

# GLOBAL LONGEVITY FEDERATION



**MAY 15-16, 2023  
DUBAI, UAE**

**Venue Address:**

Royal Continental Hotel  
P.O. Box 182166, Deira, Dubai, UAE

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# GLF 2023

MAY 15-16, 2023 | Dubai, UAE (Hybrid Event)

GLF 2023

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# KEYNOTE

## PRESENTATIONS

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## Aging is Reversible

### Michael Fossel

Telocyte, United states

#### Biography

Dr. Fossel is president of Telocyte, a biotech firm targeting Alzheimer's disease, intending to begin FDA-sponsored human trials aimed at curing the underlying disease process using telomerase therapy. He has authored more than 100 articles, chapters, and books, on aging, medicine, and ethics. In 2020, his invited article on the causes of Alzheimer's and other dementias, A Unified Model of Dementias and Age-related Neurodegeneration, generated more than 600 reprint requests globally. It not only lays out a clear understanding, but offers a novel point of intervention in order to potentially prevent and cure the dementias. He received a joint BA and MA in psychology in four years from Wesleyan University, and then won an NSF fellowship. He completed his PhD in Neurobiology in 1978 and his MD (both at Stanford University) in 1981, where he taught neuroanatomy, experimental design, and other courses in the medical school. He began to focus on aging, emphasizing premature aging syndromes, and the experimental testing of aging theories. Dr. Fossel was a Clinical Professor of Medicine for almost three decades, the director of the American Aging Association, editor of several journals, and a frequent speaker and chair at conferences. His academic textbook, Cells, Aging, and Human Disease, published by Oxford University Press, is an extensive look at the field, with well over four thousand references. It reviews the fields of telomere biology and cell senescence as they apply to human clinical diseases and aging. Still the only medical textbook on the clinical potential of telomerase, it includes in-depth discussions of Alzheimer's disease, the progerias, atherosclerosis, osteoporosis, immune senescence, skin aging, and cancer, as well as the potential for fundamentally new therapies for these diseases using telomerase therapy. His more recent book, The Telomerase Revolution, discussed prospective FDA clinical trials of telomerase therapy as an effective intervention for Alzheimer's disease. His book was lauded in both The London Times and the Wall Street Journal (as one of the five best science books of 2015). It is now out in 7 languages and 10 global editions.

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**Immune mediated removal of senescent cells is effective in treating multiple age related disease indications.**

## Robin Mansukhani

Deciduous Therapeutics, United States

As we age, the immune system fails to effectively remove senescent cells resulting in the accumulation of pathogenic senescent cells. This accumulation of senescent cells drives chronic inflammation, fibrosis, and stem cell exhaustion. Unfortunately, identification of a targetable immune mechanism to selectively clear senescent cells was previously undiscovered.

In response, Deciduous Therapeutics was formed to elucidate the endogenous immune mechanism underlying senolysis. Using single cell RNA sequencing, we analyzed senescent cell populations to uncover that Natural Killer T-cells or “NKT’s” were responsible for clearing senescent cells in vivo.

Further, we show that while NKT function declines with age and in the presence of disease, they can be restimulated with novel immunotherapies. Subsequently, our in vivo data shows that a single dose of the NKT agonist can stimulate NKT cells, leading to a significant ablation of senescent cells, ultimately culminating in disease resolution in both metabolic and fibrotic disease classes.

### Biography

Robin Mansukhani is the CEO and Co-Founder of Deciduous Therapeutics, a venture-backed start-up developing novel immunotherapies to treat age related diseases. He also been an advisor to several early-stage biotech companies in the Aging and CNS space including Therini Bio and Reservoir Neurosciences. Previously, Robin co-founded and served as President and CEO of Alzeca Biosciences, a diagnostic imaging company for CNS disorders, which is supported by venture investors, the Alzheimer’s Drug Discovery Foundation, and an NIH Direct to Phase 2 Grant. Robin has been an invited keynote speaker both domestically and abroad, including TEDx. Previously, Mr. Mansukhani worked in early-stage venture capital at The Maple Fund and investment banking at Axiom Capital. He has also co-founded BlueStamp Engineering, an intensive, project-based engineering program for high school students. Robin previously served a term in AmeriCorps where he led health and literacy programs. Mr. Mansukhani holds a B.S. in Biochemistry from Case Western Reserve University.

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## Investment trends within Longevity

### Jyothi Devakumar

Longevity Tech Fund, USA

Longevity with its potential to be the next megatrend is attracting attention of investors worldwide. The long-term macroeconomic impact, ability to transform healthcare practice, ever expanding definition and blurring boundaries with other verticals make this one of the most sought-after fields of basic and application oriented clinical research. This talk brings in the investor's perspective on the attractiveness of the field and also some of the hot trends such as AI, computational biology and machine learning and their impact on longevity drug discovery trajectory.

#### Biography

Dr. Jyothi Devakumar is a scientist, entrepreneur and a lifelong longevity enthusiast. She holds a PhD in biotechnology and her postdoctoral work was in in-vivo delivery systems. She has worked in various sectors of the industry including working as a part of a contract research organization liaising with several ivy league pharma companies in the drug discovery space, as scientific founder and CSO of two startups, and as a consultant in the regenerative medicine and longevity space. In the investing space, she has been a venture consultant, part of a mid-sized venture fund as the Principal Biologist and Partner. She is currently associated with the Longevity Tech Fund group of companies as the Chief Science officer and Partner. She has served on several scientific advisory boards and editorial boards, and she brings in scientific expertise, business strategy and management experience with a multicultural multi-country background.



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## How Smart Home Technology Meets the Needs and Wants of Older Adults: A Qualitative Study on Perspectives and Information Preferences.

**Dr. Abir Ghorayeb**

University of Bristol, UK

Smart home technologies have the potential to support ageing in place by providing older adults with increased safety, care, and autonomy. This study investigates the perceptions of smart home technologies among older people, focusing on the design of visualisations for smart home data. Thirteen participants aged 65-89 were involved in various activities, including interviews, observations, and design workshops, to explore their information needs and preferences. The study compared the perceptions of those with and without direct experience of smart home technologies. Participants with direct experience expressed increased acceptance and fewer concerns over time, while those without experience focused on potential intrusiveness and vulnerability. However, the usefulness and acceptability of these technologies are influenced by older people's access to and understanding of the information gathered by the technology. Visualisations that work for older adults would suggest ways or opportunities to connect and socialise, stimulate contact with close friends or family members, maintain awareness of health and wellbeing, provide support in decision making and in cognitive tasks and daily life activities, and monitor health status. By engaging older adults as co-designers of smart home visualisations, we can provide an appropriate in-home interface that resonates with their experiences and promotes their independence and quality of life. Older adults are the best co-designers for development of visual metaphors that reflect their own experiences and preferences. Our findings promote the development of smart home technologies that are appropriate, acceptable, and useful for supporting ageing in place. By considering what older people want to know from smart home technology and how to visualise data in ways that work for them, we can improve the acceptability and perceived utility of in-home technology.

