OF EXCELLENCE IN THE
BASIC BIOLOGY OF AGING**

8:00 AM

Session 4. Role of cytoplasmic chromatin in aging

🕒 8:00 AM - 9:45 AM, Jun 10

📍 OK Station

Session

The subject of cytosolic DNA/chromatin accumulation and its role in senescence, aging, and aging-related diseases has been gaining momentum. Novel studies are linking cytosolic chromatin sensing mechanisms with aging hallmarks. In this session, we will hear from leaders in this new field who are studying in-depth the mechanisms leading to the buildup of cytosolic DNA/chromatin, and the downstream signaling pathways triggering inflammation, fibrosis, metabolic alterations, and other processes that influence healthspan and lifespan.

Peter Adams will present seminal work on the role of cytoplasmic chromatin fragments (CCF) driving inflammation during senescence via the cGAS-STING pathway. Joao Passos will share his studies on mitochondrial and telomere dysfunction as major sources of cytoplasmic DNA, triggering sterile inflammation during senescence/aging. John Maciejowski will tell us about his work on nuclear envelope rupture contributing to DNA damage, inflammation, and clustered mutagenesis.

The research from these investigators will contribute to shed light into the impact of cytoplasmic DNA/chromatin to the biology of aging and geroscience fields.

📣 Speakers



Susana Gonzalo
Professor
Saint Louis University



Anner Harris
UT Health San Antonio

5 Subsessions

● **Cytoplasmic Chromatin Fragments (CCF) in senescence and aging**

🕒 8:00 AM - 8:25 AM, Jun 10

● **Mechanisms whereby cytosolic DNA triggers cellular and organismal decline in progeria**

🕒 8:25 AM - 8:50 AM, Jun 10

● **DNA repair and anti-cancer mechanisms in the longest-living mammal: the bowhead whale**

🕒 8:50 AM - 9:15 AM, Jun 10

● **The interaction of cell senescence and necroptosis in inflammaging**

🕒 9:15 AM - 9:30 AM, Jun 10

● **Gene body DNA hydroxymethylation restricts the magnitude of transcriptional changes during aging**

🕒 9:30 AM - 9:45 AM, Jun 10

9:45 AM

Poster Pitches II (20 at one min each)

🕒 9:45 AM - 10:15 AM, Jun 10

📍 OK Station

Poster Pitch...

19 Subsessions

● **121. Impaired proteostatic mechanisms other than protein synthesis limit aged skeletal muscle recovery after disuse atrophy**

🕒 9:46 AM - 9:47 AM, Jun 10

📍 OK Station

● **122. Telocytes, rising stars in muscle regeneration?**

🕒 9:47 AM - 9:48 AM, Jun 10

📍 OK Station

● **123. The impact of overnutrition during pregnancy on adult offspring skeletal muscle metabolism in primates**

🕒 9:48 AM - 9:49 AM, Jun 10

📍 OK Station

● **124. Associations between plant-based vs animal-based protein supplies and age-specific mortality in human populations**

🕒 9:49 AM - 9:50 AM, Jun 10

📍 OK Station

● **125. The persistent metabolic health benefits of a reduced branched-chain amino acid diet are independent of FGF21.**

🕒 9:50 AM - 9:51 AM, Jun 10

📍 OK Station

● **126. Leveraging a systems geroscience approach to identify drug synergy for Alzheimer's Disease**

🕒 9:51 AM - 9:52 AM, Jun 10

📍 OK Station

● **127. Efficacy of an intranasal Long R3-IGF-1 treatment strategy in the 5XFAD mouse model of cerebral amyloidosis.**

🕒 9:52 AM - 9:53 AM, Jun 10

📍 OK Station

● **128. Dietary restriction rescues age-related decline in intestinal stem cell function.**

🕒 9:53 AM - 9:54 AM, Jun 10

📍 OK Station

● **129. Targeting Microglial ER-stress Response for Neuroinflammation and Age-Related Metabolic Disease**

🕒 9:54 AM - 9:55 AM, Jun 10

📍 OK Station

● **130. Improved adenine nucleotide translocase (ANT) function is linked to rescued muscle function in aging.**

🕒 9:55 AM - 9:56 AM, Jun 10

● **131. Activating the NAMPT-NAD+ Axis in Senescence to Target Age-Associated Disease**

