

AGE - American Aging Association Changing the Way We Age: 50 Years of Research in the Biology of Aging

Event Schedule

Tue, May 17, 2022

8:00 AM

Breakfast

🕒 8:00 AM - 9:00 AM, May 17

📍 Iberian Foyer

[Networking Br...](#)

9:00 AM

Pre-Conference Symposium: Nathan Shock Centers Geroscience Symposium: Hallmarks of Aging Revisit

🕒 9:00 AM - 11:00 AM, May 17

📍 Iberian Room

[Nathan Shock Centers Geroscience S...](#)

🚩 Moderator



Matt Kaeberlein

Professor of Laboratory Medicine and Pathology
University of Washington

🚩 Speakers



David Gems

Professor
University College London



Christy Carter

University of Alabama at Birmingham



Rafael De Cabo

NIA



Sara Espinoza

UTHSCSA



Jan Vijg

Professor and Chairman of the Department of Genetics
Albert Einstein College of Medicine

6 Subsessions

- **The hallmarks of aging: paradigm or pseudo-paradigm?**
🕒 9:00 AM - 9:20 AM, May 17
- **A "Gut" Feeling to Create a 10th Hallmark of Aging**
🕒 9:20 AM - 9:40 AM, May 17
- **Measuring Healthspan in Geroscience-guided Clinical Trials**
🕒 9:40 AM - 10:00 AM, May 17
- **From hallmarks to benchmarks**
🕒 10:00 AM - 10:20 AM, May 17
- **Genome instability in the hierarchy of hallmarks**
🕒 10:20 AM - 10:40 AM, May 17
- **Roundtable Discussion**
🕒 10:40 AM - 11:00 AM, May 17

11:00 AM

Lunch on Your Own - Explore the Riverwalk
🕒 11:00 AM - 12:00 PM, May 17

[Hotel Restaurants](#)

12:00 PM

Orentreich Foundation Symposium: Dietary Interventions, Healthspan and Lifespan: Session 1. Chair: Saliendra Nichenametla
🕒 12:00 PM - 2:00 PM, May 17
📍 Iberian Room
Orentreich Foundation Sym...

🗣️ Speakers



Shijiao Huang
Research Investigator
University of Michigan



Christopher Hine
Assistant Staff/Assistant Professor
Cleveland Clinic Lerner Research Institute



Adam Antebi
Director
Max Planck Institute for Biology of Ageing



Brett Frye
Adjunct Assistant Professor
Wake Forest School of Medicine



Jay Zimmerman
Deputy Director for Research
Orentreich Foundation for the Advancement of Science

🗣️ Chair



Sailendra Nichenametla
Orentreich Foundation

6 Subsessions

● OFAS Highlight

🕒 12:00 PM - 12:15 PM, May 17

● Dietary Restriction mimetic drugs block food perception and induce FMO, a conserved regulator of stress response and metabolism

🕒 12:15 PM - 12:35 PM, May 17

● Lifespan and Healthspan Extension via Dietary Restriction in Mice is Dependent on the H2S Generating Enzyme Cystathionine γ -Lyase

🕒 12:35 PM - 12:55 PM, May 17

● Folate and methionine restriction as a convergent mechanism of longevity

🕒 12:55 PM - 1:25 PM, May 17

● Western Diet and Stress Impair Ovarian Function in Mid-life, Increasing Risk of Chronic Diseases of Aging in Primates

🕒 1:25 PM - 1:45 PM, May 17

● Q/A and Roundtable Discussion: Session 1

🕒 1:45 PM - 2:00 PM, May 17

2:00 PM

Networking and Coffee Break

🕒 2:00 PM - 2:15 PM, May 17

📍 Iberian Foyer

Networking Br...

2:15 PM

OFAS Keynote Lecture: Changing the conversation from ‘chronic disease’ to ‘chronic health’

🕒 2:15 PM - 2:50 PM, May 17

📍 Iberian Room

Orentreich Foundation Sym...

Dietary restriction without malnutrition remains the most robust non-genetic intervention to date that can maximize lifespan and healthspan in model organisms.¹ It also safeguards against obesity, cancer, neurodegeneration, frailty, and a range of cardiometabolic and inflammatory conditions in rhesus monkeys; and in humans, it promotes adaptations that protect against these pathologies.² In this lecture, I will discuss the effects of different forms of dietary restriction in mammalian model organisms, and the accumulating data indicating that dietary restriction with adequate nutrient intake results in many of the same physiological, metabolic and molecular changes responsible for the prevention of multiple age-associated diseases in humans, especially when combined with other lifestyle interventions.

This is important because most of the research priorities and spending for health are focused on finding new molecular targets and pharmaceutical products for treating diseases after they have occurred. Very little is invested in mechanism-based preventive science, medicine, and education. The problem is that these overly enthusiastic expectations regarding the benefits of pharmacological research for disease treatment have the potential to impact and distort not only medical research and practice but also environmental health and sustainable economic growth.³ Transitioning from a primarily disease-centered medical system to a balanced preventive and personalized treatment healthcare system is key to reducing social disparities in health and achieving financially sustainable, universal health coverage for all while protecting planetary health.

Key references:

1. Fontana L, Partridge L, Longo VD. Extending Healthy Lifespan—From Yeast to Humans. *Science* 2010;328(5976):321-6
2. Green CL, Lamming D, Fontana L. Molecular mechanisms of dietary restriction promoting health and longevity. *Nature Reviews Molecular Cell Biology* 2022;23(1):56-73.
3. Fontana L, Fasano A, Chong YS, Vineis P, Willett WC. Transdisciplinary Research and Clinical Priorities for Better Health. *Plos Medicine* 2021;18(7):e1003699.

🚩 Speaker



Luigi Fontana

Leonard P Ullmann Chair in Translational Metabolic Health; Academic Scientific Director, Charles Perkins Centre Royal Prince Alfred; Director, Healthy Longevity Research and Clinical Program
Sydney Medical School

2:50 PM

Orentreich Foundation Symposium: Dietary Interventions, Healthspan and Lifespan: Session 2. Chair: Dudley Lamming

🕒 2:50 PM - 4:25 PM, May 17

📍 Iberian Room

Orentreich Foundation Sym...

🚩 Speakers



Cara Green

Postdoctoral Researcher
University of Wisconsin-Madison



Susan Howlett

Professor
Dalhousie University



Jay Johnson

Orentreich Foundation

🚩 Chair



Dudley Lamming

Associate Professor Of Medicine
University of Wisconsin-Madison

4 Subsessions

● **A Low Isoleucine Diet Extends Lifespan and Improves Healthspan in a Sex-Dependent Manner in Genetically Heterogeneous Mice**

🕒 2:50 PM - 3:10 PM, May 17

● **Multifactorial lifestyle interventions to treat frailty: exercise with a nutritional supplement is not always beneficial**

🕒 3:10 PM - 3:40 PM, May 17

● **Intermittent methionine restriction reduces IGF-1 levels and produces similar healthspan benefits to continuous methionine restriction**

🕒 3:40 PM - 4:10 PM, May 17

● **Q/A and Roundtable Discussion: Session 2**

🕒 4:10 PM - 4:25 PM, May 17

4:30 PM

Trainee Career Roundtable: Individual Trajectories in Aging Research

🕒 4:30 PM - 6:00 PM, May 17

📍 Madero

Trainee Eve...

🚩 Speakers



Melanie McReynolds

Assistant Professor of Biochemistry and HHMI Hanna H. Gray Faculty Fellow
Penn State University



Brian Chen

Chief Scientific Officer
FOXO Technologies



Brian Wasko

Assistant Professor
Western University Of Health Sciences



Bitu Nakhai

NIH



Amber Mueller

Scientific Editor
Cell Metabolism, Cell Press



Holly Brown-Borg

University of North Dakota

6:00 PM

Trainee Networking Reception

🕒 6:00 PM - 7:00 PM, May 17

📍 Madero

[Trainee Eve...](#)

7:00 PM

50th AGE Conference Opening Reception

🕒 7:00 PM - 10:00 PM, May 17

📍 El Capistrano

[Networking Br...](#)

Don't miss the 50th Annual AGE Conference Opening Reception!!

Featuring LIVE music and rides on the San Antonio River Barges!!