### Biography

Abir Ghorayeb is a digital health researcher, with a focus on the use of smart home technologies to support aging in place. She is an honorary research associate at the University of Bristol. She was a Jackson Fellow, sponsored by the EPSRC, within the Musculoskeletal Research Unit. Dr. Ghorayeb has also held positions at the University of Oxford and the University of Montreal, where she conducted research on the use of digital health technologies to improve healthcare outcomes. Dr Ghorayeb's research interests include participatory design with older people, accessibility, usability scales, clinical decision support systems, and digital health evaluation methods. She has published numerous research papers in leading academic journals and presented her work at conferences around the world. Her work has the potential to improve healthcare outcomes, making it more patient-centred, and enhance the quality of life for older adults.



# WORKSHOP

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**Practical biogerontology and longevity medicine.  
Introducing aging clocks in clinical practice**

## Fedor Galkin

Deep Longevity, Hong Kong

This workshop will teach you how to use aging clocks to build a longevity-focused narrative with your patients or customers. The main focus of the workshop will be a hematological aging clock Blood Age that only requires standard clinical blood tests to function and can be accessed via an easy-to-use web interface Senoclock.AI.

### Biography

Fedor Galkin is the Research Director at Deep Longevity. He leads and oversees multiple research projects exploring the advances of AI and machine learning in the context of aging, aging diagnosis, and anti-aging solutions. As a graduate of the Lomonosov State University, Fedor has received a master's degree in Bioengineering and Bioinformatics. He has co-authored multiple research papers and patents.

Fedor's previous research on the effects of different biological and psychological factors on human aging has led to the development of various aging clocks, including Blood Age, which is one of the core technologies offered by SenoClock. An expert in Python and data analysis, Fedor is deeply-integrated with the research on human aging. Currently residing in Dubai, Fedor is often speaking at anti-aging conventions.

**ORAL**

**PRESENTATIONS**

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## Development of a Novel Multi-dimensional Measure of Aging to Predict Mortality and Morbidity in the Prospective MJ Cohort

Xifeng Wu

Zhejiang University School of Public Health, China

Although biological aging has been proposed as a more accurate measure of aging, few biological aging measures have been developed for Asians, especially for young adults. A total of 521,656 participants were enrolled in the MJ cohort (1996 -2011) and were followed until death, loss-to-follow-up, or Dec 31, 2011, whichever came first. We selected 14 clinical biomarkers including chronological age using random forest algorithm and developed a multi-dimensional aging measure (MDAge). Model performance was assessed by area under the curve (AUC) and internal calibration. We evaluated the associations of MDAge and residuals from regressing MDAge on chronological age (MDAgeAccel) with mortality and morbidity, and assessed the robustness of our findings. MDAge achieved an excellent AUC of 0.892 in predicting all-cause mortality (95% confidence interval [CI]: 0.889-0.894). Participants with higher MDAge at baseline were at a higher risk of death (per 5 years, HR=1.671, 95%CI: 1.662-1.680), and the association remained after controlling for other variables and in different subgroups. Furthermore, participants with higher MDAgeAccel were associated with shortened life expectancy. For instance, compared to men who were biologically younger (MDAgeAccel $\leq$ 0) at baseline, men in the highest tertiles of MDAgeAccel had shortened life expectancy by 17.23 years. In addition, higher MDAgeAccel was associated with having chronic disease either cross-sectionally (per 1-SD, OR=1.564, 95%CI: 1.552-1.575) or longitudinally (per 1-SD, OR=1.218, 95% CI: 1.199-1.238). MDAge accurately predicted mortality and morbidity, which has great potential in the early identification of individuals at higher risk, and therefore promoting early intervention.

### Biography

Xifeng Wu, M.D., Ph.D., is Dean and Professor of School of Public Health; Vice President of The Second Affiliated Hospital of School of Medicine; Director of National Institute for Data Science in Health and Medicine; Director of Center for Big Data Research in Medical Insurance & Health Policy at Zhejiang University; China National Top Expert; and Zhejiang Province Top Expert. Dr. Wu's research focus has been on human genetics and health big data.

Dr. Wu has made impactful contribution on using highly innovative and integrative strategies to build big data, discover novel modifiable risk factors, uncover molecular signatures, and create robust prediction models across the cancer continuum with evidence-based artificial intelligence to advance precision health. She is a world-renowned public health expert and highly productive cancer epidemiologist with over 920 publications in journals such as Nature Genetics, Lancet, Lancet Oncology, British Medical Journal, JAMA, New England Journal of Medicine, and Nature.

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## Spectral Analysis Applications to the Study of Human Gene Regulatory Networks Evolution in Aging

Anastasiia Velikanova  
Open Longevity, UAE

No consensus exists on the fundamental processes underlying aging. Our study aims to determine how structure and dynamics of gene regulatory networks affect the aging phenotype. Genes, proteins, cells and even organs in the living organism are not independent. They work together, and the phenomena of life emerges from their cooperative dynamics. We used the spectral tools from the network theory to analyse how gene networks evolve during aging. Gene networks were acquired from gene expression data. The analysis pipeline can be seen on Fig. 1. Spectrum is a fingerprint of the network (Fig. 2) and its analysis can reveal hidden structural properties and predict dynamics. Spectra of blood gene networks demonstrate significant change with age. The number of clusters decreases with time (Fig. 3a), which is a sign of the loss of resilience. We found a large non-clustered part of the blood gene network that is almost conserved across different ages. The large stable non-clustered part with smaller clusters demonstrates both network robustness and flexibility, and a hint for near-critical dynamics. To prove this near-criticality, a further analysis of clusters evolution is needed. It also allures that a complicated aging process could be described in terms of several network characteristics, that encode all the biological important changes. The spectral entropy (Fig. 3b) increases with age, with local minimums at 25 and 53 years, which correspond to transitions between early adulthood, middle age, and older age. The cluster content was analysed and compared with well-known pathway databases

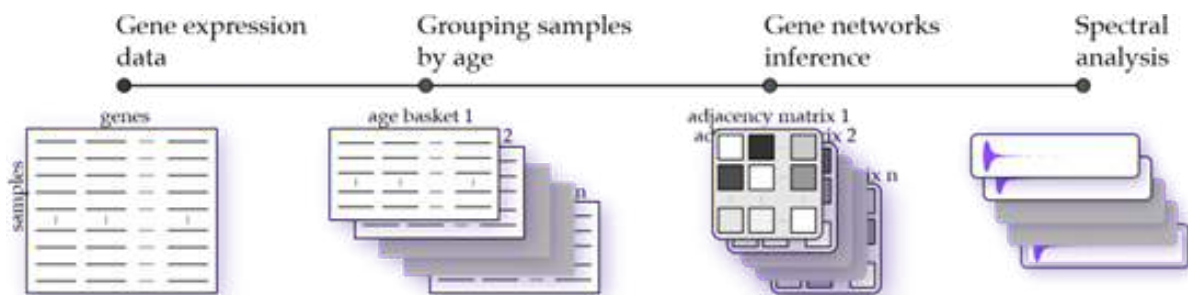


Figure 1: We obtained gene expression datasets for a particular species and tissue from open source databases, processed and standardized them. The samples were categorized by age, and GENIE3 algorithm was used to calculate adjacency matrices of gene networks for each age group. Network theory tools were applied to analyze each network, and clusters were biologically interpreted.