🕒 9:56 AM - 9:57 AM, Jun 10

● **132. Melanoma alters the bone marrow immune composition in an age-related manner**

🕒 9:57 AM - 9:58 AM, Jun 10

📍 OK Station

● **133. Young blood rejuvenates cerebrovascular endothelial function in aged mice: lessons from heterochronic parabiosis experiments**

🕒 9:58 AM - 9:59 AM, Jun 10

📍 OK Station

● **134. Clinical Evaluation of mTORC1 Inhibition for Geroprotection**

🕒 9:59 AM - 10:00 AM, Jun 10

📍 OK Station

● **135. LRP1 knockout in adult neural stem cells causes loss of CXCR4, improvement in recovery after stroke, and hippocampal dysfunction with age**

🕒 10:00 AM - 10:01 AM, Jun 10

📍 OK Station

● **136. Inhibition of Glutaminolysis Restores Age-associated Loss of Mitochondrial Function**

🕒 10:01 AM - 10:02 AM, Jun 10

📍 OK Station

● **138. Increase in microglia chromatin accessibility in aged female mice**

🕒 10:03 AM - 10:04 AM, Jun 10

📍 OK Station

● **139. mTOR-dependent regulation of heterogeneous ribonucleoprotein (hnRNP) family in the hAPP(J20) mouse model of Alzheimer's disease**

🕒 10:04 AM - 10:05 AM, Jun 10

📍 OK Station

● **140. Necroptosis-mediated inflammation as a possible driver of hepatocellular carcinoma in aging**

🕒 10:05 AM - 10:06 AM, Jun 10

📍 OK Station

10:15 AM

Break Sponsored by USC Leonard Davis School of Gerontology

🕒 10:15 AM - 10:45 AM, Jun 10

📍 OK Prefunction

Networking Br...

USC Leonard Davis
School of Gerontology

10:45 AM

Keynote Address: You have come a long way baby: Five decades of research on the biology of aging from the perspective of a researcher studying aging

🕒 10:45 AM - 11:45 AM, Jun 10

📍 OK Station

Keynote Spea...

🗣️ Speaker



Arlan Richardson
Professor
OU Health Sciences Center

12:00 PM

Lunch on your own

🕒 12:00 PM - 1:00 PM, Jun 10

Networking Br...

NIA Trainee Lunch (Registration Required): Training and Career Development Opportunities from the National Institute on Aging

🕒 12:00 PM - 1:00 PM, Jun 10

📍 OK Station

Trainee Eve...

This session will provide an overview of NIH funding opportunities available to graduate students, postdocs, and early career faculty pursuing research in aging. Important details such as deadlines, eligibility policies, and available resources for compiling a strong application will be covered. Drawing on experience in advising applicants, observing application review, and participating in funding decisions, tips and best practices for writing your application will be provided. Topics include: how to assemble a strong mentorship team, how to write a compelling career development statement, and when and how to reach out to NIH program officers for advice or feedback.

🗣️ Speaker



Maria Carranza
National Institute on Aging, NIH

Journal Editorial Board Meeting

🕒 12:00 PM - 1:00 PM, Jun 10

📍 Route 66

Board Meet...

1:00 PM

Session 5. New insights into genome instability as a pillar of aging

🕒 1:00 PM - 2:45 PM, Jun 10

📍 OK Station

Session

New insights into genome instability as a pillar of aging

Saturday June 10, 1:00-2:45 pm

Session chairs: Laura Niedernhofer (UMN) and Erica Lorenzo (UConn Health)

Genome instability is considered a primary hallmark of aging¹. There is a myriad of causes of genome instability. DNA is chemically unstable under physiological conditions resulting in hydrolysis and loss of bases or primary amine groups. Telomeric DNA shortens with each round of replication and is vulnerable to chemical insults when not protected by the shelterin complex. DNA is the also the substrate for innumerable enzymes that replicate, transcribe, deaminate, methylate, decatenate, and repair the genome, which can introduce errors. The net yield of DNA damage is estimated at 10^4 - 10^5 lesions per nuclear genome per day². What remains unclear is mechanistically how genome instability drives aging. Is it through activation of the DNA damage response and cell fate decisions, decay of transcriptional integrity, epigenetic changes, altered mitochondrial function, or mutagenesis? This session will highlight state-of-the-art research by experts in genome instability and its downstream consequences from the field of aging biology. Dr. Patricia Opresko (University of Pittsburgh) will describe the vulnerability of telomeric sequences to oxidative stress. Dr. Xiao Dong (University of Minnesota) will define the extent and effects of somatic mutation accumulation with aging. Dr. Nicola Neretti (Brown University) will emphasize cellular senescence as a consequence of genome instability. Dr. Ingrid van der Pluijm (Erasmus Medical Center) will illuminate the contribution of DNA damage to vascular aging. Finally, Dr. Tianpeng Zhang (University of Minnesota) will identify microRNA dysregulated with aging and their role in cellular senescence.

