3rd Edition

Global Longevity Federation

August 12th, 2025

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PROCEEDING BOOK

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Introduction

The 3rd Edition of the Global Longevity Federation, organized by the Sciinov Group, was successfully held on August 12, 2025. This premier event brought together a global community of researchers and scientists, clinicians and medical professionals, biotech and pharma representatives, investors and venture capitalists, and entrepreneurs and innovators to advance thfrontiers of aging and longevity science.

The conference provided a dynamic platform for sharing groundbreaking research, emerging technologies, and translational strategies aimed at extending human healthspan and lifespan. With a diverse lineup of expert speakers and thought leaders, the event showcased the latest innovations in cellular rejuvenation, regenerative medicine, senescence-targeting therapies, and precision longevity approaches.

The Sciinov Group was proud to host this influential gathering, which not only highlighted key scientific and clinical advancements but also fostered collaboration across disciplines to accelerate progress toward a healthier, longer-lived global population.

Keynote Presentations

Defining a Longevity Medicine for the Future: Perspectives from a Longevity Medicine Consultant

David Barzilai

Concierge Personal Longevity Coach and Health Consultant, USA

Biography:

David Barzilai, MD, Ph.D., MBA, M.S., DipABLM is Physician, Longevity Consultant, Health Coach, and Founder and CEO of Healthspan Coaching.

Through Barzilai Consulting (Healthspan Coaching LLC), David incorporates the latest data and scientific and technology breakthroughs, providing state-of-the-art longevity and healthy lifestyle coaching and consultations one-on-one with his clients. Quality of life, physical and mental vigor, and healthier lifespan are at the center of Barzilai Consulting's mission.

Known as Agingdoc on the social platform X, David actively engages with a community of scholars interested in geroscience, longevity medicine, and lifestyle medicine. His posts highlight the latest research in aging biology, healthy aging, lifestyle medicine, and longevity practices.

David is a Diplomat of the American Board of Lifestyle Medicine (DipABLM), certifying proficiency in essential aspects of lifestyle medicine such as nutrition, physical activity, sleep, and general health and wellness.
David has authored educational materials

David earned his Bachelor's Degrees of Arts in Cell and Developmental Biology and in Health and Society at the University of Rochester, both in 1998, where he also graduated Phi Beta Kappa and Summa Cum Laude. He earned his MBA from Isenberg School of Management, UMass Amherst in 2015 and his Master's Degree of Science in Psychology from Capella University in 2018.

David earned his Ph.D. in Health Services Research, which included training in evidence-based medicine in 2003 and his MD in 2005, both from Case Western Reserve University.Between 2006 and 2009, David did his Residency at The Warren Alpert Medical School of Brown University.

David is a highly sought-after speaker, having been invited to present at scientific and clinical conferences such as the Longevity Docs Mastermind 2024 (New York), Longevity Summit Dublin 2024 (Dublin), Longevity Med Summit (LMS) 2024 (Lisbon), the 8th Edition of Global Congress on Aging and Gerontology (Aging & Gerontology, 2024 (London)), ARDD 2024(Copenhagen), and the Hevolution Foundation Global Healthspan Summit 2025. He is keynote speaker for the 3rd Edition Global Longevity Federation.

Self-Domestication, Nutrients and Healthy Aging in Humans

Vijay K. Yadav

Columbia University, USA

Abstract:

Self-domestication of humans some 10,000 years ago led to many molecular deficiencies, often nutritional, that affected human health. These deficiencies remained insidious and unnoticed due to the short lifespan. However, due to advancements in medical care and government policies in the last century we are now living longer and these deficiencies have become apparent. My laboratory investigates how changes in molecular composition that occur with age affects the aging process. We recently identified that deficiency of taurine, a semi-essential micronutrient, is a driver of aging. We found that reversal of taurine deficiency during aging through once-daily oral administration of taurine to middle-aged mice of both the sexes increased the lifespan by 10–12% and suppressed morbidity. We further showed that effect of taurine transcended evolutionary landscape and showed that it increases healthy lifespan in invertebrates as well. Different aspects of this regulation were also demonstrated in primates. Taurine regulates healthy lifespan due to improvements in multiple hallmarks of aging. Taurine reduces cellular senescence, protects against telomerase deficiency, suppresses mitochondrial dysfunction, decreases DNA damage, and attenuates inflammaging. Our findings contribute to the growing body of literature that advances the concept that nutritional and lifestyle changes have profound impact on the aging processes, and that these can be modified to live longer and healthier life.

