

# HEVOLUTION

Global  
Healthspan  
Summit 2025

# Architecting the Future

4-5 February 2025

Four Seasons Hotel Riyadh at Kingdom Center, Riyadh (Saudi Arabia)

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#GlobalHealthspanSummit2025  
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## 2025 Themes



### The Macro Case

What next?



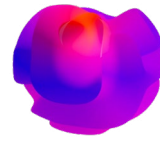
### State Of The Science

Where do we stand?



### Ecosystem Trends

How do we develop the ecosystem?



### Radical Change

What will it take?



### The Long View

Where will this lead in the future?

## GHS 2025 Spaces

### The Horizon Hall

Welcome to the Global Healthspan Summit, where we explore the future of healthspan.

### The Healthspan Hub

The central meeting point at GHS 2025 featuring networking space, stages and more.

### The Healthspan Arena

The key ideas space at GHS 2025, featuring leading minds, showcasing the big questions around healthspan and overarching themes, setting the tone for the path ahead in architecting the future.

### The Foundry

New ideas and deconstruction of ecosystems across verticals within ecosystems including science, medicine, policy and investment, featuring leading minds, real-life stories and allowing for audience Q&A.

### The Innovation Lab

Hear from the Healthspan Future Architects who will share their technical expertise on science, medicine, ethics, investment and more including the latest research and statistics, benchmarks and best practice. This stage features audience Q&A.

### The Ideas Lab

Hear from the Healthspan Future Architects who will share their technical expertise on science, medicine, ethics, investment and more including the latest research and statistics, benchmarks and best practice. This stage features audience Q&A.

### The Forum

Step into GHS 2025's dynamic Debate Space, where the art of discussion and thinking beyond the obvious comes alive! This vibrant arena is dedicated to showcasing compelling points and thought-provoking counterpoints, creating an exhilarating environment for intellectual exchange.

### The Plaza

A new stage for GHS 2025, showcasing entrepreneurship, the Saudi landscape as well as new scientific posters and much more.

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# The Healthspan Arena

## Day 1

Tuesday, 4 February 2025

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HEVOLUTION

Global Healthspan  
Summit 2025

**08:30-09:30 Registration**

**09:30 Opening Proceedings**

**Opening Keynote Architecting the Future**

**09:35** Welcome to GHS 2025 - how can we architect the future together?

- **Dr. Mehmood Khan, CEO, Hevolution Foundation, Saudi Arabia**

**Opening Panel: Healthspan Science, Research Investment, Medicine and More – What Now, What Next?**

A walk through the ecosystem elements that influence how the future of healthspan looks, with expert-led highlights around core challenges and opportunities.

**09:50**

- H.R.H. Princess Dr. Haya Bint Khaled Bin Bandar Al Saud, Senior Vice President of Research, Hevolution Foundation, Saudi Arabia
- Professor Andrea B. Maier, Director - Academy for Healthy Longevity, National University of Singapore, Singapore
- Dr. Laura Niedernhofer, Director, Institute on the Biology of Aging & Metabolism, University of Minnesota Medical School, United States
- Dr. Sharon Rosenzweig-Lipson, Chief Scientific Officer, Life Biosciences, United States

**Moderator: Edie Lush, Journalist, MC & Host, Communication Trainer**

**Ministerial In Conversation: Investment in Focus – National Level Thinking on Healthspan**

A special in-conversation with the Minister of Economy and Planning, looking at how healthspan can be thought of at the national level.

**10:25**

**In Conversation:**

- H.E. Faisal Alibrahim, Minister of Economy and Planning, Saudi Arabia

**Moderator: Edie Lush, Journalist, MC & Host**

**Science Focus: Science Beyond the Hallmarks of Aging - Exosomes, Microbiomes, Sexual Dimorphism and Scientific Investigations around Healthspan**

What is the science saying now? This session highlights recent scientific investigations that are pushing the boundaries of healthspan research and how we are moving towards a more comprehensive understanding of the aging process.