Wed, May 18, 2022

7:00 AM

Breakfast

🕒 7:00 AM - 8:00 AM, May 18

📍 Iberian Foyer

[Networking Br...](#)

8:00 AM

Keynote Lecture: Using *C. elegans* to Study Human Age-Related Decline

🕒 8:00 AM - 9:00 AM, May 18

📍 Iberian Room

[Keynote Lect...](#)

As we age, we lose many of the abilities that make our lives worth living. Model systems can be used not only to study mechanisms of lifespan regulation, but also to study these "quality of life" characteristics that we value. I will discuss our work to develop quantifiable metrics of several different quality-of-life phenotypes that change with age, including reproductive aging and learning and memory decline with age. Combining these metrics with genetic mutants that extend abilities and transcriptional analyses to identify downstream targets has allowed us to identify new mechanisms to extend reproduction and cognitive abilities with age in *C. elegans*, with the hope of translating this information to humans.

📌 Speaker



Coleen Murphy

Princeton

9:00 AM

Session 1: Regenerative Medicine, Cellular Reprogramming and Stem Cells

🕒 9:00 AM - 10:50 AM, May 18

📍 Iberian Room

Symposia

Aging is characterized by a gradual loss of function occurring at the molecular, cellular, tissue, and organismal levels. At the chromatin level, aging is associated with the progressive accumulation of epigenetic errors that eventually lead to a broad spectrum of phenomena that include aberrant gene regulation, stem cell exhaustion, senescence, and deregulated cell/tissue homeostasis. The technology of nuclear reprogramming to pluripotency, through over-expression of a small number of transcription factors, can revert both the age and the identity of any cell to that of an embryonic cell by driving epigenetic reprogramming. Work developed in my lab shows that interrupted reprogramming, mediated by transient expression of mRNAs, promotes a rapid reversal of multiple hallmarks of physiological aging in many distinct human cell types isolated from elderly individuals, reduces inflammation in chondrocytes and mesenchymal stem cells, and restores youthful regenerative response to aged, human muscle stem cells, in each case without abolishing cellular identity (Sarkar et al., 2020, Nature Communications). Our method, which we named Epigenetic Reprogramming of Aging (ERA), paves the way to a novel, groundbreaking, translatable strategy for *ex vivo* cell rejuvenation treatment. In addition, ERA holds promise for *in vivo* tissue rejuvenation therapies to reverse the physiological manifestations of aging and the risk for the development of age-related diseases.

📌 Speakers



Thomas Rando

UCLA



Collin Kaufman

Postdoctoral Associate
Sanford Burnham Prebys Med Disc Inst



Sun Maybury-Lewis

Postdoctoral Fellow
Harvard Medical School



Constanza Cortes

Assistant Professor
University of Alabama at Birmingham



Vittorio Sebastiano

Associate Professor
Stanford University

6 Subsessions

● **Stem Cell Aging: The Quiescence State as an Integrator of Environmental Cues**

🕒 9:00 AM - 9:20 AM, May 18

● **Screening for drugs that induce a younger epigenetic signature in primary mouse hepatocytes**

🕒 9:20 AM - 9:35 AM, May 18

● **Decoding age-associated dynamics of chromatin accessibility in neural stem cell activation**

🕒 9:35 AM - 9:55 AM, May 18

● **Exercise-Associated Signaling Against CNS Aging and Neurodegenerative Disease**

🕒 9:55 AM - 10:10 AM, May 18

● **The role of protein longevity in cell maintenance and aging**

🕒 10:10 AM - 10:30 AM, May 18

● **Epigenetic Reprogramming of Aging: Repurposing the Principles of Reproduction for a Healthy Longevity**

🕒 10:30 AM - 10:50 AM, May 18

10:50 AM

Poster Pitches 1

🕒 10:50 AM - 11:05 AM, May 18

📍 Iberian Room

Poster

6 Subsessions

● **Mitochondrial retrograde signaling integrates multiple pathways driving senescence-associated inflammation**

🕒 10:50 AM - 10:52 AM, May 18

● **The role of endothelial senescence in age-related blood-brain barrier dysfunction and cognitive decline**

🕒 10:52 AM - 10:54 AM, May 18

● **Extending healthy lifespan with 3-hydroxyanthranilic acid.**

🕒 10:54 AM - 10:56 AM, May 18

● **The association of resilience, age, and response to lifespan extending interventions in mice.**

🕒 10:56 AM - 10:58 AM, May 18

● **Adiponectin receptor activation impacts skeletal muscle aging in mice.**

🕒 10:58 AM - 11:00 AM, May 18

● **Dietary intervention as a modulator of chemotherapy response**

🕒 11:00 AM - 11:02 AM, May 18

11:30 AM

Denham Harman Award Lecture and Luncheon

🕒 11:30 AM - 1:00 PM, May 18

📍 Iberian Room

Denham Harmon Award Luncheon

Networking Break

🗣️ **Speaker**



LaDora Thompson

Professor and Travis M. Roy Endowed Professor in Rehabilitation Sciences
Boston University

1:00 PM

Session 2: The Nutrient Response, Metabolism and Proteostasis

🕒 1:00 PM - 3:10 PM, May 18

📍 Iberian Room

🔊 Speakers



Dudley Lamming
Associate Professor Of Medicine
University of Wisconsin-Madison



Maria Mihaylova
Assistant Professor
The Ohio State University



Mitchell Lee
University of Washington Sch of Med



Stacy Hussong
OUHSC



Keith Blackwell
Joslin Diabetes Center/Harvard Medical School



Elizabeth Dean
Ph.D. Candidate
University of Michigan, Ann Arbor



Benjamin Miller
Member
Oklahoma Medical Research Foundation



Adam Salmon
Professor of Molecular Medicine
UTHSCSA, Barshop Institute

7 Subsessions

● **Effects of Diet on Nutrient Sensing and Metabolism in the Mammalian Intestine**

🕒 1:00 PM - 1:20 PM, May 18

● **Ora Biomedical: Utilizing robotics and machine learning to perform high-resolution, high-throughput survival and health analysis for drug discovery**

🕒 1:20 PM - 1:35 PM, May 18

● **Neuronal mTOR signaling controls peripheral metabolism**

🕒 1:35 PM - 1:55 PM, May 18

● **Nutrient-responsive mechanisms that enhance proteostasis and longevity**

🕒 1:55 PM - 2:15 PM, May 18

● **Multiple forms of food perception modulate dietary-restriction-mediated longevity through biogenic amine signaling.**

🕒 2:15 PM - 2:30 PM, May 18

● **Assessing changes in protein turnover as a proteostatic mechanism during aging and altered nutrient sensing**

🕒 2:30 PM - 2:50 PM, May 18

● **Interactions between diet and rapamycin intervention identify novel mediators of aging health**

🕒 2:50 PM - 3:10 PM, May 18

3:10 PM

Poster Pitches 2

🕒 3:10 PM - 3:27 PM, May 18

📍 Iberian Room

7 Subsessions

- **Leveraging the Ndufs4^{-/-} mouse as a platform for testing longevity interventions.**
🕒 3:10 PM - 3:12 PM, May 18
- **High-resolution cognitive testing paradigm identifies transcriptional signatures of cognitive heterogeneity in aging mic**
🕒 3:12 PM - 3:14 PM, May 18
- **Effects of Hyperbaric Oxygen on Brain Function and Markers of Neural Health.**
🕒 3:14 PM - 3:16 PM, May 18
- **Fucoidans are novel senotherapeutics that enhance SIRT6 and DNA repair activity.**
🕒 3:16 PM - 3:18 PM, May 18
- **Soluble tau aggregates impair neurovascular coupling and cognitive outcomes.**
🕒 3:18 PM - 3:20 PM, May 18
- **Hyperactive mTORC1/4eBP1 Signaling Accelerates Cardiac Aging.**
🕒 3:20 PM - 3:22 PM, May 18
- **Identification of age-related transcriptional programs associated with cognitive resilience in Alzheimer's Disease.**
🕒 3:22 PM - 3:24 PM, May 18

3:25 PM

Networking and Coffee Break

🕒 3:25 PM - 3:45 PM, May 18

📍 Iberian Foyer

Networking Br...