1. López-Otín C, Blasco MA, Partridge L, Serrano M, Kroemer G. Hallmarks of aging: An expanding universe. *Cell*. 2023 Jan 19;186(2):243-278.
2. Niedernhofer LJ, Gurkar AU, Wang Y, Vijg J, Hoeijmakers JHJ, Robbins PD. Nuclear Genomic Instability and Aging. *Annu Rev Biochem*. 2018 Jun 20;87:295-322.

Speakers



Laura Niedernhofer

Director, Institute on the Biology of Aging and Metabolism
University of Minnesota



Erica Lorenzo

UConn Health Center on Aging

5 Subsessions

● How telomeric oxidative damage promotes cellular aging

🕒 1:00 PM - 1:25 PM, Jun 10

📍 OK Station

● Discovering somatic mutations in single cells during aging

🕒 1:25 PM - 1:50 PM, Jun 10

📍 OK Station

● Single Cell Transcriptomics Reveals Global Markers for Different Forms of Cellular Senescence

🕒 1:50 PM - 2:15 PM, Jun 10

📍 OK Station

● Ercc1 DNA repair deficiency results in rapid vascular aging

🕒 2:15 PM - 2:30 PM, Jun 10

📍 OK Station

● Targeting senescence using a microRNA cocktail recipe

🕒 2:30 PM - 2:45 PM, Jun 10

📍 OK Station

2:45 PM

Break Sponsored by Jackson Lab

🕒 2:45 PM - 3:15 PM, Jun 10

📍 OK Prefunction

[Networking Br...](#)

Visit: [Jackson Laboratory](#)



3:15 PM

Session 6. Utility and limitations of epigenetic clocks

🕒 3:15 PM - 5:00 PM, Jun 10

📍 OK Station

Session

🗣️ Speakers



Sarah Ocañas
Assistant Member
Oklahoma Medical Research Foundation



Alice Kane
Assistant Professor
Institute for Systems Biology

5 Subsessions

● **Quantitative biomarkers of aging and rejuvenation**

🕒 3:15 PM - 3:40 PM, Jun 10

📍 OK Station

● **Determining the effects of somatic mutations on measurements of DNA methylation and epigenetic clocks**

🕒 3:40 PM - 4:05 PM, Jun 10

📍 OK Station

● **Somatic mutations underlie widespread changes in DNA methylation**

🕒 4:05 PM - 4:30 PM, Jun 10

📍 OK Station

● **Working together but aging differently - age-related changes in the eye.**

🕒 4:30 PM - 4:45 PM, Jun 10

📍 OK Station

● **Causal Epigenetic Age Uncouples Damage and Adaptation**

🕒 4:45 PM - 5:00 PM, Jun 10

📍 OK Station

5:00 PM

Poster Session II Sponsored by Oklahoma Medical Research Foundation OMRF

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

Poster Sessio...

Visit: [Oklahoma Medical Research Foundation OMRF](#)



● **121. Impaired proteostatic mechanisms other than protein synthesis limit aged skeletal muscle recovery after disuse atrophy**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **122. Telocytes, rising stars in muscle regeneration?**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **123. The impact of overnutrition during pregnancy on adult offspring skeletal muscle metabolism in primates**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **124. Associations between plant-based vs animal-based protein supplies and age-specific mortality in human populations**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **125. The persistent metabolic health benefits of a reduced branched-chain amino acid diet are independent of FGF21.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **126. Leveraging a systems geroscience approach to identify drug synergy for Alzheimer's Disease**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **127. Efficacy of an intranasal Long R3-IGF-1 treatment strategy in the 5XFAD mouse model of cerebral amyloidosis.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **128. Dietary restriction rescues age-related decline in intestinal stem cell function.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

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⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