**Opening Statement:**

- Dr. Felipe Sierra, Chief Science Officer, Hevolution Foundation, Saudi Arabia

**10:35**

**Scientific Panel:**

- Dr. Pinchas Cohen, Dean, Leonard Davis School of Gerontology, University of Southern California, United States
- Dr. Dena Dubal, Professor of Neurology, University of California, San Francisco, United States
- Dr. James Kirkland, Director, Center for Gerotherapeutics, Cedars-Sinai Medical Center, United States
- Dr. Paul D. Robbins, Associate Director, Institute on the Biology of Aging & Metabolism, University of Minnesota, United States
- Dr. Eric Verdin, CEO & President, Buck Institute, United States

**Moderator: Dr. Sebastien Thuault, Chief Editor, Nature Aging**

**Regulatory Pathways - Balancing Innovation and Safety**

11:15

As breakthroughs in healthspan research surge ahead and we unravel the mysteries of aging, policymakers face an urgent need to modernize regulatory frameworks. In this session, we bring to light candid conversation and explore how to strike the right balance between accelerating innovation and ensuring patient safety, highlighting success stories, evolving thinking and more.

- H.E. Prof. Dr. Hisham Saad AlJadhey, CEO, Saudi Food and Drug Authority, Saudi Arabia
- Dr. Amrit Ray, Life Sciences Board Chairman & Director / Former Global President of R&D, Pfizer, United States

**Moderator: Angela Nwaneri, General Counsel, Hevolution Foundation, Saudi Arabia**

**Investment Focus - What Now, What Next**

11:35

What does the current investment landscape in healthspan look like, and what emerging market trends are driving the field forward? This session explores how strategic capital deployment can create targeted impacts, accelerate innovation, and drive meaningful progress in extending healthy lifespan. We will also examine the evolving ecosystem, highlighting its intersections with adjacent fields and the collaborative opportunities shaping the future of healthspan investment.

**In Conversation:**

- Dr. William Greene, Chief Investment Officer, Hevolution Foundation, Saudi Arabia

**Global Viewpoints:**

- H.R.H. Prince Khaled bin Alwaleed bin Talal Al Saud, Founder & CEO, KBW Ventures, Saudi Arabia
- Dr. Greg Bailey, Executive Chairman & Co-Founder, Juvenescence, United Kingdom
- Dr. Werner Lanthaler, CEO, Wlanholding GmbH & Age X Partners, Austria
- Dr. Helmut M. Schuehler, Chairman & CEO, TVM Capital Healthcare, Singapore
- Jim Scopa, Director, Hevolution U.S. LLC, United States

**Moderators: Nisha Pillai, International Moderator**

**Ethics Focus: Equitable Approaches to Geroscience - How Can we Balance Ethics and Justice?**

12:10

The session will explore the ethical, social, and economic implications of funding geroscience research, with a focus on achieving equitable outcomes. As the global population ages, the field of geroscience aims to understand and intervene in the biological mechanisms of aging. However, this pursuit raises significant concerns about fairness, particularly in resource allocation and the distribution of research benefits. This session will discuss various justice frameworks, including egalitarianism, sufficientarianism, and prioritizing the least well-off, to guide the equitable distribution of geroscience advancements. We will examine the Hevolution Foundation's commitment to global justice in geroscience and the practical challenges of ensuring that the benefits of anti-aging research are accessible to all, regardless of geographical location or socioeconomic status. Attendees will gain insights into how to balance innovation with ethical considerations to promote a longer, healthier life for everyone.

**In Conversation:**

- Dr. Salman AlAsiry, Vice President of Legal, Hevolution Foundation, Saudi Arabia
- Dr. Arthur Caplan, Head, Division of Medical Ethics, NYU Grossman School of Medicine, United States

**New Insights, New Thinking: Human Lifespan - Have we reached the Biological Limit?**

12:30

The science of human longevity stands at a pivotal crossroads. Decades of research reveal that life expectancy gains are plateauing, not from systemic failures, but because aging itself has emerged as the primary risk factor. This inflection point represents a transformative opportunity to shift from a focus on extending lifespan, to extending the period of healthy life - healthspan. By treating aging as a modifiable process, we can unlock unprecedented advances in primary prevention and redefine aging as a period of vitality. Investments in technologies designed to modify aging will not just be profitable - they are imperative in our rapidly aging world. The future of aging science holds the power to transform the human condition to one characterized by purpose and possibility rather than decline - rewriting the narrative of life itself.