3:45 PM

Session 3: Neuroendocrine Control of Aging

🕒 3:45 PM - 5:30 PM, May 18

📍 Iberian Room

Symposia

📣 Speakers



Holly Brown-Borg
University of North Dakota



Dongsheng Cai
Professor
Albert Einstein College of Medicine



Silvana Duran Ortiz
Postdoctoral Research Fellow
Ohio University



Sarah Nouredine
Doctoral Candidate
University of Central Florida



Cristal Hill
Pennington Biomedical Research Center



Luke Stilgenbauer
Graduate Research Assistant
Wayne State University



Elizabeth Rhea
Research Assistant Professor
University of Washington

6 Subsessions

● Hypothalamic programming of systemic aging

🕒 3:45 PM - 4:05 PM, May 18

● Lifespan extension in females and improved insulin sensitivity in male mice with an adult-onset growth hormone receptor gene disruption

🕒 4:05 PM - 4:20 PM, May 18

● microRNA-449a reduces growth hormone stimulated senescent burden through Pi3K-mTOR signaling pathway

🕒 4:20 PM - 4:35 PM, May 18

● Linking Brain FGF21 Signaling to Improvements in Health and Lifespan during Dietary Protein Restriction

🕒 4:35 PM - 4:55 PM, May 18

● Hypothalamic growth hormone receptor (GHR) regulation of adaptive thermogenesis during aging

🕒 4:55 PM - 5:10 PM, May 18

● CNS insulin in aging and Alzheimer's disease: role of the blood-brain barrier

🕒 5:10 PM - 5:30 PM, May 18

5:30 PM

Session 4: 50th Anniversary Public Lecture

🕒 5:30 PM - 6:30 PM, May 18

📍 Iberian Room

Public Lectu...

Matt Kaeberlein and Special Mystery Guest

Age is the greatest risk factor for nearly every major cause of death and disability in developed nations. Yet, traditional biomedical research and clinical approaches have generally focused on waiting until people are sick and treating individual diseases one at a time. Attempts to cure age-related diseases have proven unsuccessful, and the impact of disease-first approaches continue to be incremental. Recent advances in understanding the mechanisms linking biological aging to disease, or geroscience, have identified interventions that directly target the molecular hallmarks of aging. Unlike disease-specific approaches, such interventions have the potential to prevent multiple diseases of aging simultaneously, thereby greatly enhancing healthspan and lifespan for most individuals. For this talk, I will interview a well-known special guest who applies geroscience approaches in clinical practice. We will discuss the challenges and opportunities for 21st Century Medicine.

📣 Speakers



Felipe Sierra

National Institute on Aging



Matt Kaeberlein

Professor of Laboratory Medicine and Pathology
University of Washington

6:45 PM

Poster Session I – Reception / Mixer

🕒 6:45 PM - 8:15 PM, May 18

📍 Madero & Veramendi

Poster

Poster sessions will be held in two rooms: Madero and Veramendi.

Poster Session 1: Posters 1-68 are in the Madero; Posters 69-115 are in the Veramendi.

Poster Session 2: Posters 116-191 are in the Madero; Posters 192-227 are in the Veramendi.

Poster numbers may have changed! Please check our final program on the Whova app for your Poster Session, Room assignment and Poster number. We will have a list at the registration desk and posted in the poster rooms. The registration desk is in the El Cabildo room between the Iberian Ballroom and the Veramendi on the 4th level. Fun fact: the 4th and 5th levels are separated by 5 steps.

103 Subsessions

● **Identification of age-related transcriptional programs associated with cognitive resilience in Alzheimer's Disease**

🕒 5:30 PM - 7:00 PM, May 19

● **Effects of hyperbaric oxygen on brain function and markers of neural health**

🕒 5:30 PM - 7:00 PM, May 19

● **Telomeric 8-Oxo-Guanine Drives Rapid Premature Senescence in the Absence of Telomere Shortening**

🕒 5:30 PM - 7:00 PM, May 19

● **High resolution cognitive testing paradigm identifies transcriptional signatures of cognitive heterogeneity in aging mice**

🕒 5:30 PM - 7:00 PM, May 19

● **Hyperactive mTORC1/4eBP1 Signaling Accelerates Cardiac Aging**

🕒 5:30 PM - 7:00 PM, May 19

● **Demonstration of age-related increases in blood-brain barrier permeability and microvascular rarefaction in mouse cerebral cortex. Adam Nyul-Toth**

🕒 6:45 PM - 8:15 PM, May 18

● **Uncovering the Role of Cyclin D1 in Aging and Senescence**

🕒 6:45 PM - 8:15 PM, May 18

● **DNA damage alters metabolic-epigenetic axis to drive aging**

🕒 6:45 PM - 8:15 PM, May 18

● **Myonuclei can replicate DNA**

🕒 6:45 PM - 8:15 PM, May 18

● **Nutritional Stress and Aging: The Role of Flavin Monooxygenase**

⌚ 6:45 PM - 8:15 PM, May 18

● **Universal DNA methylation age across mammalian tissues**

⌚ 6:45 PM - 8:15 PM, May 18

● **Impaired DNA repair mechanism induces retinal aging in mice**

⌚ 6:45 PM - 8:15 PM, May 18

● **Leveraging the Ndufs4^{-/-} mouse as a platform for testing longevity interventions.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Myocardial fibrosis and remodeling due to aging are accelerated in Intrauterine Growth Restriction (IUGR) baboons.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Impaired myocardial contractility in intrauterine growth restricted (IUGR) baboon offspring (F1) is improved with aging.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Left-ventricular function and output in Intrauterine Growth Restricted (IUGR) baboons are impaired in early life but normalize in later life: Need for life course studies.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Role of Porphyromonas gingivalis-derived virulence factors in the promotion of age-dependent periodontitis**

⌚ 6:45 PM - 8:15 PM, May 18

● **Characterizing mitochondrial dysfunction of the aging prostate via mass spectrometry methods**

⌚ 6:45 PM - 8:15 PM, May 18

● **Impact of the aged bone marrow on the anti-tumor response to melanoma.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Morphological and microstructural brain alterations in the rhesus macaque model of normative aging**

⌚ 6:45 PM - 8:15 PM, May 18

● **miR-146a-5p Modulates Cellular Senescence in Visceral Adipose Tissue and Liver of Long-Lived Ames Dwarf Mice and in Human Endothelial Cells.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Dietary intervention as a modulator of chemotherapy response**

⌚ 6:45 PM - 8:15 PM, May 18

● **A novel mitochondrial-derived peptide regulates pathways critical to aging, obesity, and inflammation**

⌚ 6:45 PM - 8:15 PM, May 18

● **Longitudinal tracking of accelerated brain aging after mild traumatic brain injury**

⌚ 6:45 PM - 8:15 PM, May 18

● **Dj1 expression and dopamine deregulation in hiv-1 infected and antiretroviral therapy associated neurodegeneration.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Limiting polyamine production in Down syndrome fibroblast cells lead to reduction in cellular senescence.**

⌚ 6:45 PM - 8:15 PM, May 18

● **A Complex I deficiency induces tau aggregation in mitochondrial disease mice**

⌚ 6:45 PM - 8:15 PM, May 18

● **Intrinsic mitochondrial function impacts the outcomes of metformin treatment on skeletal muscle mitochondrial morphology in aged rats**

⌚ 6:45 PM - 8:15 PM, May 18

● **A novel genetically heterogenous rat model (OKC-HETB/W) for aging research**

⌚ 6:45 PM - 8:15 PM, May 18

● **Transcriptomic changes in epigenetic regulators of oligodendrocyte differentiation in a monkey model of aging.**

⌚ 6:45 PM - 8:15 PM, May 18

● **The effect of reproduction on cellular senescence markers in the brain, liver, and skeletal muscle of wild-derived female house mice.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Soluble tau aggregates impair neurovascular coupling and cognitive outcomes**

⌚ 6:45 PM - 8:15 PM, May 18

● **How to Age With Elegans: Do environmental stressors affect aging differently in combination vs. alone?**

⌚ 6:45 PM - 8:15 PM, May 18

● **Mitochondrial membrane potential is required for the lifespan-extending effects of dietary restriction in *C. elegans***

🕒 6:45 PM - 8:15 PM, May 18

● **Mapping the ketogenic system across ages, sexes, and diets.**

🕒 6:45 PM - 8:15 PM, May 18

● **White matter fractional anisotropy in a nonhuman primate model of aging: relationships with social status and physiologic measures of stress**

🕒 6:45 PM - 8:15 PM, May 18

● **Identifying FDA approved drugs that inhibit mTOR signaling.**

🕒 6:45 PM - 8:15 PM, May 18

● **Hypoxia-inducible factor-2a increases with age in hippocampal astrocytes**

🕒 6:45 PM - 8:15 PM, May 18

● **Unacylated ghrelin ameliorates muscle wasting and contractile dysfunction in age-associated loss of muscle mass and function**