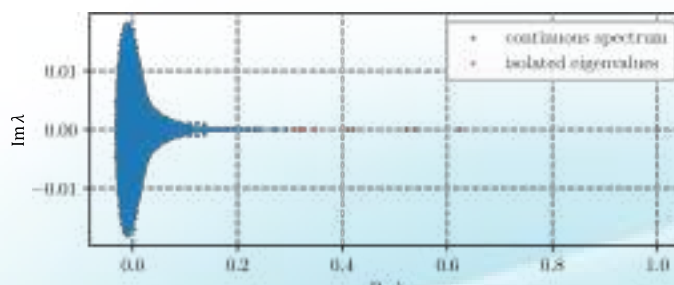


Figure 2: Example of the spectrum of gene network built from transcriptomic data of human blood for individuals aged 24-26 years old.

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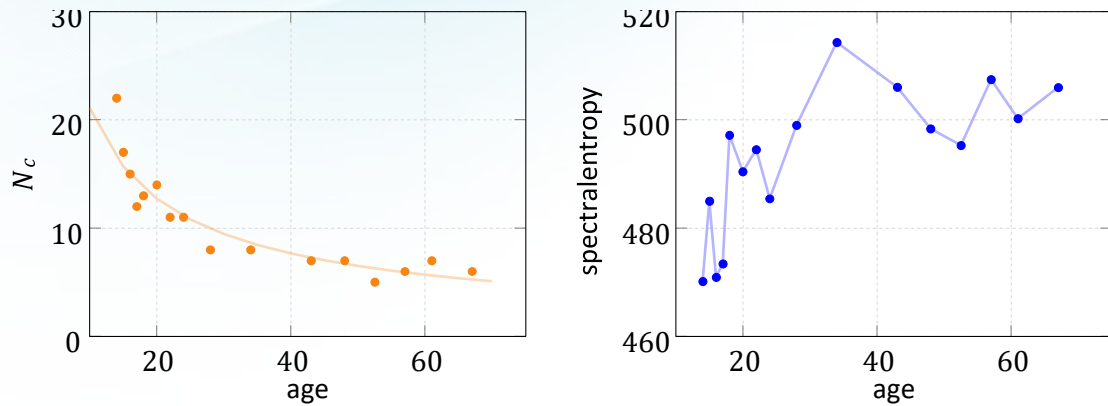


Figure 3: a) Dependence of the number of clusters in human blood gene networks obtained by spectral clustering on age, b) Dependence of the spectral entropy of gene networks, built on blood transcriptomic data, on age.

## Biography

Anastasiia, the Aging Nets Project leader, has a bachelor's degree in General and Applied Physics from the Moscow Institute of Physics and Technology and a master's degree in Life Science from the Skolkovo Institute of Science and Technology.

Prior to this project, she coordinated scientific projects at Open Longevity and worked as a bioinformatician at the Center for Neurobiology and Brain Restoration.

She assembled a team of bioinformaticians and theoretical physicists, and developed the study pipeline for this multidisciplinary project. Within a year, the team collected, processed, and analysed data from four human tissues and two species: mouse and fly.

Anastasiia's interdisciplinary experience in both physics and biology has enabled her to effectively manage the project and set research objectives.



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## U.S. National Institute on Aging's Seed Funding Programs are seeding key innovations to improve healthspan

**Todd Haim**

NIH/National Institute on Aging(NIA), USA

The NIA is providing almost \$150M annually in non-dilutive seed funding to startups developing innovations that extend and enhance the healthspan of older adults. The funding, which occurs through Small Business Innovation Research (SBIR) grants, has enabled U.S. startups to achieve key value inflection points, raise investments and bring products to the market. The funding enables advances in longevity therapeutic startups such as Juvena Therapeutics and Dorian Therapeutics. Approximately 40% of the funding supports innovations in digital health and helped accelerate innovations that improve care, including Careband, Care.Coach, CareVirtue, MapHabit, Care Daily, Biosensics, and others. In 2022, NIA launched several entrepreneurial training initiatives that represent potential best practices. The REDI funding opportunities equip early career researchers for a broad array of future career paths. NIA launched the NIA Healthy Aging Start-Up Challenge and Accelerator in which 20 finalist teams participated in a longevity-focused accelerator. The program, which received over 200 applications, includes more than 20 workshops featuring 30 subject matter experts, an in-person networking entrepreneurial bootcamp, and mentorship. The startup challenge is making key strides in fostering diversity in entrepreneurship and in supporting the development of innovations that address health equity. The program, which covers areas from longevity biotech, fintech, care management, and longevity-focused digital health, has been incredibly as evidenced by the fact that four of the teams have won international pitch competitions within just four months. Overall, NIA's entrepreneurial and seed finding programs are supporting the advancement of innovations posed to increase the healthspan of older adults worldwide.

### Biography

Todd Haim is the Director of NIH/NIA's Office of Strategic Extramural Programs. In this role, Todd leads ~\$150 million in seed funding to startups developing longevity-focused innovations as well as a wide variety of innovative career development funding opportunities and initiatives. Todd received his PhD from Albert Einstein College of Medicine and has been successful in his previous positions at the U.S. National Cancer Institute, the U.S. National Academy of Sciences, and Pfizer.

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## Senomorphics or Senolytics for Vascular Calcification and Cardiovascular Disorders

Shivani Arora

Clemson University, USA

Vascular stenosis due to calcification, diagnosed as plaques of calcium deposited in tunica media, is major contributor for cardiovascular morbidity and mortality. Preventing tissue remodeling and apoptosis in arteries is critical for devising new therapeutic interventions to treat Vascular Calcification (VC). Presence of senescent cells plays an important role in progression of pathology (like diabetes and chronic kidney disorder; CKD) as well as aging associated VC. Significant number of in-vitro reports corroborate the potential role of senescent cell phenotype (SASP) in osteoblastic differentiation of VSMCs. Preclinical data from the stallwarths in the field; Campisi and Kirkland labs; have supported the view that senolytics can be potential therapy for treating vascular stenosis by clearing senescent cells from atherosclerotic plaques. These reports support the compelling hypothesis that senolytics (agents that induce apoptosis selectively in senescent cells) and senomorphics (agents that alter SASP and modulate local immune environment) could provide attractive therapeutic strategy to prevent and treat vascular calcification. However, a recent study by Grosse et al (2020), demonstrated that global elimination of P16<sup>high</sup> cells is irreplaceable and was in-fact detrimental to lifespan as it led to liver fibrosis and disruption of blood tissue barrier. (Schematics1- Challenges and Proposed Solution). In our preliminary data we have observed an increased expression of Pit-1 (Ca and P ion transporter) and NOD Like Receptor Protein 3 (NLRP3) in the calcified aorta, which is reversed by targeted chelation therapy with EDTA nanoparticles (NPs) with a simultaneous decrease in calcium deposition, SASP and senescent cells, without apoptosis.