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⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **131. Activating the NAMPT-NAD⁺ Axis in Senescence to Target Age-Associated Disease**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **132. Melanoma alters the bone marrow immune composition in an age-related manner**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **133. Young blood rejuvenates cerebrovascular endothelial function in aged mice: lessons from heterochronic parabiosis experiments.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **134. Clinical Evaluation of mTORC1 Inhibition for Geroprotection**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **135. LRP1 knockout in adult neural stem cells causes loss of CXCR4, improvement in recovery after stroke, and hippocampal dysfunction with age**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **136. Inhibition of Glutaminolysis Restores Age-associated Loss of Mitochondrial Function**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **137. P53 regulated GDF15 represses type one interferon response in vascular senescence**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **138. Increase in microglia chromatin accessibility in aged female mice**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **139. mTOR-dependent regulation of heterogeneous ribonucleoprotein (hnRNP) family in the hAPP(J20) mouse model of Alzheimer's disease**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **140. Necroptosis-mediated inflammation as a possible driver of hepatocellular carcinoma in aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **141. Integrating chromatin architecture shifts with transcriptional and epigenetic changes in aging hippocampal neurons**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **142. Sex Differences in Muscle Function within Obesity and Aging Mice**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **143. Senescent cells activation by pathogen-associated factors.**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **144. Molecular Signatures of Healthy Aging Across Tissues and Organs**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **145. Cardiac Metabolic Remodeling Induces Glycosaminoglycan Accumulation Via Hexosamine Biosynthetic Pathway Throughout Aging in Baboons**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **147. Mechanisms whereby cytosolic DNA triggers cellular and organismal decline in progeria**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **148. Combating Age Associated Immune Decline with 3-Hydroxyanthranilic Acid**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **149. Aging-mediated Programming of Innate Immune Cells in Mouse Hearts**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **150. Cerebromicrovascular effects of time-restricted feeding**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **151. Assessing the impact of cancer diagnosis and treatment on epigenetic aging in adolescent and young adult patients: A pilot study**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **153. The aging bone marrow stromal niche is depleted of Cyr61/CCN1, a key extracellular regulator of skeletal MSCs**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **154. Insulin-Like Growth Factor-1 and Platelet-Derived Growth Factor-BB Induce Distinct Forms of Phenotypic Switching in Vascular Smooth Muscle Cells.**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **155. B cell estrogen signaling contributes to menopause-associated weight gain and modifies glucose metabolism**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **156. Mechanisms of gamma delta T cell accumulation in visceral adipose tissue with aging.**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **158. Late-Life Depression and Markers of Immunosenescence**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **159. Cellular Senescence and Brain Aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **160. The role of IGF-1 on vascular smooth muscle cells in the development of cerebral microhemorrhages.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **162. Comparative effect of a senolytic and a senomorphic on cognitive impairment in an experimental model of middle-aged female rats with chronic obesity**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **163. Long-term SFN treatment prevents neuroinflammation, cognitive decline, and brain senescence in a sex-dependent way in middle-aged Wistar rats**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **164. The consumption of a hypercaloric diet from weaning to middle age induces brain inflammation and senescence with cognitive decline in female Wistar rats**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **165. tRNA synthetase inhibitors greatly increase longevity through enhanced proteostasis**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **166. FOXO transcription factors in starvation-induced differential stress resistance**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **168. Retinal Pigment Epithelium-specific knockout of Ercc1 induces RPE senescence and retinal aging in mice**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **169. Predicting mortality through analysis of metabolic rate in mice.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **171. Skeletal Muscle Microenvironment Differences in Young and Aged Mice Following Traumatic Injury.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **172. Exploring Isogenic Cellular Lifespan Heterogeneity with Single-Cell Transcriptomic Aging Landscape Analysis in Yeast**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **173. Age-related accumulation of leukocytes with loss of Y chromosome in lungs, kidneys, and hearts during aging in males**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **174. Hyperbaric oxygen therapy ameliorates chemotherapy-related cognitive impairments in male mice**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **175. The role of Cellular senescence in ovarian aging**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **176. Age- and sex-dependent alterations in neuronal calcium network dynamics in S1: relationship to gait**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **177. An engineered cell model for understanding of regulation of aging through cellular bioenergetics**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **179. Chemotherapy impairs neurovascular coupling responses in breast cancer survivors: a pilot study**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **180. International Registry of Werner Syndrome: Search for progeroid syndrome loci and disease mechanisms**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