🕒 6:45 PM - 8:15 PM, May 18

● **Sialylation of Microglia and Alzheimer's Disease Substrates**

🕒 6:45 PM - 8:15 PM, May 18

● **An LSD1 histone demethylase inhibitor as a potential senotherapeutic**

🕒 6:45 PM - 8:15 PM, May 18

● **Sex-specific reduction of aging kidney dysfunction with long-term mitochondrial protection in the context of Western diet.**

🕒 6:45 PM - 8:15 PM, May 18

● **The longevity-promoting intervention 17 β -estradiol protects against aging phenotypes in APOE4 mice.**

🕒 6:45 PM - 8:15 PM, May 18

● **Oolonghomobisflavans from *Camellia sinensis* increase *Caenorhabditis elegans* lifespan and healthspan**

🕒 6:45 PM - 8:15 PM, May 18

● **TITLE: CHEMOTHERAPY-INDUCED ACCELERATED CEREBROVASCULAR AGING**

🕒 6:45 PM - 8:15 PM, May 18

● **Evaluation of changes in oral health during aging in a novel non-human primate model**

🕒 6:45 PM - 8:15 PM, May 18

● **Beta-guanidinopropionic acid, a creatine analog, induces mitochondrial genotoxicity and myopathy in skeletal muscles of aged rats**

🕒 6:45 PM - 8:15 PM, May 18

● **Skeletal muscle mitochondrial ADP sensitivity correlates to indices of metabolic health in humans**

🕒 6:45 PM - 8:15 PM, May 18

● **Investigating the effects of pathogenic tau on nuclear tension**

🕒 6:45 PM - 8:15 PM, May 18

● **Investigating P19INK4D Associated Neuronal Senescence in ALS**

🕒 6:45 PM - 8:15 PM, May 18

● **Ambulatory and cognitive function in aging marmosets**

🕒 6:45 PM - 8:15 PM, May 18

● **Skeletal Muscle Circulating Factors as Novel Regulators of CNS Aging**

🕒 6:45 PM - 8:15 PM, May 18

● **Metabolic Rewiring of Aged Myoblasts and Restoration of Regenerative Potential of Progeric Skeletal muscle**

🕒 6:45 PM - 8:15 PM, May 18

● **Ultrastructural localization of PDE4D and HCN1 in rhesus macaque entorhinal cortex layer II: Molecular mechanisms mediating susceptibility to tau pathology in Alzheimer's Disease.**

🕒 6:45 PM - 8:15 PM, May 18

● **Molecular mechanism of age-related stress response – lesson from retina.**

🕒 6:45 PM - 8:15 PM, May 18

● **Metformin rescues disease-related phenotypes in a *C. elegans* model of Alzheimer's Disease**

🕒 6:45 PM - 8:15 PM, May 18

● **Pathology in the Study of Longitudinal Aging in Mice (SLAM): what did we learn so far?**

🕒 6:45 PM - 8:15 PM, May 18

● **Astaxanthin Lowers Global Protein Thiol Oxidation in Older Adults**

🕒 6:45 PM - 8:15 PM, May 18

● **Limiting mitochondrial STAT3 improves immune cell mitochondrial function and inflammation.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Age-related impaired polyunsaturated fatty acid (PUFA) synthesis disrupts RPE phagocytosis**

⌚ 6:45 PM - 8:15 PM, May 18

● **Regulation of a brain-specific isoform of the mitochondrial regulator PGC-1α in neurons**

⌚ 6:45 PM - 8:15 PM, May 18

● **microRNA in Hepatic Vascular Aging and Age-Related Endothelial Progenitor Function in Chronic Liver Disease**

⌚ 6:45 PM - 8:15 PM, May 18

● **The effects of a Fasting Mimicking Diet on an E4FAD mouse model of Alzheimer's disease.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Assessing osteoarthritis related pain following long term in vivo senolytic treatment in mice.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Using isolated mitochondria to measure age-related ADP insensitivity.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Extending healthy lifespan with 3-hydroxyanthranilic acid**

⌚ 6:45 PM - 8:15 PM, May 18

● **Colanic Acid Regulate Mitochondrial Dynamics and Longevity via the Endo-lysosomal Pathway**

⌚ 6:45 PM - 8:15 PM, May 18

● **Rat Leukocyte Population Dynamics Predicts a Window for Intervention in Aging**

⌚ 6:45 PM - 8:15 PM, May 18

● **Progression of Sarcopenia in Old and Very Old C57BL/6J Mice**

⌚ 6:45 PM - 8:15 PM, May 18

● **Multi-omics analysis identifies Cth2 as a negative regulator of mitochondrial translation during aging.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Older microbiota promotes early brain aging by promoting leaky gut and inflammation via suppressing butyrate-FFAR2/3 pathway**

⌚ 6:45 PM - 8:15 PM, May 18

● **Obesity is a key risk factor for Alzheimer's disease (AD) related dementia (ADRD) in older adults, however, contribution of obesity in age-related cognitive decline and ADRD remains debatable.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Early-adulthood protein translation spike drives aging via juvenile hormone/germline stem cell signaling**

⌚ 6:45 PM - 8:15 PM, May 18

● **Primary data for longevity of nonhuman primate species common to biomedical research**

⌚ 6:45 PM - 8:15 PM, May 18

● **Development of an Old World primate resource to study developmental programming- aging interactions**

⌚ 6:45 PM - 8:15 PM, May 18

● **Lack of TRIB2 expression contributes to the preferential loss of naive CD8+ T cells with age.**

⌚ 6:45 PM - 8:15 PM, May 18

● **Maternal obesity predisposes offspring (F1) to age-related metabolic changes in later life despite maintaining a normal dietary lifestyle**

⌚ 6:45 PM - 8:15 PM, May 18

● **An immunotranscriptomic clock measures aging in humans**

⌚ 6:45 PM - 8:15 PM, May 18

● **Transcriptional Profiling of the Aging Primate Brain: Age and Neuropathology-Associated Transcripts in Olfactory Pathway Brain Regions of Vervets**

⌚ 6:45 PM - 8:15 PM, May 18

● **Differential morphology of cerebral microhemorrhages originating from arterioles, capillaries and venules in mice**

⌚ 6:45 PM - 8:15 PM, May 18

● **The influence of chronological and reproductive aging on resistance to oxidative stress in post-reproductive female mice.**

⌚ 6:45 PM - 8:15 PM, May 18

● **The effects of elamipretide (SS-31) and nicotinamide mononucleotide (NMN)**

treatment on the aged mouse heart proteome and acetylome

🕒 6:45 PM - 8:15 PM, May 18

● **The association of resilience, age, and response to lifespan extending interventions in mice**

🕒 6:45 PM - 8:15 PM, May 18

● **Regulation of Germline Proteostasis by HSF1 and Insulin/IGF-1 Signaling in Maternal Aging**

🕒 6:45 PM - 8:15 PM, May 18

● **Evolution of lifespan investigated with epidemiological modeling**

🕒 6:45 PM - 8:15 PM, May 18

● **Tradeoffs between life extension and quality of life: a psychiatric perspective**

🕒 6:45 PM - 8:15 PM, May 18

● **Single molecule direct mitochondrial DNA sequencing of human skeletal muscle mitochondrial DNA across the human lifespan**

🕒 6:45 PM - 8:15 PM, May 18

● **The role of endothelial senescence in age related blood-brain barrier disruption and cognitive decline**

🕒 6:45 PM - 8:15 PM, May 18

● **Impaired proteostasis, not protein synthesis, limits recovery of aged skeletal muscle after disuse atrophy**

🕒 6:45 PM - 8:15 PM, May 18

● **An anti-steatosis transcriptional response controlled by oleic acid through lipid droplet-induced ERAD enhancement promotes health and longevity**

🕒 6:45 PM - 8:15 PM, May 18

● **17 β -estradiol does not adversely affect sperm parameters or fertility in male mice**

🕒 6:45 PM - 8:15 PM, May 18

● **Establishing ceramide accumulation as a universal driver of aging: A functional lipidomics tale**

🕒 6:45 PM - 8:15 PM, May 18

● **Frailty in individuals with mental disorders: longitudinal analyses of all-cause mortality**