- Dr. S. Jay Olshansky, Professor of Public Health, University of Illinois at Chicago, United States

**12:45 - 13:30 Lunch, Poster Visits and Networking****Peers in Conversation: Comparative Biology - What Can it Unlock?**

This session will uncover the transformative potential of comparative biology, revealing how insights from diverse species can unlock new strategies for enhancing healthspan and combating age-related diseases.

**13:30**

- Dr. Vera Gorbunova, Professor & Director, Aging Research Center, University of Rochester, United States
- Dr. Steve Horvath, Principal Investigator, Altos Labs, United Kingdom
- Professor João Pedro de Magalhães, Chair of Molecular Biogerontology, University of Birmingham, United Kingdom
- Dr. Ashley Zehnder, Co-Founder & CEO, Fauna Bio, United States

**Conversation Leader: Dr. Vadim Gladyshev, Professor of Medicine, Harvard Medical School, United States**

**In Conversation: There's an Injection for That!****14:00**

- Dr. David B. Allison, Dean, Indiana University Bloomington School of Public Health-Bloomington, United States

**Moderator: Nina Ruge, Science Journalist & CEO, staYoung Media, Germany**

**Medicine Focus: The Future of (Healthspan) Medicine - Interventions beyond the Clinic**

The latest thinking on the groundbreaking interventions that extend beyond traditional clinical settings, envisioning a future where medicine integrates seamlessly into daily life to enhance healthspan. This session delves into the medical aspects of healthspan.

**Scene Setters:**

- Professor Raghib Ali, CEO, Chief Investigator & Chief Medical Officer, Our Future Health, United Kingdom
- Dr. Sophia Pathai, VP of Medicine, Hevolution Foundation, Saudi Arabia

**14:20****Panel:**

- Joanna Bensch, Founder & CEO, Longevity Center Europe & Co-Founder, International Institute of Longevity, Poland
- Dr. Guido Kroemer, Professor, Université Paris Cité, France
- Dr. Daniel Quirk, Chief Medical Officer and Head of Medical, Biogen, United States
- Dr. Nathan K. LeBrasseur, Director, Robert & Arlene Kogod Center on Aging, Mayo Clinic, United States
- Shannon Neilsen, Director - Longevity, PureHealth, United Arab Emirates

**Moderator: Oliver Barrett MBE, Founder, Connector Unit, United Kingdom**

**From Lab to Life - Translating Healthspan Research into Real-World Interventions**

Translating healthspan research into real-world interventions involves bridging the gap between laboratory discoveries and practical applications that enhance healthy aging. This process requires adapting findings on molecular pathways, cellular resilience, and lifestyle factors into treatments and strategies that are both effective and accessible. Key challenges include identifying science with translation potential, validating the science navigating regulatory pathways, and ensuring safety across diverse populations.

**Scene Setter:**

- Dr. Mark Kotter, Professor of Neurosurgery University of Cambridge, Founder, bit.bio and clock.bio, United Kingdom

**15:00****Panel:**

- Dr. Maha AlMozaini, Senior Scientist & Consultant, The Research, Development & Innovation Authority, Saudi Arabia
- Dr. Khalid AlRomaih, Science Executive Director, Hevolution Foundation, Saudi Arabia
- Professor Andy Philp, Director - Centre for Healthy Ageing, Centenary Institute, Australia
- Dr. Dario Riccardo Valenzano, Group Leader & Scientific Director, Leibniz Institute on Aging, Germany

**Moderator: Dr. Mark Kotter, Professor of Neurosurgery University of Cambridge, Founder, bit.bio and clock.bio, United Kingdom**



**Town Hall: Venture Capital for Healthspan**

The convergence of biotechnology, precision medicine, and advanced healthspan research is catalyzing a new investment paradigm. This session explores how venture capital is positioning itself at the intersection of scientific innovation and economic opportunity in healthspan technologies.