### Biography

Shivani Arora has completed her PhD from Delhi University and has obtained her initial postdoctoral training at University of California, San Francisco in Prof. Anil Bhushan Lab. Currently she is continuing her postdoctoral training under Prof. Vyavahare mentorship at Dept. of Schematics 1- Senomorphics as potential therapeutic strategy to treat vascular calcification. Bioengineering, Clemson University.

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## Reversing Your Biologic Age with Rejuvant

**Thomas D. Weldon**  
Ponce De Leon Health, USA

### Biography

Tom Weldon has 35 years of senior management experience, primarily in the medical device industry, in both early stage and public companies. He is a well-known entrepreneur and venture capitalist and holds more than two dozen patents. He has founded more than a dozen companies, which have created more than \$2 billion in shareholder value. Today, he is the founder, executive chairman and CEO of Ponce De Leon Health, which focuses on increasing human health span. Rejuvant is a product he helped develop.

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## **Intergenerational relationships, benefits and actions with a positive impact for the new positioning of the 50+ in society, companies and active longevity.**

Eliane Kreisler  
longetalks, Brazil

**U**N studies find that the global population is aging at never seen rate, with the proportion of individuals aged 60 and over predicted to increase from 12% (in 2015) to 22% by 2050. This demographic shift affects the diversity of the entire workforce, markets, customers, employees and the social, economic and political environment. According to research, intergenerational engagement can benefit health and well-being within an aging population and companies can contribute and also remain competitive in this ever-changing job market. There are a number of potential benefits of intergenerational engagement, most notably in relation to anxiety, teaching younger generations, cross-age attitudes and physical activity. Experience-based skills help establish their position as mentors, mentors and role models for younger generations and, in turn, lead to mutual understanding and more connected communities (Hilson and Ennals, 2007). Studies that involved the exchange of knowledge between two generations were community- or center-based for older persons (eg, Hsu et al., 2014; Johnson, 2014) are transferable for implementation in any country and at locations where and specific communities where different generations are able to meet.

Preparing leaders so that they can build Intergenerational understanding is fundamental. Intergenerational leaders need to know how to deal with and promote collaboration between people from different generations, encouraging an Intergenerational dimension in their management. Identifying each generation's relationship with work favors collaboration and intergenerational synergies, such as cooperation, commitment and interaction among all.

### **Biography**

Pedagogue, post-graduated in Positive Psychology from the Pontifical Catholic University of Rio Grande do Sul/PUCRS, with a specialization in Gerontology, from the Paulista Institute of Geriatrics and Gerontology/IPGG. Managing partner of Pontes&Conexões Consulting, focused on Age Diversity, and training projects for intergenerational leaders. Management and Career Transition Consultant focused on the 50+. Member of the HubMulher maturity committee. Co-author of the books: Revolution 50+ and Diversity and Inclusion: Practical Cases, and articles on Intergenerational Leadership and Meeting of Generations – Case Longetalks channel . With more than 35 years of experience in People Management in large companies.

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## Tibetan Medicine and Longevity

**Cynthia Husted, PhD**

Global Institute for Tibetan Medicine, USA

Current concepts of Tibetan medicine have been in practice for over 1500 years and modern functional medicine is in philosophical agreement of addressing the systems biology whole. Longevity is one of the eight branches of Tibetan medicine which takes a mind-body approach that places great importance on harmony of the mind, body, and spirit, achieved by maintaining positive mental attitudes balanced with virtuous behavior, including lifestyle, diet, herb and herb/mineral medications, and external therapies as needed. At the heart of this healing system is a deep connection with nature and the main aim is prevention of illness and promotion of longevity.

Longevity and regeneration approaches in Tibetan medicine occur with the sequence of tonification, detoxification, and rejuvenation. The formation of the body is defined by the cycling of nutrition into the seven tissues of plasma, blood, muscle, fat, bone, marrow, and seminal fluid/hormones. These seven tissues must be in balance for adequate embryological development and for maintenance through life and longevity.

From the view of functional medicine, tonification involves processes such as evaluating and balancing the gut microbiome, including dietary modifications, and balancing biochemistry, including hormones, nutrient deficiencies, and the cardiovascular system. Once this balance is optimized then detoxification of heavy metals, organic solvents and pesticides, and pathogenic microorganisms can proceed. After detoxification, the rejuvenation protocols are implemented to restore structure and function and promote longevity. Rejuvenation protocols include the potential use of Tibetan herb-mineral precious pills, herbal baths, medicated oils and massage, and tsa lung yogic exercises.

### Biography

Dr. Husted obtained a Ph.D. in physical chemistry with a focus on nuclear magnetism and quantum mechanics as a possible link to the energy concepts of traditional medicines. Her research focus was myelin and multiple sclerosis, including postdoctoral studies at UCSF. She was then Director of the Center for the Study of Neurodegenerative Disorders at UCSB, where she implemented integrative approaches to research of neurodegenerative disorders, including managing a three-acre medicinal plant garden. She is now board certified in functional medicine and conducts integrative research through two nonprofits, the Science and Spirit Institute and the Global Institute for Tibetan Medicine.

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## Reproductive Longevity: Challenging Current Perspectives on Ovarian Senescence

Natasa Billeci  
FemmeÂGE, USA

A global effort to increase healthy human longevity is now underway. But even though women today are living longer than ever before...The onset of menopause has only increased by 3 to 4 years and little headway has been made to ward off the cascade of negative health effects that coincide with the end of fertility. More and more women are asking: "What good is living longer, if those added years are in poor health?" Aging up to two times faster than the rest of the body, women's reproductive organs are already considered geriatric by the time they reach their early 30's. We now know that many conditions once thought to be an inevitable consequence of aging and the conclusion of a woman's fertility are actually preventable. With an enhanced fundamental understanding of female biology and, the underlying mechanisms of reproductive aging, will come opportunities to influence health outcomes and improve quality of life. Current evidence in research and novel therapeutic innovations are ushering in a new paradigm that will shift the delivery of care from a reactive symptoms-based model to a sustainable and prevention-based model thus increasing healthspan for fifty percent of the global population of citizens. The goal of this presentation is to:

- discuss existing views on ovarian aging
- recent findings in reproductive aging research
- implications for increasing healthspan
- utility of complimentary treatments to support fertility and IVF
- reduction of disease burden
- extension of time to menopause
- explore how a paradigm shift in delivery of care will transform health for women on a global scale

### Biography

Natasa Billeci is a Nurse Practitioner, founder and CEO of women's health platform FemmeÂGE and the founder of the H.E.R.R Longevity Foundation. Her recent whitepaper is shedding light on chasms and opportunities in extending reproductive longevity for the modern woman. As a passionate clinician, she is on a mission to advance our knowledge of female biology through research while delivering equitable, actionable and evidence-based health care to women globally. She is pursuing a PhD starting 2023 to investigate the biobehavioral mechanisms responsible for extending reproductive longevity. Natasa believes that if we can decelerate ovarian aging, we can prolong fertility, delay the menopause — and most importantly, reduce the cascading negative symptoms and conditions that come along with it. Discovering female specific biomarkers of reproductive aging will empower women across the globe to live more healthy - symptom and disease free - years of life.