🕒 6:45 PM - 8:15 PM, May 18

● **Leukocyte telomere length in individuals with mental disorders**

🕒 6:45 PM - 8:15 PM, May 18

● **Tom70-based transcriptional regulation of mitochondrial biogenesis and aging**

🕒 6:45 PM - 8:15 PM, May 18

● **The role of lysyl oxidase and collagen-crosslinking in age-related cardiac fibrosis.**

🕒 6:45 PM - 8:15 PM, May 18

● **Mitochondrial retrograde signaling integrates multiple pathways driving senescence-associated inflammation**

🕒 6:45 PM - 8:15 PM, May 18

● **Adiponectin receptor activation impacts skeletal muscle aging in mice**

🕒 6:45 PM - 8:15 PM, May 18

● **Assessing the Role of BHB in Proteasome Activation Across Age and Ketone Ester Supplementation**

🕒 6:45 PM - 8:15 PM, May 18

● **DNA hydroxymethylation maintains transcriptional stability during aging**

🕒 6:45 PM - 8:15 PM, May 18

● **The emerging role of 3-hydroxyanthranilic acid in aging and immune function in *C. elegans*.**

🕒 6:45 PM - 8:15 PM, May 18

● **Hypothalamic melanocortin-4 receptors on astrocytes mediate hypothalamic and systemic inflammation**

🕒 6:45 PM - 8:15 PM, May 18

● **Phosphoproteomic profiling of skeletal muscle after potentiation in aged female mice**

🕒 6:45 PM - 8:15 PM, May 18

8:15 PM

Trainee - Faculty Mixer

🕒 8:15 PM - 10:00 PM, May 18

📍 El Capistrano

Trainee Eve...



Trainee-Faculty Mixer to be held in the beautiful El Capistrano ballroom under the "stars". Join us for networking, drinks, food and fun!

Thu, May 19, 2022

7:15 AM

Women In AGE Breakfast

🕒 7:15 AM - 8:30 AM, May 19

📍 Iberian Room (round tables to follow in Espada & Concepción)

Networking Break

Roundtable Discussion

Trainee Event

This year at the AGE2022 annual meeting, we will be hosting the inaugural Women in AGE breakfast! The purpose of this breakfast is to highlight excellent women scientists and to discuss unique barriers to progress that women face in academia. From this, we hope to brainstorm ideas on how to best support our colleagues. We encourage all AGE2022 attendees to participate, regardless of gender.

Dr. Dorota Skowronska-Krawczyk (Women in AGE session chair) and the AGE trainee chapter have invited women from varying backgrounds to lead these important discussions, including: Drs. Susan Howlett, Rozalyn Anderson, Coleen Murphy, Holly Brown-Borg, Holly Van Remmen, Laura Niedernhofer, Jamie Justice, Su-In Lee and Christy Carter. We are excited to hear their perspectives!

🚩 Speakers



Dorota Skowronska-Krawczyk

Assistant Professor
University of California Irvine



Susan Howlett

Professor
Dalhousie University



Rozalyn Anderson

University of Wisconsin Madison



Leena Bharath

Assistant Professor
Merrimack College



Sarah Ocañas, PhD

OUHSC



Alice Kane

Research Associate
Harvard Medical School - Blavatnik Institute

7:30 AM

Breakfast

🕒 7:30 AM - 8:30 AM, May 19

📍 Iberian Foyer

Networking Br...

8:30 AM

Session 5: Biomarkers, Population Forecasting, and GxE Interactions in Aging

🕒 8:30 AM - 10:40 AM, May 19

📍 Iberian Room

Symposia

🚩 Speakers



Su-In Lee

Paul G. Allen Professor
University of Washington



Yousin Suh

Columbia University



Delany Rodriguez

SBP



Jamie Justice

Assistant Professor
Wake Forest School of Medicine



Ellen Quillen

Assistant Professor, IM-Molecular Medicine
Wake Forest School of Medicine



Melanie McReynolds

Assistant Professor of Biochemistry and HHMI Hanna H. Gray Faculty Fellow
Penn State University



Monica Sanchez-Contreras

Acting Instructor
University of Washington



David Gems

Professor
University College London

7 Subsessions

● Impact: Interpretable Machine Learning Prediction of All-Cause Mortality

🕒 8:30 AM - 8:50 AM, May 19

● Functional Genomics of Human Aging and Longevity

🕒 8:50 AM - 9:10 AM, May 19

● Determining biological age in multiple tissues with MIEL, a novel imaging technique that captures epigenetic patterns with single-cell resolution

🕒 9:10 AM - 9:25 AM, May 19

● Resilience, Aging, and Response to Ionizing Radiation Exposure in Nonhuman Primates

🕒 9:25 AM - 9:45 AM, May 19

● NAD⁺ Flux and Resiliency in Aged Mice

🕒 9:45 AM - 10:05 AM, May 19

● Somatic Mitochondrial DNA Mutation Accumulation is Age, Sex and Tissue Dependent

🕒 10:05 AM - 10:20 AM, May 19

● Understanding Programmatic Mechanisms of Aging: Hyperfunction, Hypofunction and Constraint

🕒 10:20 AM - 10:40 AM, May 19

10:40 AM

Poster Pitches 3

🕒 10:40 AM - 10:55 AM, May 19

📍 Iberian Room

Poster

7 Subsessions

● **Rapamycin delays age-related osteoarthritis in the common marmoset.**

🕒 10:40 AM - 10:42 AM, May 19

● **Tau-induced astrocyte senescence as a driver of neuronal dysfunction in Alzheimer's disease.**

🕒 10:42 AM - 10:44 AM, May 19

● **Evidence for preserved insulin responsiveness in the aging rat brain.**

🕒 10:44 AM - 10:46 AM, May 19

● **Mitochondrial DNA copy number; a molecular marker of human aging implicated in health disparities of prostate cancer.**

🕒 10:46 AM - 10:48 AM, May 19

● **Development of Novel Knock-In Mouse Models to Study the Role of Necroptosis in Age-Related Diseases.**

🕒 10:48 AM - 10:50 AM, May 19

● **Aging microglia and their impact on neural stem cell function in the SVZ.**

🕒 10:50 AM - 10:52 AM, May 19

● **Mitochondrial GTP metabolism regulates reproductive aging through controlling oocyte mitochondrial dynamics.**

🕒 10:52 AM - 10:54 AM, May 19

11:00 AM

Lunch on Your Own / Explore the Riverwalk

🕒 11:00 AM - 12:30 PM, May 19

11:15 AM

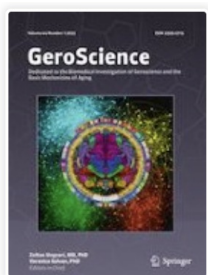
Geroscience Journal Meeting

🕒 11:15 AM - 11:45 AM, May 19

📍 Iberian Room

Editor-in-Chief

- Veronica Galvan,
- Zoltan Ungvari



12:30 PM

Session 6: Clinical Trials in Geroscience

🕒 12:30 PM - 2:20 PM, May 19

📍 Iberian Room

Symposia

📣 Speakers



Sara Espinoza
UTHSCSA



Taylor Buchanan
University of Alabama at Birmingham



George Kuchel
University of Connecticut



Andriy Yabluchanskiy
Assistant Professor
Oklahoma University Health Sciences Center



Mitzi Gonzales
UTHSCSA



LaTonya Hickson MD
Professor of Medicine Nephrology & Hypertension
Mayo Clinic Florida

6 Subsessions

● Metformin: A Potential Intervention to Prevent Frailty in Community-Dwelling Older Adults with Pre-Diabetes

🕒 12:30 PM - 12:50 PM, May 19

● Impact of high-intensity interval training on affect and neuroinflammation in older adult with fibromyalgia

🕒 12:50 PM - 1:05 PM, May 19

● Potential of senolytics and senotherapeutics in the elderly with diabetes and chronic kidney disease

🕒 1:05 PM - 1:25 PM, May 19

● NAD supplementation increases neurovascular coupling responses in human subjects

🕒 1:25 PM - 1:40 PM, May 19

● From bench to bedside: Moving rapamycin into clinical trials for Alzheimer's disease

🕒 1:40 PM - 2:00 PM, May 19

● Designing Your Next Geroscience-Guided Trial: From Drug Discovery to Repurposing and Modeling.