Biography:

Vijay K. Yadav is an American biologist and biogerontologist. He graduated from Indian Institute of Science, Bangalore, India. He is currently a faculty at the Vagelos College of Physicians and Surgeons at Columbia University. Dr. Yadav's laboratory investigates how (semi)essential nutrients regulate whole-body homeostasis, and how this process gets dysregulated during aging to identify novel avenue to treat diseases of aging. His laboratory in the last two decades has shown that self-imposed domestication in humans has led to an imbalance in nutrient-genetic interactions leading to increased incidence of diseases. Dr. Yadav is best known for his research on evolutionarily conserved mechanisms of aging, in particular on how nutrients such as vitamin B12 and taurine regulate aging.

Oral Presentations

The Impact of Chronic Inflammation on Human Health Span and Aging

David J Bearss

Halia Therapeutics, USA

Abstract:

Chronic inflammation has emerged as a critical determinant of health span and aging, influencing the onset and progression of age-related diseases. We have explored the intricate relationship between chronic inflammation and human health span, and its profound impact on aging processes. Chronic inflammation, characterized by persistent activation of the immune system, exerts multifaceted effects on cellular and molecular pathways associated with aging. Through dysregulation of inflammatory mediators such as cytokines, chemokines, and reactive oxygen species, chronic inflammation accelerates cellular senescence, compromises tissue homeostasis, and promotes the development of age-related pathologies including cardiovascular diseases, neurodegeneration, and cancer. Moreover, chronic inflammation disrupts the delicate balance between pro-inflammatory and anti-inflammatory mechanisms, leading to sustained tissue damage and impaired repair processes. The interplay between chronic inflammation and aging extends beyond individual organ systems and tissues, influencing systemic metabolic functions and immune responses. Understanding the mechanisms underlying chronic inflammation-mediated aging is imperative for developing targeted interventions to mitigate age-related diseases and promote healthy aging. The recent advances in understanding the intricate crosstalk between chronic inflammation and aging processes, offers insights into potential therapeutic strategies to enhance human health span and quality of life. We will present data with our novel strategy targeting the assembly of the NLRP3 inflammasome through a novel mechanism of NEK7 allosteric inhibition. By blocking the interaction of NEK7 and NLRP3, we prevent the formation of the inflammasome and the downstream signaling that drives immune-inflammatory diseases, hematologic malignancies, and even cancer development.

Biography:

Dr. David J. Bearss is a seasoned drug developer with over 25 years of experience in academic and industry settings. He possesses expertise in small molecule drug development utilizing structure-based drug design and computational approaches for drug discovery. Dr. Bearss has discovered 16 compounds with accepted INDs by the FDA and has worked on two approved drugs. Dr. Bearss has co-founded eight biotech companies and is an inventor with over 75 patents and an author with 85 peer-reviewed research publications. He has won several awards for his entrepreneurial and scientific efforts and has recently been awarded the Utah Governors Medal of Science.

Accelerating toward Longevity Escape Velocity: Rational Optimism and Breakthrough Initiatives

David Wood
Longevity Escape Velocity (LEV) Foundation, London Futurists, United Kingdom

Biography:
David W. Wood is the author or co-author of 12 books about the future, including The Abolition of Aging, The Singularity Principles, The Death of Death, Vital Foresight, Smartphones and Beyond, Sustainable Superabundance, and Transcending Politics.
As Chair of London Futurists, he has organized over 300 public meetups on techno progressive topics since 2008.
He is also the Executive Director of the LEV (Longevity Escape Velocity) Foundation.
Previously he spent 25 years designing smart mobile devices, at Psion PLC and Symbian (the creator of the world's first successful smartphone OS), which he co-founded in 1998, and as CTO at Accenture Mobility.