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## Recognizing degenerative aging as a medical condition to extend healthy longevity: research methodology, education and policy

**Ilia Stambler**

Bar Ilan University, Department of Science, Technology and Society;  
Vetek (Seniority) Association – the Movement for Longevity and Quality of Life, Israel

The anti-aging, longevity medicine or geroscience-based approach to health research and healthcare aims to treat degenerative aging processes as the main underlying causes and risk factors of chronic diseases. This approach is poised to significantly improve healthy longevity and solve urgent challenges of the aging population. Yet, a major obstacle to implementing this approach is the deficit of agreed evidence-based criteria for the evaluation of the aging process, in order not only to predict aging health trajectory, but also to evaluate the efficacy and safety of anti-aging therapies. A further crucial obstacle is the deficit of massive and effective educational and policy-making efforts in this field. This presentation will discuss some of the methodological, educational and policy challenges of geroscience-based research and healthcare, and potential ways toward their solution.

### Biography

Ilia Stambler, PhD, is the Chief Science Officer and Chairman of Vetek (Seniority) Association – the Movement for Longevity and Quality of Life, Israel (<http://www.longevityisrael.org/>). He is a fellow at the Department of Science, Technology and Society, Bar Ilan University, Israel. He received his PhD at the Department of Science, Technology and Society, Bar Ilan University. His thesis explored the “History of Life-extensionism in the Twentieth Century” which resulted in an encompassing compendium on the history of aging and longevity research (<http://www.longevityhistory.com/>). His research has focused on the historical and social implications of aging and longevity research, including ethical, policy and regulatory implications. He has also been involved in mathematical modeling of aging and aging-related diseases, utilizing information-theoretical measures, with high impact publications. He has established the “Quantified Longevity Guide” commitment at the European Innovation Partnership on Active and Healthy Aging (EIP-AHA). He is the author of the books “A History of Life-extensionism in the Twentieth Century” and “Longevity Promotion: Multidisciplinary Perspectives” ([www.longevityhistory.com](http://www.longevityhistory.com)) and over 60 academic papers (journal articles and book chapters) including in Progress in Neurobiology, Aging and Disease, Cancer Detection and Prevention, Rejuvenation Research, Current Aging Science, Global Aging, Mechanisms of Ageing and Development, Frontiers in Genetics, Geroscience, The Lancet Healthy Longevity, Encyclopedia of Gerontology and Population Aging, Encyclopedia of Biomedical Gerontology, and other scientific journals and books. He has been an invited speaker in over 50 academic conferences, over half of which he co-organized and/or co-chaired. He is actively involved in advocacy for aging and longevity research, serving as an executive committee member of the International Society on Aging and Disease (ISOAD <http://www.isoad.org/>) and International Longevity Alliance (ILA <http://www.longevityalliance.org>; [www.longevityforall.org](http://www.longevityforall.org)), fellow at the Institute for Ethics and Emerging Technologies (IEET <https://ieet.org/>), scientific committee member of the European Society of Preventive, Regenerative and Anti-Aging Medicine (ESAAM <https://esaam.global/>), fellow and policy director at the Global Healthspan Policy Institute (GHPI <https://healthspanpolicy.org/>). He has initiated and organized the international advocacy and educational campaign for aging and longevity research – the “Longevity Day and Month” with events organized since 2013 in dozens of countries. He is the author and active promoter of the section on “Enhancing research, development and education for healthy longevity and prevention of aging-related diseases” as a part of the Israel National Masterplan on Aging published by Knesset in 2019. He played an active part in the campaign for the inclusion of aging into the WHO work program in 2017, and other advocacy and educational campaigns for healthy longevity research, development and application.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Longevity phenomena in human practice

**Sebastijan Orlić**

Founder: Kvaliteta života,

Team Specialist: GlycanAge & Science Associate: Ani Biome, Croatia

**A**lthough results and conclusions from longevity experiments in labs look and sound tempting, we often forget that we cannot and should not directly extrapolate those results on humans. Our organism and psycho-social interactions in real life present a much more complex environment and circumstances compared to animals studied in longevity experiments, usually *Drosophila* (fruit flies), *Nematodes* (worms), yeasts and rodents.

What can be useful from those studies, what are longevity phenomena observed on humans so far and is there a fountain of youth, but one applicable on *Homo sapiens*? Find out in this lecture!

### Biography

PhD degree in Engineering Chemistry (field biomaterials/quality of life), fitness instructor and certified exercise nutrition coach (Precision Nutrition Canada).

Focused on the application of science in order to promote longevity, healthspan and quality of life by achieving optimal human life and sports performance.

My practice deals extensively with nutritional interventions, exercise physiology, studying the impact of microbiota health and function as well as topic related supplementation and pharmacology.



# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Integrative analysis reveals a novel aged clonal B cell population in the origin of spontaneous age-related lymphoma in mice

José Pedro Castro

Brigham and Women's Hospital, Harvard Medical School, Boston, USA

i3S, Institute for Research and Innovation in Health, University of Porto, Portugal

While cancer is an age-related disease, most studies focus on genetically engineered younger mouse models. Here, we uncover how cancer develops as a consequence of the naturally aged immune system in mice. B-cell lymphoma frequently occurs in aged mice and is associated with increased cell size, splenomegaly, and a novel age-associated clonal B-cell (ACBC) population. ACBC cells clonally expand driven by somatic mutations in oncogenes, activated c-Myc and hypermethylated promoters, and both genetically and epigenetically recapitulate human B-cell lymphomas. Mechanistically, mouse cancerous ACBC cells likely originate from age-associated B cells (ABCs). B cells by interacting with ABC increase in cell size and likely followed by transformation into ACBC through CD22 binding. Although clonal B cells (ACBC) are a product of an aging microenvironment, they evolve being self-sufficient and support malignancy when transferred into young mice recipients shortening animals' lifespan. Inhibition of mTOR and c-Myc in old mice attenuates premalignant changes in B cells documented here during aging and emerges as a therapeutic strategy to delay the onset of age-related lymphoma. Together, we uncover how aging contributes to B cells cancer transformation through cell-intrinsic and microenvironment, characterize a model that captures the origin of spontaneous cancer during aging and identify interventions that may postpone age-associated lymphoma.