🕒 2:00 PM - 2:20 PM, May 19

2:20 PM

Poster Pitches 4

🕒 2:20 PM - 2:35 PM, May 19

📍 Iberian Room

Poster

6 Subsessions

- **OXR1 maintains the retromer to delay brain aging under dietary restriction.**
⌚ 2:20 PM - 2:22 PM, May 19
- **Metformin mitigates doxorubicin-induced senescence signaling and SASPs secretion in endothelial cells.**
⌚ 2:22 PM - 2:24 PM, May 19
- **Short-term dietary branched-chain amino acid restriction has persistent metabolic health benefits.**
⌚ 2:24 PM - 2:26 PM, May 19
- **Multi-organ gene therapy efficiently rescues disease in a mouse model of Wolfram Syndrome II.**
⌚ 2:26 PM - 2:28 PM, May 19
- **Immunosenescence, acceleration of aging by infection, and the evolution of adaptive suicide.**
⌚ 2:28 PM - 2:30 PM, May 19
- **Aged visceral adipose tissue microenvironment mediates enhanced proliferation and accumulation of resident gamma delta (γδ)-T cells in mice.**
⌚ 2:30 PM - 2:32 PM, May 19

2:35 PM

Networking and Coffee Break

⌚ 2:35 PM - 3:10 PM, May 19
📍 Iberian Foyer

Networking Br...

3:10 PM

Session 7: The Immune System in Aging and Age-Associated Disease

⌚ 3:10 PM - 5:00 PM, May 19
📍 Iberian Room

Symposia

🗣️ Speakers



Aimee Kao
Professor of Neurology
University of California, San Francisco



Stephan Emmrich
Postdoctoral Research Associate
University of Rochester



Brianah McCoy
Ph.D. Candidate
Arizona State University



Janko Nikolich-Zugich
University of Arizona



Katrin Andreasson
Professor
Stanford University School of Medicine



Ann Griffith
Assistant Professor
UTHSCSA

6 Subsessions

● The role of lysosomes in aging and neurodegeneration

🕒 3:10 PM - 3:30 PM, May 19

● Neotenic traits shape the hematopoietic landscape of naked mole-rats

🕒 3:30 PM - 3:45 PM, May 19

● Reprogramming myeloid cell metabolism reverses cognitive decline in aging

🕒 3:45 PM - 4:05 PM, May 19

● Redox regulation of age-associated thymus dysfunction

🕒 4:05 PM - 4:25 PM, May 19

● Age-related epigenetic changes in the immune system of companion dogs

🕒 4:25 PM - 4:40 PM, May 19

● Immune aging as a microenvironmental process

🕒 4:40 PM - 5:00 PM, May 19

5:30 PM

Poster Session 2 - Reception / Mixer

🕒 5:30 PM - 7:00 PM, May 19

📍 Madero & Veramendi

Poster

Poster sessions will be held in two rooms: Madero and Veramendi.

Poster Session 1: Posters 1-68 are in the Madero; Posters 69-115 are in the Veramendi.

Poster Session 2: Posters 116-191 are in the Madero; Posters 192-227 are in the Veramendi.

Poster numbers may have changed! Please check our final program on the Whova app for your Poster Session, Room assignment and Poster number. We will have a list at the registration desk and posted in the poster rooms. The registration desk is in the El Cabildo room between the Iberian Ballroom and the Veramendi on the 4th level. Fun fact: the 4th and 5th levels are separated by 5 steps.

99 Subsessions

● Protein structure, function and complex interactions influencing convergent sequence evolution in long-lived species.

🕒 5:30 PM - 7:00 PM, May 19

● OXR1 maintains the retromer to delay brain aging under dietary restriction.

🕒 5:30 PM - 7:00 PM, May 19

● Metformin mitigates doxorubicin-induced senescence signaling and SASPs secretion in endothelial cells

🕒 5:30 PM - 7:00 PM, May 19

● Methionine sulfoxide reductase A (MsrA) and Sex-dependent effects of Methionine Restriction on metabolism and longevity.

🕒 5:30 PM - 7:00 PM, May 19

● A multi-omics analysis reveals maternal obesity and overnutrition (MOB) accelerate liver cardio-metabolic aging in adult offspring (F1)

🕒 5:30 PM - 7:00 PM, May 19

● Increased Myelopoiesis and Upregulation of Alarmins in the Aging Bone Marrow: Reversal by Angiotensin-(1-7)

🕒 5:30 PM - 7:00 PM, May 19

● Paired analysis of gene expression and DNA modifications in hippocampal neurons between sexes with aging.

🕒 5:30 PM - 7:00 PM, May 19

● Senolytic Therapy: Results from a Placebo Controlled 6-Month Nonhuman Primate Trial

🕒 5:30 PM - 7:00 PM, May 19

● Evaluation of Protectin DX as a therapeutic strategy against frailty in mice

🕒 5:30 PM - 7:00 PM, May 19

● Dysregulation of FGF21-mediated protein preference during aging.

🕒 5:30 PM - 7:00 PM, May 19

- **Development of an Old World Primate normative aging resource**
⌚ 5:30 PM - 7:00 PM, May 19
- **Vascular smooth muscle cells and IGF-1 in age-related vascular fragility and cognitive decline**
⌚ 5:30 PM - 7:00 PM, May 19
- **Effect of Mitochondrial-nuclear interaction on lifespan regulation.**
⌚ 5:30 PM - 7:00 PM, May 19
- **The MotrMito project: Aging and the mitochondrial response to exercise training, measured by ³¹P magnetic resonance spectroscopy, among MoTrPAC participants**
⌚ 5:30 PM - 7:00 PM, May 19
- **SOLUBLE PATHOGENIC TAU ENTERS BRAIN VASCULAR ENDOTHELIAL CELLS AND DRIVES CELLULAR SENESCENCE AND MICROVASCULAR DYSFUNCTION IN TAUOPATHY**
⌚ 5:30 PM - 7:00 PM, May 19
- **Peptidomimetic proteasome activators as novel agents to battle Alzheimer's disease.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Short-term dietary branched-chain amino acid restriction has persistent metabolic health benefits.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Canagliflozin modifies hypothalamic function in aging**
⌚ 5:30 PM - 7:00 PM, May 19
- **Tau-induced astrocyte senescence as a driver of neuronal dysfunction in Alzheimer's disease**
⌚ 5:30 PM - 7:00 PM, May 19
- **Predicting maximum lifespan using the coefficient of variation of MIEL-based epigenetic signatures in PBMCs.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Lysosome Lipid Signaling from the Periphery to Neurons Regulates Longevity**
⌚ 5:30 PM - 7:00 PM, May 19
- **The Role of PPAR α -driven β -oxidation in Bone Health During Aging**
⌚ 5:30 PM - 7:00 PM, May 19
- **17 β -Estradiol Mitigates the Negative Effects of High-Fat Feeding in Both Male and Female Mice**
⌚ 5:30 PM - 7:00 PM, May 19
- **Evidence for preserved insulin responsiveness in the aging rat brain.**
⌚ 5:30 PM - 7:00 PM, May 19
- **A novel proteostasis adaptation in the long-lived *Caenorhabditis elegans* rpn-10 proteasome subunit mutant**
⌚ 5:30 PM - 7:00 PM, May 19
- **Mitochondrial DNA copy number; a molecular marker of human aging implicated in health disparities of prostate cancer**
⌚ 5:30 PM - 7:00 PM, May 19
- **Activation of NAMPT as a preventive strategy for age-associated diseases.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Late-life administration of 4-Phenylbutyrate slows frailty onset in mice of multiple genetic backgrounds.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Multi-organ gene therapy efficiently rescues disease in a mouse model of Wolfram Syndrome II**
⌚ 5:30 PM - 7:00 PM, May 19
- **Investigating the role of sex and strain on the metabolic effects of dietary isoleucine restriction**
⌚ 5:30 PM - 7:00 PM, May 19
- **The mitochondrial-derived peptide MOTS-c reprograms monocyte-to-macrophage differentiation in an age-related manner to produce a unique population of macrophages**
⌚ 5:30 PM - 7:00 PM, May 19
- **Receptor for advanced glycation endproducts signaling impacts on healthspan: Early-life cognitive assessments**
⌚ 5:30 PM - 7:00 PM, May 19
- **The microbiome-muscle connection: Native microbiota affect muscle ageing and motility.**
⌚ 5:30 PM - 7:00 PM, May 19
- **Stem Cell-Mediated Restoration of Neuromusculoskeletal Function in**

Naturally Aged Mice

⌚ 5:30 PM - 7:00 PM, May 19

● Discovery of Proteome- and Secretome-Based Senescent Monocyte Biomarker Candidates

⌚ 5:30 PM - 7:00 PM, May 19

● Behavior of *C. elegans* on lifespan-promoting bacterial diets

⌚ 5:30 PM - 7:00 PM, May 19

● The interaction of cell senescence and necroptosis in inflammaging

⌚ 5:30 PM - 7:00 PM, May 19

● Metabolic Rewiring of Aged Myoblasts and Restores Regenerative Potential of Progeric Skeletal muscle

⌚ 5:30 PM - 7:00 PM, May 19

● Neurobehavioral outcomes of low-dose methotrexate exposure in C57BL/6/J pups

⌚ 5:30 PM - 7:00 PM, May 19

● Increased lifespan through altered Gcn4 / ATF-4 in *S. cerevisiae* and *C. elegans*.