**15:25**

- Dr. Srinivas Akkaraju, Managing General Partner, Samsara BioCapital, United States
- Dr. Abdulrahman AlOlayan, Founder & Managing Partner, Beta Lab, Saudi Arabia
- Dr. Therese Liechtenstein, Investment Director, 4BIO Capital, United Kingdom
- Dr. Jarod Rutledge, Venture Partner, Starbloom Capital & Biomarkers Lead, Amaranth Foundation, United States
- Dr. Christoph Westphal, Co-Founder & General Partner, Longwood Fund, United States

**Facilitators: Dr. Yury Kukushkin, Investment Partner, Hevolution Foundation, Saudi Arabia and Dr. Jens Eckstein, Investment Partner, Hevolution Foundation, Saudi Arabia**

**Healthy Humanity – How Can we Achieve It?**

The world's demographic shift towards an older population, with life expectancy reaching +70 years in 2023 and projected to rise to 77 years by 2050 means the quest for healthspan has never been more important. How can we unlock health and economic benefits on a global scale to turn the dream of healthy humanity into a solution?

**16:00**

- Rakan Tarabzoni, COO, FII Institute, Saudi Arabia

**Moderator: Oliver Barrett MBE, Founder, Connector Unit, United Kingdom**

**In Conversation: Philanthropy, Innovation and Impact in Healthspan**

How do philanthropy, innovation and solutions to our big global challenges interact? In this exclusive conversation, we explore how strategic investments, cutting-edge thinking on collaboration and investment can drive human advancement around healthspan and other large global challenge areas. From funding transformative discoveries to ensuring access, we look at the role of philanthropy, innovation and big ideas play in accelerating what we know, how we live and how we create impact.

**16:10**

- Dr. Jamie Justice, Executive Vice President, Health Domain, XPRIZE, United States
- Robert Rosenkranz, Chairman, Delphi Capital Management, United States

**Moderator: Oliver Barrett MBE, Founder, Connector Unit, United Kingdom**

**Next-Gen Grantmaking: Addressing Challenges in Modern Scientific Funding**

This session explores the evolving landscape of grantmaking in scientific research, with a particular focus on healthspan – the period of life spent in good health. We will discuss innovative funding models that prioritize healthspan-focused research, explore emerging methods for assessing long-term health outcomes, and address the unique challenges faced by researchers seeking funding for aging-related studies. Experts will examine how new approaches to grantmaking can accelerate breakthroughs in healthy aging, improve policy frameworks, and ensure equitable access to funding for transformative healthspan research.

**16:30**

- Dr. Khaldoun AlRomaih, Science Executive Director, Hevolution Foundation, Saudi Arabia
- Dr. Bhanu Priya Ganesh, Associate Professor, The University of Texas Health Science Center Houston, United States
- Niamh Peren, Chief of Innovation & Strategy, The Foresight Institute, United States

**Moderator: Nisha Pillai, International Moderator**

**The Macro Case**

What next?

**State Of The Science**

Where do we stand?

**Ecosystem Trends**

How do we develop the ecosystem?

**Radical Change**

What will it take?

**The Long View**

Where will this lead in the future?

**Intersectional Town Hall: Architecting the Future of Healthspan (with Audience Q&A)**

Open debate combined with expert thinking on the role research and innovation play in supporting solving the challenge of healthspan, and what further building blocks are needed.

**17:00**

- Dr. Maddalena Adorno, Co-Founder & CEO, Dorian Therapeutics, United States
- Professor Klaus Dugi, CEO, Vandria, Switzerland
- Nathaniel Farouz, Managing Director, Keppel Senior Living, Singapore
- Professor Imed Gallouzi, Chair, KAUST Center of Excellence for Smart Health (KCSH), KAUST, Saudi Arabia
- Professor John Piggott AO, Scientia Professor of Economics & Director, Centre for Population Ageing Research, UNSW, Australia
- Dr. Morten Scheibye-Knudsen, Associate Professor, Center for Healthy Aging, University of Copenhagen, Denmark
- Tina Woods, Executive Director, International Institute of Longevity and Founder & CEO, Collider Health, United Kingdom

**Scene-Setter and Co-Moderator: Dr. David Barzilai, Faculty & Trustee, Geneva College of Longevity Science, Switzerland**

**Co-Moderator: Edie Lush, Journalist, MC & Host, Communication Trainer**

**17:45 End of GHS Day 1**



**The Macro Case**

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**Radical Change**

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**The Long View**

Where will this lead in the future?