### Biography

José Pedro Castro has completed his PhD at the age of 30 years from University of Porto and postdoctoral studies from Harvard Medical School. He is an independent assistant researcher studying aging and age-related inflammation. He has published more than 25 papers in reputed journals and has been serving as an editorial board member and reviewer for a number of relevant journals in the aging field. He also teaches immunology and he is involved with the Longevity Education Hub initiative.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Stop Idadismo Movement – An Ibero-American Movement

Silvia Triboni

Stop Idadismo Association, Portugal

Idadismo (Ageism) is one of the greatest contemporary violence. As reported by WHO World Health Organization, Ageism follows racism and sexism as the third most common form of discrimination affecting people in the world. Ageism affects people of all ages, it starts in childhood, but the negative consequences have more impact as people get older. From the earliest age, children pick up implicit messages from people in their family and friendship circle about the stereotypes and prejudices of their culture, messages that are assimilated in a short time. Ageism (idadismo) is often intersectional, interacting with other stereotypes, prejudices, and discriminations, including sexism and racism.

#AWorld4AllAges

Recognizing the urgency of addressing this social scourge in an increasingly aging world, the Member States of the World Health Organization (WHO), in line with the Global Strategy, Plan of Action on Ageing and Health and the Decade of Healthy Ageing (2021-2030), launched the Global Campaign to Combat Ageism which aims to change the narrative around age and aging and help create a world for all ages: #AWorld4AllAges.

### IBERO-AMERICAN STOP IDADISMO MOVEMENT

A video conference on April 30, 2021, held simultaneously in 11 Portuguese and Spanishspeaking countries, marked the launch of the international #StopIdadismo Movement.

PORTUGAL – SPAIN – BRAZIL – CHILE – ARGENTINA – COLOMBIA – VENEZUELA – MEXICO – PANAMA – EL SALVADOR and CUBA. The movement answered a call from the WHO for action to combat the social virus of ageism, made even more evident by the emergence of the pandemic.

His Excellency the President of the Portuguese Republic, Professor Marcelo Rebelo de Sousa, welcomed the civic movement #StopIdadismo, at the time of its public presentation, aligning Portugal with a global concern, in the decade for the healthy aging of the nations units and the fight for the promotion of human rights, namely Non-Discrimination on the basis of age. STOP IDADISMO MOVIMENT GOALS

- raise awareness about the nature, impact and determining factors of idadism, targeting both younger and older people;
- to draw attention to the need to prevent ageism
- promote and protect the full realization of human rights for all people;
- present proposals for effective interventions to combat ageism, in line with the three WHO strategies: policies and legislation; educational activities and intergenerational activities;
- to alert to the urgent need for action by governments, civil society, the private sector, and individuals of all ages.

### STOP IDADISMO MOVIMENT- MAIN ACTIONS TAKEN

- Co-founders, in partnership with the International Longevity Center Brazil, of the IberoAmerican League to Combat Ageism.
- Strategic partnership in the creation, in Spain, at the University of Vigo - Faculty of Communication - of the Chair of Ageism.
- Creation and dissemination of pedagogical tools: "8 and 80 Calendar"; "Collective Glossary of Ageism"; "Good Practices Guide to Combat Ageism".
- Participation in national and international events: conferences, colloquia, seminars...
- International Petition "No to Age Discrimination".
- Participation in the Commission for the Defense of the Rights of the Elderly, in the Brazilian House of Representatives.
- Active participation in the Movement #AgesNotADisease, in 2021, together with several organizations of the international civil society, to prevent the old age to enter in the code of the International Classification of Diseases, of the WHO (World Health Organization).
- Liber(age) Community Action Plan, implemented in partnership with Casa do Povo de Santa Bárbara da Ilha Terceira – Azores, Portugal.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Biography

Brazilian and Italian citizen, Silvia Triboni, is Journalist and Lecturer in the area of Active and Healthy Longevity. She is a lawyer with an MBA in Public Management from Fundação Getúlio Vargas, São Paulo, Brazil. Graduated in Sustainability and Human Responsibility from the University of Lisbon, Portugal. Silvia is an activist against ageism, she is part of the Stoppladadismo Movement in Portugal. An entrepreneur, she is part of the international network Aging2.0 in Lisbon, having internationalized the Brazilian course Repórter 60+, and trained reporters aged 60 or over from various regions of Portugal. Founder of the Centenarian project, which aims to explore cities with a high rate of healthy, long-lived inhabitants, or with innovative and positive practices for the good aging of citizens, in order to disseminate them to the world. Two of the five Blue Zones, Sardinia (Italy) and Ikaria (Greece), were already visited, having interviewed the co-founder of these regions, Professor Gianni Pes. International correspondent to: . Human responsibility and development of active and healthy aging; . The examples of the Blue Zones for a long and healthy life; . Issues in the Economy Longevity, and . Benefits of tourism for good aging.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Sex Differences in Autophagy and mTOR Inhibition: A New Frontier in Anti- Ageing Therapies

Yu-Xuan Lu

Max Planck Institute for Biology of Ageing, Germany

### Biography

Dr. Yu-Xuan Lu is an ageing scientist at the Max Planck Institute for Biology of Ageing. His work centres on uncovering the biological mechanisms of ageing and developing pharmacological interventions to improve late-life health. He is particularly known for his research on the drug rapamycin as an anti-ageing reagent. Additionally, he has proposed next-generation precision longevity interventions based on biological sex differences. His contributions have been recognized with prestigious awards, including EMBO fellowship and European Crucible for future research leaders. He has also been honoured as one of the "Talents for Germany".

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Data-driven Longevity: Harnessing the Potential of Actionable Health Data and Revolutionizing Preventive Care

**Dr. Rob Konrad**

Co-Founder and CEO at Biolytica

The traditional "sick-care" system, with its emphasis on costly disease management, is both financially and ethically unsustainable, exacerbating healthcare inequalities. As preventive healthcare and longevity emerge as increasingly significant trends, the key to disease prevention and health optimization lies in hyperpersonalized care. In this talk, Dr. Rob Konrad will discuss Biolytica's revolutionary approach to health, which combines cutting-edge technology, data analysis, and actionable health data to empower individuals to enhance their well-being. By decoding bodily information and crafting tailored health journeys that factor in genomics, biomarkers, and daily activity patterns, Biolytica's experts are paving the way for a transformative shift from reactive sick-care to proactive, data-driven preventive healthcare.