⌚ 5:30 PM - 7:00 PM, May 19

● Immunosenescence, acceleration of aging by infection, and the evolution of adaptive suicide.

⌚ 5:30 PM - 7:00 PM, May 19

● Age-related changes of neurovascular coupling and global brain network function and its association to cognitive performance in human subjects.

⌚ 5:30 PM - 7:00 PM, May 19

● Aging in the adrenal zona fasciculata of female nonhuman primates (NHP): changes in markers of cell division and cellular activity indicate decreasing glucocorticoid production across the life course...

⌚ 5:30 PM - 7:00 PM, May 19

● Cell autophagy markers fall linearly from 30% of the life course across life in four female baboon tissues, brain, left ventricle, liver, and skeletal muscle.

⌚ 5:30 PM - 7:00 PM, May 19

● Reactivation of DNA Damage Response restores blood stem cell fitness during aging.

⌚ 5:30 PM - 7:00 PM, May 19

● Chronic thermogenic stimulation improves systemic metabolism and cognition in aged mice

⌚ 5:30 PM - 7:00 PM, May 19

● Characterizing the Effect of Cellular Senescence on iPSC-derived Brain Endothelial-Like Cells

⌚ 5:30 PM - 7:00 PM, May 19

● Age-mediated changes in systemic milieu alter physiology and gene expression of blood vessels

⌚ 5:30 PM - 7:00 PM, May 19

● Development of Novel Knock-In Mouse Models to Study the Role of Necroptosis in Age-Related Diseases

⌚ 5:30 PM - 7:00 PM, May 19

● Inhibition of *haao-1* enhances oxidative stress response via the SKN-1/Nrf2 pathway in *C. elegans*.

⌚ 5:30 PM - 7:00 PM, May 19

● The metabolic benefits of 17 β -estradiol occur independently of insulin-signaling in POMC neurons

⌚ 5:30 PM - 7:00 PM, May 19

● TNF alpha signaling is a cell non-autonomous mediator of intestinal stem cell aging

⌚ 5:30 PM - 7:00 PM, May 19

● The aging liver, necroptosis and nonalcoholic fatty liver disease: An inflammatory connection

⌚ 5:30 PM - 7:00 PM, May 19

● Identification of Functional and Genetic Interactors of TOR in Yeast

⌚ 5:30 PM - 7:00 PM, May 19

● Therapeutic benefits of 17 β -estradiol in hepatic fibrosis

⌚ 5:30 PM - 7:00 PM, May 19

● Aging microglia and their impact on neural stem cell function in the SVZ

⌚ 5:30 PM - 7:00 PM, May 19

● Immune signals modulating microglial phagocytosis may contribute to synaptic loss and related cognitive deficits in the aging monkey.

⌚ 5:30 PM - 7:00 PM, May 19

● **Susceptibility to cerebral microhemorrhages in an IGF-1 deficient mouse model is associated with imaging signs of vascular defects in the retina**

⌚ 5:30 PM - 7:00 PM, May 19

● **Marked reduction of spinal cord lipidome in late Alzheimer's disease contributes to neurogenic bladder**

⌚ 5:30 PM - 7:00 PM, May 19

● **Age-related brain frontal cortex transcriptome changes in female nonhuman primates.**

⌚ 5:30 PM - 7:00 PM, May 19

● **Intergenerational effects of maternal age on offspring metabolome, healthspan, and lifespan**

⌚ 5:30 PM - 7:00 PM, May 19

● **Cerebrovascular effects of time restricted feeding (TRF) in aged mice**

⌚ 5:30 PM - 7:00 PM, May 19

● **Comparative genomics of longevity: from rockfish, across mammals, and within humans**

⌚ 5:30 PM - 7:00 PM, May 19

● **Aged visceral adipose tissue microenvironment mediates enhanced proliferation and accumulation of resident gamma delta ($\gamma\delta$)-T cells in mice**

⌚ 5:30 PM - 7:00 PM, May 19

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

⌚ 5:30 PM - 7:00 PM, May 19

● **The mitochondrial permeability transition pore activates the mitochondrial unfolded protein response and promotes aging.**

⌚ 5:30 PM - 7:00 PM, May 19

● **Alpha modulation in younger and older adults during distracted encoding**

⌚ 5:30 PM - 7:00 PM, May 19

● **IgG subclass specific infiltration in skeletal muscle and their role in sarcopenia**

⌚ 5:30 PM - 7:00 PM, May 19

● **Mitochondrial driven inflammation in aged kidneys is exacerbated by nicotinamide mononucleotide but ameliorated by elamipretide**

⌚ 5:30 PM - 7:00 PM, May 19

● **Calcium handling dysregulation associated with neuromuscular functional decline**

⌚ 5:30 PM - 7:00 PM, May 19

● **Dissecting primary and secondary senescence to enable novel senotherapeutic strategies**

⌚ 5:30 PM - 7:00 PM, May 19

● **Functional and Genomic Profiling of Heart, Skeletal Muscle, and Adipose Tissues in a Primate Model of Aging**

⌚ 5:30 PM - 7:00 PM, May 19

● **The transcriptional repressor Cyc8 undergoes liquid-liquid phase separation in response to hyperosmotic shock**

⌚ 5:30 PM - 7:00 PM, May 19

● **Physiological and adipose tissue transcriptional response to CR mimetics in mice**

⌚ 5:30 PM - 7:00 PM, May 19

● **A β 42 oligomers trigger synaptic loss through CAMKK2-AMPK-dependent effectors coordinating mitochondrial fission and mitophagy**

⌚ 5:30 PM - 7:00 PM, May 19

● **Increased expression levels of SASP factors and senescence biomarkers in aged non-human primates**

⌚ 5:30 PM - 7:00 PM, May 19

● **Modulating Alzheimer's Disease by mTORC1 inhibition to augment lysosomal activity**

⌚ 5:30 PM - 7:00 PM, May 19

● **Late-Life Mortality GWAS in Flies Identifies Diabetes and Obesity Regulated to Regulate Mortality and Resilience.**

⌚ 5:30 PM - 7:00 PM, May 19

● **Plasma transfer as a model to reverse age-related epigenetic changes**

⌚ 5:30 PM - 7:00 PM, May 19

● **Transcriptional Profiling of the Aging Brain**

⌚ 5:30 PM - 7:00 PM, May 19

● **Role of Gadd45b in HSC aging**

⌚ 5:30 PM - 7:00 PM, May 19

● **Prediction vs. Reality: metabolic life course trajectories and associations with mortality within the study of longitudinal aging in mice.**

🕒 5:30 PM - 7:00 PM, May 19

● **Low isoleucine dietary intervention in aged mice**

🕒 5:30 PM - 7:00 PM, May 19

● **Can Astaxanthin Improve Redox Signaling in Older Adults?**

🕒 5:30 PM - 7:00 PM, May 19

● **Mitochondrial GTP metabolism regulates reproductive aging through controlling oocyte mitochondrial dynamics**

🕒 5:30 PM - 7:00 PM, May 19

● **Metformin stimulated Mitochondrial-Derived Peptide (Ms.MDP) a contributor to Metformin's Actions on Longevity and Healthspan.**

🕒 5:30 PM - 7:00 PM, May 19

● **Investigation of TXNIP attenuation a novel strategy to reduce bed rest induced muscle atrophy**