Luria - the future of AI in personalized healthcare

Andrea Olsen

CEO of Luria Health and the Youth Longevity Association, Insilico Medicine, Caltech University, USA

Biography:

Andrea Olsen is the founder of Luria, an AI-powered software for personalized healthcare. Based in Caltech, she pursues computational neuroscience, machine learning and longevity research alongside her entrepreneurship.

In her early career, Andrea started publishing peer-reviewed publications already at the age of sixteen. She founded the Youth Longevity Association for high schoolers interested in a longevity science career, and initiated the Inspire Longevity program at the largest aging pharma industry event, ARDD.

Her work on identifying genetic targets with AI in brain cancer (glioblastoma multiform), which was published in the journal Aging, became a foundational case study for Insilico Medicine - a company she started working at when she was only fourteen.

In her free time, Andrea likes to travel and explore new countries. She also has a passion for learning languages and is currently studying her seventh.

Key trends in the longevity science and market

Fiona Miller
quadraScope Ventures, USA

Abstract:
Around the turn of this century, scientists came to realize that it is possible to address the root cause of most diseases – aging itself – and thereby cure or prevent age-related diseases. This set the science of medicine on an exciting new course. As a venture fund investing in this new healthcare paradigm of extending human healthspan, quadraScope is carefully analyzing the ventures that are developing treatments to extend our healthspan.
The economic implications of this new healthcare paradigm are staggering. Of the $2.5T healthcare spending in the US, about 80% is spent on chronic age-related diseases. No wonder that the first approved aging drug is projected to be $200B in revenue, an order of magnitude higher revenue than the top selling drugs such as Keytruda or GLP-1 agonists.
Longevity healthcare is emerging as a massive new industry that will change our healthcare and the world forever. In this presentation, we will review the history of longevity science, status of longevity treatments today and examples of some ventures quadraScope has funded – ventures that hold the promise of treating multiple diseases by treating one of more hallmarks of aging.

Biography:
Fiona Miller is Managing Partner at quadraScope Ventures, a fund that invests in early-stage healthcare companies developing pharmaceuticals, diagnostics, software, equipment and devices enabling biological age reversal, disease treatment and prevention.
Prior to forming quadraScope, she was a successful technology entrepreneur with 3 successful exits:

- Founder and CEO of octoScope, sold to Spirent Communications in 2021
- Founder and CTO of Azimuth Systems, sold to Anritsu in 2016
- VP of Engineering at Scope Communications, sold to Hewlett-Packard (now Keysight) in 1998

Fiona holds a Bachelor of Science in Electrical Engineering from Columbia U, foundational courses in life sciences from Harvard and MIT and courses in private equity investing. She also holds 20 patents.

Identification of New Senomorphics Targets for Senescence Modulation in a model of naturally Aged Human Fibroblasts

Francesca Lugarini
Longaevus Technologies - SeneXell, UK

Abstract:
Cellular senescence is a fundamental biological process where cells permanently lose their ability to proliferate, contributing to aging and age-associated diseases as senescent cells accumulate in various tissues, including the skin, liver, lungs, and kidneys. Conditions such as cancer, atherosclerosis, and osteoarthritis are linked to this accumulation. Preventing the buildup of senescent cells is a promising strategy to combat aging and related diseases. Despite extensive research, the driving mechanisms of senescence remain poorly understood due to their diversity, complexity, and cell-type-specific context. Identifying genes that can be up- or down-regulated to delay or reverse cellular senescence is thus critical.
SeneXell, a pioneering project by Longaveus Technologies, addresses this challenge by identifying, screening, and targeting novel longevity and aging-associated disease mechanisms with a future aim of combinatory approaches. Current therapies often aim to eliminate senescent cells; however, senolytics can pose toxicity risks, face suboptimal delivery mechanisms, risk worsening outcomes in the presence of debilitating conditions, and lack long-term sustainability. Furthermore, generic inflammation therapies focus more on symptom relief than underlying disease modification. In contrast, senomorphics, like mTor inhibitors, promise alternatives for mitigating aging-related decline and promoting longevity.
SeneXell has screened over 7,000 determinants, identifying the top 50 most promising candidates for delaying or reversing cellular senescence. Utilizing primary cell cultures of human fibroblasts from both young and aged donors, SeneXell ensures relevance to in vivo human physiology. A comprehensive literature review and proprietary analytics algorithms identified these 50 genes as potential targets for down-regulation or up-regulation.
Experimental validation involved measuring a panel of senescence parameters before and after gene knockdown interventions. Results showed that knockdown of the top 7 target genes led to significant changes in the measured parameters, collectively indicating reversed senescence in treated cultures compared to non-treated controls. Specifically, gene knockdowns in cultures from old donors recapitulated characteristics of cultures from young donors. Integrative multivariate analysis using partial-least squares discriminant analysis (PLS-DS) confirmed that the knockdowns significantly made aged cells resemble young cells.
These findings collectively demonstrate that suppression of the selected genes can delay or reverse senescence in normal human fibroblasts, presenting attractive targets for anti-aging and anti-age-associated disease interventions in humans.