### Biography

As a longevity enthusiast and lifelong tech geek, Dr. Rob Konrad believes that the more you know about your body, the more you can improve your health and wellbeing – you can only manage what you can measure! As CEO and Co-Founder of Biolytica, a Swiss health data enterprise, together with his team of physicians, genetics experts, bioinformaticians, health coaches, dieticians, chronobiology experts, data specialists and many others, he has created the first truly comprehensive health management platform, Biolytica NEXUS, that integrates genetics, epigenetics, proteomics, labs and biomarkers, wearable device data and much more to create truly personalized health optimization programs.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Ageism, A New Name for An Old Prejudice

Fran Winandy (Marie Françoise M.W.M.Pereira)

Acalântis Services, Brazil

The world is getting old. If you haven't been hit by ageism yet, you still will. The roots of ageism lie in negative age stereotypes, and this affects us throughout our lives for different reasons. Intersectionality is the term attributed to the sum of forms of social exclusion, according to the identity conditions of race, gender, sexuality, and social class. The experience of a person who experiences the intersection of two or more identity markers is greater than the simple sum of these prejudices. Age is the marker that usually amplifies this issue, and aging appears as a catalyst. That is why we say that ageism is the most democratic of prejudices, as it embraces the other pillars of diversity. The story above reveals how age and aging have different connotations for women, according to the time and society in which they live. In the Labor Market, ageism is harsh for women: black elderly women are the biggest victims of prejudice in the Brazilian job market. Here it has been common for mature professionals to hide the date of birth in their CVs, to move on to the selection phase, in which they believe they can neutralize the age biases of the interviewer. Unfortunately, most of the selectors are quite young and bring with them numerous negative stereotypes related to age, making it impossible to continue the selection process.

### Biography

Fran Winandy is Psychologist, with master's in business administration with a focus on H.R. and Diversity. Consultant in Age Diversity Programs, Human Resources and Career Transition. Researcher in Age Diversity and Ageism, with several works and academic research, in addition to lectures for the Academic and Organizational environment. Reference on the topic of ageism in Brazil, she created the Blog Ageism: [www.etarismo.com.br](http://www.etarismo.com.br) Author of the book: "Ageism, a new name for an old prejudice" (in Portuguese and English) Speaker in Portuguese and French.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Discussing Death for Healthy Ageing in Global Perspective

**Bhaweshwar Singh**

L.N. Mithila University, India

**A**t the very first sight, the idea of sound understanding of death for healthy ageing appears illogical. But the present discussion aimed at achieving wide acceptance of the proposition has decidedly tremendous gerontological relevance. Quite pertinently, none of us relish to talk about our own death. In fact, the very thought of traumatic demise is horrifying. In lay man terms death means taking away of the soul from the physical body. Contrarily, ageing biologists define death as the inevitable fall out of senescence-engineered pathophysiologic perturbations. To be precise, systemic lapses culminate in cessation of biological functions and subsequent death. Genetically programmed human longevity is destined to make room for young generations by way elimination of old generations. However, premature deaths at younger ages are always disheartening.

Acquiring the knowledge of the mechanism of ageing and death will prove of immense help in appreciating the immense role of balanced diet and adequate physical activity for normal growth and development. There is urgent need of refrainment from sedentary living, junk food and toxic addictions. We invariably become victim of dreadful obesity - the mastermind of majority of age-associated disabilities. In some way or the other, we are ourselves responsible for our health impairment and enhanced morbidity and mortality.

The paper elucidates various life conditions liable for healthy ageing in the given backdrop of available data and recommends teaching of Ageing Biology in educational institutions.

### Biography

With a teaching experience of more than 39 years and special interest in Gerontology, the author superannuated from the University Department of Zoology, L.N. Mithila University, Darbhanga on Feb 28, 2022. Besides attending to academic obligations at the parent institution, he served as the founder Director of the Institute of Gerontology and Geriatrics established by the University in 2015 for carrying out elderly centric academic programmes till his superannuation. The author has several research publications to his credit.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Aging clocks, entropy, maximum human lifespan, and the challenge of age-reversal

Peter O. Fedichev

Gero LLC PTE, Singapore

Age is the leading risk factor for prevalent diseases and death. However, the relation between age-related physiological changes and lifespan is poorly understood. We combine analytical and machine learning tools to investigate aging as a macroscopic manifestation of underlying dynamic instability of the organism state in large biomedical data. In mice, the leading aging signature (“dynamic frailty indicator”, dFI) increases exponentially and predicts the remaining lifespan. The dynamics of dFI is consistent with the late-life mortality deceleration. dFI changed along with hallmarks of aging, including frailty index, molecular markers of inflammation, senescent cell accumulation, and responded to life-shortening (high-fat diet) and life-extending (rapamycin) treatments. In human data, the analysis paints a more sophisticated picture. We analyzed aging signatures of DNA methylation and longitudinal electronic medical records from the UK Biobank datasets. We observed that aging is driven by a large number of independent and infrequent transitions between metastable states in a vast configuration space. The compound effect of configuration changes can be captured by a single stochastic variable, thermodynamic biological age (tBA), tracking entropy produced, and hence information lost during aging. We show that tBA increases with age, causes the linear and irreversible drift of physiological state variables, reduces resilience, and drives the exponential acceleration of chronic disease incidence and death risks. The reduction of resilience sets the maximum human lifespan limit, whereas the entropic character of aging drift sets severe constraints on the possibilities of age reversal. However, we highlight the universal features of configuration transitions, suggest practical ways of suppressing the rate of aging in humans, and speculate on the possibility of achieving negligible senescence.

### Biography

Ph.D. from the University of Amsterdam. Co-founder of Gero, a data-driven longevity biotech company, that develops new drugs against aging and other complex diseases using AI-platform. An author of 75+ published papers in multiple domain areas, including publications in Science and Nature Communications.



# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## A Multi-Omic Approach to the Reversal of Chronic Insomnia and the Extension of Brain Span

**Dr. Lonnel Ball**

Institute for Predictive Medicine & Longevity, United States

Given the exponential strides realized in the field of precision medicine within the last decade, along with the feasibility of genetic testing, there has been a growing interest in the impact of genetic polymorphisms in the etiology of insomnia as it relates to health span and brain span. Although recent genetic polymorphisms have been found to be associated with chronic insomnia, none to date have been identified to have clinically relevant actionables which reverse patient phenomics and insomnia. Herein we offer a multi-omic profiling approach for the reversal of chronic insomnia resistant to traditional pharmacologic and nonpharmacologic therapy (e.g., CBT-I) wherein findings of altered single nucleotide polymorphisms are successfully resolved through interventions targeting resultant alterations in metabolomics, patient phenomics and insomnia within 4 weeks of treatment onset. To our knowledge, these studies represent a novel multi-omic approach in which treatment-resistant chronic insomnia has been demonstrated to be reversed through highly personalized interventional targeting extending patient quality of life and biomarkers of longevity and brain span.