- **181. Epigenetic modulating compounds with senotherapeutic potential: prospects for cellular rejuvenation**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **182. Role of metformin in Alzheimer's disease progression via impacting gut and blood brain barriers permeability**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **184. Adiponectin receptor activation improves microvascular endothelial function and cognition in aged mice**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **185. Therapeutic potential of glycation lowering cocktail in maintaining the HPO axis in menopausal condition.**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **186. A humanized fly model for studying the double-edged effects of reactive oxygen species in aging**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **188. The Role of Necroptosis in Chronic Inflammation in Aging and Age-Related diseases**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **189. Alteration of the Interferon alpha signaling pathway significantly affects Alzheimer's Disease Pathology in APP/PS1 mouse model.**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **192. Lysosomal lysine retention confers mechanical stress resiliency**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **194. Postnatal Disruption of Growth Hormone Action Extends Healthy Lifespan**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **195. Insoluble proteomics reveals remodeling of the proteome during human brain aging**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **196. Childhood trauma and its relation to risk-related behavior in adult women**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **197. Unraveling the role of neuron-specific ER α in 17 β -estradiol-mediated benefits on systemic metabolism in male mice**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **198. Intestinal targeting with 5-aminosalicylate acid (5-ASA) reduces disease pathology and symptoms in a mouse model of AD**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **199. Dual Treatment with Kynurenine Pathway Inhibitors and NAD⁺ Precursors Synergistically Extends Lifespan in Drosophila**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **200. Genetic background impacts the developmental and metabolic effects of metformin in female juvenile mice.**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **201. Sex-specific changes in mitochondrial bioenergetics in the brain of aging baboons**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **202. The soluble amyloid precursor protein and GABAB receptor interaction in neuroinflammation.**
🕒 5:00 PM - 7:00 PM, Jun 10
📍 OK Station
- **203. Behavioral self-management interventions for chronic pain improvement in middle-aged and older adults with knee osteoarthritis: A systematic review of**

the randomized control trials

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **204. Novel, engineered fusogenic liposome-based anti-oxidant delivery system improves the blood-brain barrier integrity in aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **206. Physiological variations in testosterone levels modify ventricular structure and function across the life course in male mice**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **207. Obesity, aging, and the brain: uncovering the role of cellular senescence in cognitive decline**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **208. Identification of hypoxia and dietary restriction drug mimetics through induction of fmo-2**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **209. REST elevation promotes sustained proliferation and telomere loss in mouse neural stem/progenitor cells**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **210. Metabolic and Inflammatory Signatures Distinguish Cognitive Impairment from Healthy Brain Aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **211. Obesity impacts the anti-inflammatory effect of metformin in CD4+ T cells from older adults**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **212. Tau oligomers induce endothelial senescence and brain microvascular dysfunction in tauopathy**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **214. The effect of estrogen signaling modulation on female-specific microglial heterogeneity in the mouse hippocampus**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **216. Arginase inhibition as a novel intervention to promote healthy lifespan**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **217. Effects of overactive PDGFR β on skeletal muscle function and metabolism**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **218. Age-dependent decline in nonsense-mediated mRNA decay contributes to motility decline in *Caenorhabditis elegans***

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **220. NQO1 regulates preadipocyte differentiation in 3T3-L1 MBX cells**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **221. The functional role of DNA damage pathways in astrocyte senescence and Alzheimer's Disease.**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **222. Hypoxia-inducible Factor (HIF)-mediated BNIP3 Upregulation is Required for the SASP expression**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **224. Modulating TFEB Activity to Augment the Lysosomal Clearance of Toxic Protein Aggregates**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **225. Genetic perturbation of mitochondrial function reveals functional role for specific mitonuclear genes, metabolites and pathways that regulate lifespan**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **227. Sub-lethal apoptotic stress enables mtDNA release during senescence and**

drives the SASP

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **228. Characterizing Somatic Chromosomal Structural Variation in the Aging Brain**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **231. Hyperactive mTORC1/4EBP1 signaling dysregulates proteostasis and accelerates cardiac aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **232. Fetal Exposure to Synthetic Glucocorticoids (sGC) Impairs Heart Function in Aging Adult Baboon Offspring**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **237. Detrended cross-correlation analysis reveals neurophysiological correlates of cognitive deficits related to healthy aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **238. Maternal obesity (MO) modifies gut microbiota and programs structural and functional changes in small intestine from offspring (F1) during aging**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **239. Maternal obesity (MO) programs premature aging of rat offspring (F1) liver mitochondrial electron transport chain (ETC) genes in a sex-dependent manner**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **240. Increased hyaluronan by naked mole-rat HAS2 extends lifespan in mice**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **241. MnSOD de-acetylation mimic mutant (K68R) causes dilated cardiomyopathy and senescence**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **242. Neuronal MnSod deletion in mice resulting in progressive paralysis, demyelination and inflammation resembles to Multiple sclerosis.**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