🕒 5:30 PM - 7:00 PM, May 19

● **Can a simple blood test accurately predict age?**

🕒 5:30 PM - 7:00 PM, May 19

● **LRP1 knockout in adult neural stem cells causes hippocampal dysfunction with age and loss of CXCR4**

🕒 5:30 PM - 7:00 PM, May 19

● **Copper hormesis in Caenorhabditis elegans**

🕒 5:30 PM - 7:00 PM, May 19

● **Fucoidans are novel senotherapeutics that enhance SIRT6 and DNA repair activity**

🕒 5:30 PM - 7:00 PM, May 19

● **Developmental programming-aging interactions in rat offspring (f1) liver lipidomics by maternal obesity (MO)**

🕒 6:45 PM - 8:15 PM, May 18

● **Maternal voluntary exercise prior and during pregnancy in rats has beneficial effects on both normal age-related and programming-aging induced offspring lipid metabolic changes**

🕒 6:45 PM - 8:15 PM, May 18

● **Accelerated rat offspring (f1) age-related metabolic changes programmed by maternal obesity (MO) and hyperlipidic, hypercaloric diet (MO) are prevented by short term normalization of maternal diet prior to, and during pregnancy and lactation.**

🕒 6:45 PM - 8:15 PM, May 18

● **Functional cellular assays to delineate mechanisms of aging in nonhuman primates**

🕒 6:45 PM - 8:15 PM, May 18

● **Rapamycin delays age-related osteoarthritis in the common marmoset.**

🕒 6:45 PM - 8:15 PM, May 18

● **Pre-pregnancy maternal (F0) rat metabolic markers correlate with offspring (F1) accelerated metabolic aging**

🕒 6:45 PM - 8:15 PM, May 18

● **Life-course rat blood corticosterone blood concentrations show sex specific developmental-programming-aging interactions**

🕒 6:45 PM - 8:15 PM, May 18

● **Microtubule Associated Protein Tau Alters Tubulin Expression**

🕒 6:45 PM - 8:15 PM, May 18

7:00 PM

Trainee Data Blitz

🕒 7:00 PM - 9:00 PM, May 19

📍 Iberian Room

Poster

Trainee Event

AGE Board of Directors Meeting

🕒 7:00 PM - 9:00 PM, May 19

📍 Espada

AGE

Fri, May 20, 2022

7:30 AM

Breakfast

🕒 7:30 AM - 8:30 AM, May 20

📍 Iberian Foyer

[Networking Br...](#)

8:30 AM

Session 8: Trainee Chapter Symposium: Health Disparities in Aging

🕒 8:30 AM - 10:25 AM, May 20

📍 Iberian Room

[Symposia](#)

🗣 **Speakers**



Alice Kane

Research Associate
Harvard Medical School - Blavatnik Institute



Sarah Ocañas, PhD

OUHSC



Jessica Ho

Assistant Professor of Gerontology, Sociology, and Spatial Sciences
University of Southern California



Geoffrey Clarke

Professor of Radiology
UTHSCSA



Lucas Kniess Debarba

PostDoc Fellow
Wayne State University



Robert Newton

Associate Professor
Pennington Biomedical Research Center



Jennifer Ailshire

Associate Professor
University of Southern California



Elissa June Hamlat

Postdoctoral Fellow
University of California, San Francisco

6 Subsessions

- **Disparities in Health and Aging using Biosocial Surveys**
🕒 8:30 AM - 8:50 AM, May 20
- **Sex-specific effect of anti-aging drugs on age-associated neuroinflammation.**
🕒 8:50 AM - 9:05 AM, May 20
- **Disparities in life expectancy across high-income countries**
🕒 9:05 AM - 9:25 AM, May 20
- **Total Hippocampal Volume is Reduced for Intrauterine Growth Restricted (IUGR) Baboons with Aging.**
🕒 9:25 AM - 9:45 AM, May 20
- **Early Life Adversity, Pubertal Timing, and Epigenetic Age Acceleration**
🕒 9:45 AM - 10:05 AM, May 20
- **Lifestyle interventions targeting dementia risk factors in ethnic/racial minorities**
🕒 10:05 AM - 10:25 AM, May 20

10:25 AM

Networking and Coffee Break

- 🕒 10:25 AM - 10:50 AM, May 20
- 📍 Iberian Foyer

Networking Br...

10:50 AM

Session 9: Sex Differences in Aging

- 🕒 10:50 AM - 12:40 PM, May 20
- 📍 Iberian Room

Symposia

📌 Speakers



James Nelson
UTHSCSA



Rochelle Buffenstein
Research Professor
University of Illinois at Chicago - Graduate College



Duygu Ucar
Associate Professor
Jackson Laboratory for Genomic Medicine



Nisi Jiang
Barshop Institute UTHSA



Rhonda Voskuhl
Professor
University of California, Los Angeles



Li Gan
Director, Helen and Robert Appel Alzheimer's Disease Research Institute, Burton P. and Judith B. Resnick
Distinguished Professor in Neurodegenerative Diseases
Weill Cornell Medicine



Sarah Ocañas, PhD
OUHSC



Bérénice Benayoun
USC

6 Subsessions

- **Sex differences in human immune system aging and vaccine responses**
🕒 10:50 AM - 11:10 AM, May 20
- **Prepubertal castration eliminates sexual dimorphism in early adulthood mortality, longevity, and the pattern of bodyweight changes during aging in genetically heterogeneous (UM-HET3) mice.**
🕒 11:10 AM - 11:25 AM, May 20
- **Addressing the unmet need for a treatment targeting cognitive deficits at menopause.**
🕒 11:25 AM - 11:45 AM, May 20
- **Sex modifies innate immune response in neurodegeneration**
🕒 11:45 AM - 12:05 PM, May 20
- **Sex chromosomes contribute to the transcriptomic immune response in the mouse hippocampus**
🕒 12:05 PM - 12:20 PM, May 20
- **Sex-dimorphic regulation of innate immunity during aging**
🕒 12:20 PM - 12:40 PM, May 20

12:40 PM

Lunch on Your Own / Explore the Riverwalk

🕒 12:40 PM - 2:00 PM, May 20

2:00 PM

Session 10: Cellular Senescence in Aging and Disease

🕒 2:00 PM - 4:10 PM, May 20

📍 Iberian Room

📣 Speakers

**Myriam Gorospe**

NIA, NIH

**Carlos Anerillas**Postdoctoral researcher
National Institute on Aging (NIH)**Manali Potnis**PhD candidate
Drexel University, College of Medicine**Christopher Wiley**Scientist II and Assistant Professor
Jean Mayer HNRCA at Tufts University**Corina Amor**Group Leader-Independent fellow
Cold Spring Harbor Laboratory**Stefano Tarantini**Assistant Professor
OUHSC**Laura Niedernhofer**Director, Institute on the Biology of Aging and Metabolism
University of Minnesota**Peter Adams**

Sanford Burnham Prebys Med Disc Inst

7 Subsessions

● **Early SRC activation skews cell fate from apoptosis to senescence**

🕒 2:00 PM - 2:20 PM, May 20

● **The evolving role and regulation of H19 during cellular senescence**

🕒 2:20 PM - 2:35 PM, May 20

● **Oxylipin biosynthesis in senescent cells – biomarkers, disease drivers, and interventions**

🕒 2:35 PM - 2:55 PM, May 20

● **Senolytic CAR T cells reverse and prevent natural aging**

🕒 2:55 PM - 3:15 PM, May 20

● **Treatment with the BCL-2/BCL-xL inhibitor senolytic drug ABT263/Navitoclax improves functional hyperemia in aged mice**

🕒 3:15 PM - 3:30 PM, May 20

● **In hunt of pathogenic senescent cells**

🕒 3:30 PM - 3:50 PM, May 20

● **Cytoplasmic chromatin fragments (CCF) in senescent cells**

🕒 3:50 PM - 4:10 PM, May 20

4:20 PM

AGE General Membership Meeting

🕒 4:20 PM - 4:50 PM, May 20

📍 Iberian Room

AGE

4:50 PM

Awards Ceremony

1:30 PM

Arrival Ceremony

🕒 4:50 PM - 5:30 PM, May 20

📍 Iberian Room

AGE

6:30 PM

50th Anniversary Gala

🕒 6:30 PM - 9:00 PM, May 20

📍 Iberian Room

AGE

Networking Break

1 Subsessions

● Presentation of Distinguished Achievement Award to Mrs. Ann Barshop and Family

🕒 6:30 PM - 6:45 PM, May 20