### Biography

Director & Chief Medical Scientist with expertise in precision medicine including multi-omics profiling (genomics, microbiomics, metabolomics, phenomics and immunomics) with AI predictive modeling for the provision of state-of-the-art, real-time personalized medicine. Academic and clinical backgrounds in Molecular & Cellular Biology, Neurobiology, Endocrinology, Precision Oncology & Artificial Intelligence from University of California, Berkeley, San Francisco, Los Angeles & Stanford Medical School.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Mind and Mortality: The Relationship between The Psyche and Longevity

**Manuel S. Faria**

Department of Genetics, Stanford University School of Medicine, USA  
Stanford Center for Genomics and Personalized Medicine, USA

Psychological factors are amongst the most robust global predictors of survival, morbidity, and quality of life, yet they are seldom part of the aging conversation. Data suggests that a person's total psyche contributes to mortality even more so than smoking. However, how these psychological factors influence survival remains to be comprehensively understood. This talk covers an array of studies elucidating the existing link between mind and mortality: how beliefs affect health-related outcomes, how individuals exhibit individual ageotypes, how mental illness accelerates epigenetic aging, and what psychological interventions have to been shown to extend lifespan. First, the conversation will establish the groundbreaking potential of multi-omics and precision medicine in uncovering the hidden side of aging and longevity, spinning some unpublished data on the multi-omic correlates of belief restructuring practices. Then, the multiple psychological variables that have been shown to modulate aging – e.g., religiosity, optimism, purpose, stress mindset, dispositional mindfulness – will be explained and detailed. Lastly, the talk will culminate with evidence from a pivotal randomized controlled trial done at Stanford that shed light into the possibility of extending cancer survival using a simple psychotherapeutic intervention. Overall, the presentation aims to leave the audience with an understanding of the biological mechanisms that mediate the psyche (i.e., a person's unique psychology) and different age- or health-related outcomes, underscoring new research prospects at Stanford that hope to exploit the relationship between these variables.

### Biography

Born in Caracas, Venezuela, to a family of immigrants from Madeira, Portugal, Manuel Faria is a research scientist at the Stanford Health Innovation Lab in Palo Alto, California. His research interests focus on precision medicine, human flourishing, and health longevity. He has previously been awarded an HHMI fellowship, an internship in The United Nations, and is currently a Harvard Kennedy School PPLC Scholar. In his free time, Manuel is an avid meditator, amateur chef, and biohacker.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Longevity - Comparative Study and Impact of Private Sector Participation

**Nasser Fares Massoud**

Concept Realisation, Dubai, UAE

Longevity in the context of this paper (and the conference) is about both living longer and in good mental and physical health. As such, it has two key components: Life Expectancy and Healthy Life Expectancy. Achieving this requires a good health system which focuses on both cure and prevention. Most health systems have been concerned with cure rather than prevention, and the only emphasis on prevention has historically been related to communicable diseases through vaccination programs and improved sanitation.

The paper studies factors which contribute to longevity such as health screening to detect illnesses early on so as to prevent the onset of a disease and/ or reduce its burden. It also studies factors that influence well-being such as diet, nutrition, exercise, stress levels, access to healthcare, and genetics. The concept of nation-wide screening for non-communicable diseases is relatively new. Leading countries in this domain are Japan (the Specific Health Check and Guidance System), South Korea (the National Health Screening Program), Singapore (Screen for Life) and Australia.

The paper identifies countries which score highest in longevity and explores correlations they have with contributing factors. It also identifies the extent to which these health systems utilise private healthcare providers and the method of funding health services. Importantly it explores factors such as mental health state, standards of living, welfare state and importantly universal health coverage.

The paper provides meaningful conclusions and suggests further areas of research with the objective of providing health systems with a range of tangible actions.

### Biography

Nasser Massoud has 28 years' experience in Public Private Partnerships (PPPs) in the social sector covering strategy formulation; developing funding, financing and payment mechanisms; compiling business cases and feasibility studies; and managing procurement.

Nasser holds a BSc in engineering; a MSc in economics and management, both from UCL; a masters in finance from LBS. He is a Fellow of the Chartered Institute of Arbitrators. Honours include Global Healthcare Key Opinion Leader by the Korean Ministry of Health; UNECE team to develop the Global Standard for Healthcare PPPs; UNECE panel for telemedicine. Nasser is a recognised authority on healthcare PPPs.

# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## NAD depletion mediates cytotoxicity in human neurons with autophagy deficiency

Elena Seranova  
NMN Bio, UAE

Autophagy is a homeostatic process critical for cellular survival, and its malfunction is implicated in human diseases including neurodegeneration. Loss of autophagy contributes to cytotoxicity and tissue degeneration, but the mechanistic understanding of this phenomenon remains elusive. Here, we generated autophagy-deficient (ATG5<sup>-/-</sup>) human embryonic stem cells (hESCs), from which we established a human neuronal platform to investigate how loss of autophagy affects neuronal survival. ATG5<sup>-/-</sup> neurons exhibit basal cytotoxicity accompanied by metabolic defects. Depletion of nicotinamide adenine dinucleotide (NAD) due to hyperactivation of NAD-consuming enzymes is found to trigger cell death via mitochondrial depolarization in ATG5<sup>-/-</sup> neurons. Boosting intracellular NAD levels improves cell viability by restoring mitochondrial bioenergetics and proteostasis in ATG5<sup>-/-</sup> neurons. Our findings elucidate a mechanistic link between autophagy deficiency and neuronal cell death that can be targeted for therapeutic interventions in neurodegenerative and lysosomal storage diseases associated with autophagic defect.

### Biography

Elena is a serial entrepreneur, business mentor and the founder of NMN Bio, a company focusing on anti-aging supplements. She previously founded a healthcare industry business and co-founded a UK-based biotech start-up. She holds a BSc in Psychology, MSc in Translational Neuroscience and a Ph.D. in Stem Cell Biology and Autophagy.

# POSTERS

## PRESENTATIONS

# GLOBAL LONGEVITY FEDERATION

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# GLOBAL LONGEVITY FEDERATION

May 15-16, 2023 | Dubai, UAE (Hybrid Event)

## Effects of COVID-19 and Funding Project on Academic Achievements of Master's and Doctoral Training in Henan Province, China: A MMQR Analysis

**Babar Nawaz Abbasi**  
Zhengzhou University, china

This study has examined the effect of COVID-19 and funding projects on the academic achievements of master's and doctoral training in Henan province, China, based on panel data from 58 universities in the province from 2015 to 2021 by employing the novel technique of the Method of Moments Quantile Regression (MMQR) model introduced by Machado and Silva (2019). The results showed that though COVID-19 is negatively associated with the number of master's and doctoral dissertations, the effect is inconsequential. Furthermore, COVID-19 is positively related to the number of patent rights; however, the impact is insignificant. Moreover, COVID-19 is negatively related to the number of publications, and the impact is significant. Yet, in all the variables, the amount supported by the National Social Science Foundation (ASNSSF) has no significant impact. However, the amount supported by the National Natural Science Foundation (ASNNSF) has a significant impact on them. Hitherto, the amount at which ASNSSF and ASNNSF funds become cost-effective in stimulating the number of master's\_dissertations, doctoral\_dissertations, patent rights, and publications is 140 (0000 yuan) and 1511.4 (0000 yuan), 139.6 (0000 yuan) and 2577 (0000 yuan); 139.7 (0000 yuan) and 48.8 (0000 yuan); and 109.8 (0000 yuan) and 27.9 (0000 yuan), respectively.

### Biography

Babar Nawaz Abbasi is a Ph.D. student at Zhengzhou University, China. His research mainly focuses on the Economics of Education, Educational Funding, National Development, Health Economics, Rural-Urban Education, Child Non-Cognitive Skills, Migration Studies, and Left-behind Chinese Children.





# GLF 2023

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DUBAI, UAE