● **51. Microglial MHC-I induction with aging and Alzheimer's is conserved in mouse models and humans**

🕒 5:00 PM - 7:00 PM, Jun 10

📍 OK Station

Poster Session - Virtual

🕒 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

Poster Session - V...

17 Subsessions

● **V1. The crystalline eye lens as a model of protein aging**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V2. ROS targeted new synthetic molecule improves mitochondrial function while reducing cellular senescence in vitro.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V3. Regulation of ApoE and ABCA1 in the Neuron During Aging**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V4. Unique differences in N- and O-linked sialylation in Alzheimer's disease**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V5. Determining the role of calcium on the UPRmt**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V6. Age-related skeletal muscle transcriptome changes in female nonhuman primates**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V7. Pro-longevity compounds extend the lifespan and healthspan of *C. elegans* males**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V8. Update on the Nonhuman Primate (NHP) Lifespan Project: >110,000 NHP with Thought Provoking Preliminary Findings from Baboons**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V9. Hyperbaric oxygen therapy improves cognition in a sex-dependent manner in 5xFAD mice**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V10. A longitudinal study of yeast p-bodies: changes in size, composition, and mother-daughter segregation as cells age**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V11. The chromatin factors SET-26, HCF-1, and HDA-1 antagonize each other to modulate longevity**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V12. The effects of methionine restriction on mitochondrial physiology are dependent on tissue, sex, and status of methionine sulfoxide reductase A (MsrA).**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V14. Single-cell imaging of epigenetic landscape in the intestinal crypts reveals age-dependent changes in crypt organization.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V16. Oxygen Consumption Rates Between Skeletal Muscle Cells Derived From Young and Old Human Donors Elucidate Mitochondrial Dysfunction**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V17. Epigenetic aging contributes to racial disparities in cognitive outcomes.**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V18. Sugar, microbiota, and healthy aging**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

● **V19. Ceramide deficiency: A novel molecular signature associated with lifespan extension in rodents and non-human primates**

⌚ 5:00 PM - 7:00 PM, Jun 10

📍 Online/Whova App

🕒 6:30 PM - 8:30 PM, Jun 10

📍 Route 66

Board Meet...

7:00 PM

Data Blitz Sponsored by American Federation for Aging Research AFAR

🕒 7:00 PM - 9:00 PM, Jun 10

📍 OK Station

Trainee Eve...

Moderator: Brian Wasko

Trainees only (no faculty/supervisors) are allowed to attend the Data Blitz. The goal in this event is to allow practice without the concern that a supervisor, committee members, or a potential future employer is in the audience. Four awards will be given out, and it'll be fun!

Visit: [American Federation for Aging Research AFAR](#)



🗣️ Speaker



Brian Wasko

Assistant Professor
Western University of Health Sciences - Oregon

Sun, Jun 11, 2023

7:00 AM

Breakfast Sponsored by Nathan Shock Centers

🕒 7:00 AM - 8:00 AM, Jun 11

📍 OK Station

Networking Br...

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**NATHAN SHOCK CENTERS
OF EXCELLENCE IN THE
BASIC BIOLOGY OF AGING**

8:30 AM

Session 7. Cell and tissue heterogeneity in aging

🕒 8:30 AM - 10:15 AM, Jun 11

📍 OK Station

Session

🚩 Speakers



Peter Adams

Sanford Burnham Prebys Medical Discovery Institute



Stella Victorelli

Research Associate
Mayo Clinic

5 Subsessions

● **Using Spatial Genomics to Study the Central Nervous System in Health and Disease**

🕒 8:30 AM - 8:55 AM, Jun 11

📍 OK Station

● **Integrating noise from the microenvironment into luminal signals that presage breast cancer**

🕒 8:55 AM - 9:20 AM, Jun 11

📍 OK Station

● **Age-related changes in the tumor microenvironment drive tumor progression**

🕒 9:20 AM - 9:45 AM, Jun 11

📍 OK Station

● **Genetic dosage screen identifies unique case of longevity; long-lived cells with hyperactive TORC1**