Biography:
Francesca holds a Master's in Cell Biology, Molecular Biology, and Biomedical Sciences from the University of Rome Tor Vergata. Her thesis, conducted at the Laboratory of Regenerative Pharmacology under Dr Puri at Santa Lucia Foundation (Italy), focused on Amyotrophic Lateral Sclerosis (ALS) and Inflammationin muscular fibroblasts. During her two-year work, she also contributed to a bioinformatic-based project to characterise the exosome content in a Duchenne Muscular Dystrophy (DMD) mouse model and participated in two pre-clinical trials centred around DMD and Dysferlinopathies. As a PhD candidate, in the laboratory of Biochemistry of signal Dynamics under Dr Faesen, at the Max Planck Institute for Multidisciplinary Sciences (Germany), Francesca pioneered a project on the biochemical reconstitution of Autophagy initiation, redefining the dynamics framework and mechanistic process for Autophagy complex formation. Her PhD in Biochemistry from the University of Göttingen revolved around the study of metamorphic proteins within the autophagy initiation complex.

Introspecting Potential Threat of Chronic Stress to Elderly Well-being and Major Reductional Strategies

Bhaweshwar Singh
L.N.Mithila University, India

Abstract:
Elderly by and large represent 60+ population confronting multiple disabilities as a natural consequence of universal ageing and senescence. Notably the disease burden in the oldest old age segment is maximised. Life conditions in terminal age cohort often turns critical. Further beside heterogenicity of the geriatric population growing exponentially as a sequel of raised life expectancy necessitates customised care and support. Quite pertinently chronic stress intervention is hazardous for all ages. However, the age-ravaged older adults are probably the worst victims. Chronic stresses of variable intensities and duration might jeopardise both physical and mental well-being among elderly. Optimization of senile health is seemingly a tough task. It is in this perspective that the present discussion has been undertaken.

Related data from secondary source and select respondents from the aged lot inhabiting urban Darbhanga and its suburbs reveal that repetitive episodes of stress and even their reference in later part of life could interfere with systemic functionalities and lead to depressive mood swings. In every likelihood, living conditions of predominantly under privileged single elderly belonging to unorganised sector and suffering from chronic infections and/or metabolic diseases were found to be highly deplorable.

The paper summarily discusses chronic stress as one of the potential health hazards with conspicuous ill effects among the elderly and suggests practically feasible reductional plans. Developing persona with positivity, accepting the inevitability of age onslaughts and last but not the least, evolving mental preparedness for bearing old age blues could be thought of considerable help in achieving the goal of elderly well-being with minimal distress and discomfort.

Biography:
With a teaching experience of more than 39 years, the author has remained passionate for enhancing subject knowledge by continuing participation in seminars and conferences in the area of research interest ever since superannuation from the University Department of Zoology, L.N. Mithila University, Darbhanga on Feb 28, 2022 and also relinquishing the additional position of the Director of the Institute of Gerontology and Geriatrics situated on the campus and publishing books and research articles.

Next Edition

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