🕒 9:45 AM - 10:00 AM, Jun 11

📍 OK Station

● **Explaining the asynchrony of aging through cell population dynamics**

🕒 10:00 AM - 10:15 AM, Jun 11

📍 OK Station

10:15 AM

Break Sponsored by American Federation for Aging Research AFAR

🕒 10:15 AM - 10:45 AM, Jun 11

📍 OK Prefunction

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Visit: [American Federation for Aging Research AFAR](https://www.afar.org/)



american federation for
AGING RESEARCH

10:45 AM

Session 8. Metabolomic insights into aging

🕒 10:45 AM - 12:30 PM, Jun 11

📍 OK Station

Session

This session will focus on the intricate connection between metabolism, aging, and immune function. Metabolites make up the structural and functional building blocks of all organisms. Focusing on metabolism and metabolomics promises to shed light on how genetic and environmental factors shape downstream aging-related morbidity and mortality. In this session, we will discuss how deep metabolic profiling of dietary restriction is being leveraged for healthy aging and how age-related dysregulation of immune cells impacts cancer progression and senescence, with particular focus on the mitochondria and plasma proteome

Speakers



Daniel Promislow

Professor
University of Washington School of Medicine



Edward Anderton

PhD Student
Buck Institute for Research In Aging

5 Subsessions

● Targeting methionine metabolism for healthspan extension

🕒 10:45 AM - 11:10 AM, Jun 11

📍 OK Station

● Profiling the Metabolism of Healthy Aging

🕒 11:10 AM - 11:35 AM, Jun 11

📍 OK Station

● Mapping immune deficits during aging that enable tumorigenesis

🕒 11:35 AM - 12:00 PM, Jun 11

📍 OK Station

● STAT3 Modulates CD4+ T cell Cytokine Production by Regulating Mitochondrial Dynamics and Function

🕒 12:00 PM - 12:15 PM, Jun 11

📍 OK Station

● Extracting Senescence-Associated Monocyte Proteome Signatures in Human Clinical Studies

12:30 PM Women in AGE Luncheon (Requires Registration)

🕒 12:30 PM - 2:00 PM, Jun 11

📍 OK Station

Women in AGE Lun...

The Women in AGE luncheon is a forum to discuss challenges faced by women in science. During this luncheon there will be a panel of speakers that will discuss their experiences in science, followed by discussions at tables. We will also present the inaugural Women in AGE awards for mentoring and scientific achievement.

Speakers



Hemali Phatnani

Columbia University/New York Genome Center



Alice Kane

Assistant Professor
Institute for Systems Biology

Lunch on your own

🕒 12:30 PM - 2:00 PM, Jun 11

Networking Br...

12:30 PM

2:00 PM

Session 9. Mechanisms by which metabolic shifts influence aging

🕒 2:00 PM - 3:45 PM, Jun 11

📍 OK Station

🔊 Speakers



Dudley Lamming
Associate Professor Of Medicine
University of Wisconsin-Madison



Kenneth Wilson
Postdoctoral Fellow
Buck Institute for Research on Aging

5 Subsessions

● **When a calorie is not just a calorie: The regulation of health and longevity by dietary macronutrients**

🕒 2:00 PM - 2:25 PM, Jun 11

📍 OK Station

● **Turning the Oxygen and Vitamin Dials**

🕒 2:25 PM - 2:50 PM, Jun 11

📍 OK Station

● **Glycogen metabolism in neurons: An unexpected role in neurodegenerative diseases**

🕒 2:50 PM - 3:15 PM, Jun 11

📍 OK Station

● **Metabolic crosstalk in the wound bed is derailed during aging**

🕒 3:15 PM - 3:30 PM, Jun 11

📍 OK Station

● **Non-canonical Metabolic and Molecular Effects of Calorie Restriction Are Revealed by Varying Temporal Conditions**

🕒 3:30 PM - 3:45 PM, Jun 11

📍 OK Station

4:00 PM

Membership Meeting

🕒 4:00 PM - 4:30 PM, Jun 11

📍 OK Station

4:30 PM

Award Celebration and Closing Reception

🕒 4:30 PM - 5:30 PM, Jun 11

📍 OK Prefunction

[Networking Br...](#)