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# The Healthspan Hub

Foundry

Innovation Lab

Ideas Lab

Forum

Plaza

## Day 1

Tuesday, 4 February 2025

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## The Foundry

### The GCC Exchange

How the GCC is building its healthspan research ecosystem, investing in age-related disease understanding while fostering collaboration for sustainable growth.

13:15

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**Chaired by:** H.R.H. Princess Dr. Haya Bint Khaled Bin Bandar Al Saud, Senior Vice President of Research, Hevolution Foundation, Saudi Arabia

14:15

#### Participants:

- Dr. Rasha Abdulrahman AlFawaz, Director, Public Health Programs & Policies, Gulf Center for Disease Prevention & Control, Saudi Arabia
- Dr. Majed AlJeraisy, Executive Director - Research, Saudi NIH, Saudi Arabia
- Dr. Theeb AlKahtani MBE, Chairman & Founder, Integrative Health Organization, Saudi Arabia
- Dr. Walid AlKeridy, Director, Home Health Care Administration, Ministry of Health (MOH), Saudi Arabia
- Dr. Nouf AlNumair, Secretary General, The Ministerial Committee for Health in All Policies (HiAP), Saudi Arabia

### The Medical and Healthcare Exchange

How can the medical sector evolve to support healthspan extension, focusing on shifting from disease-centric approaches to preventive and personalized medicine? This session also looks at the link between digital health and healthspan clinics. Healthcare systems must transition to a proactive, personalized approach integrating advanced diagnostics and lifestyle interventions to extend healthspan and compress morbidity across the lifespan.

14:30

-

**Chaired by:** Dr. Michael Wolf, SVP of Global Operations, Hevolution Foundation, Saudi Arabia

15:30

#### Participants:

- Dr. Ihsan AlMarzooqi, Co-Founder & Managing Director, meta[bolic] & GluCare.Health, United Arab Emirates
- Dr. Wadha AlMuftah, Qatar Genome Senior Director, Qatar Precision Health Institute, Qatar
- Dr. Joseph Antoun, CEO & Chairman of the Board, L-Nutra, United States
- Nathaniel Farouz, Managing Director, Keppel Senior Living, Singapore
- Dr. Ryan T. Hurt, Vice Chair & Professor of Medicine, Division of General Internal Medicine, Mayo Clinic, United States
- Nawal Roy, Founder & CEO, Holmusk, United States

### The Investment Exchange

In this dynamic dialogue, investment experts will dissect the rapidly evolving healthspan investment landscape. As the sector matures and new scientific breakthroughs emerge, understanding where and how to deploy capital effectively becomes crucial. Our distinguished panel brings together diverse perspectives from different stakeholders to examine current trends, opportunities, and challenges in the space. The session will provide actionable insights into investment strategies, deal structures, and how to evaluate the next generation of healthspan investment. The session also weaves in angles on technology and entrepreneurship and the role they have within the investment ecosystem.

15:45

-

**Chaired by:** Dr. William Greene, Chief Investment Officer, Hevolution Foundation, Saudi Arabia

16:45

#### Participants:

- Marc P. Bernegger, Co-Founder, Maximon & Longevity Investors, Switzerland
- Zack Lynch, Managing Director, JAZZ Venture Partners, United States
- Dr. Hannah Mamuszka, CEO, Alva10 & Managing Director, 10Edison Capital, United States
- Dr. Vijay S. Pande, Founding General Partner, a16z Bio + Health, United States
- Dr. Amol Sarva, Managing Partner, LifeX Ventures, United States

### The Innovation Lab

### The Ideas Lab

13:45 - 14:30

#### New Frontiers in Science and Healthspan - Bioelectricity and More

##### Part I: Enhancing Healthspan with Bioelectricity

Dr. Elena Sergeeva's research leverages bioelectricity to enhance healthspan and promote healthy aging. Inspired by bioelectric rejuvenation in vertebrate embryogenesis, her work explores how bioelectric states can slow aging without driving carcinogenesis. By developing bioelectric aging models, biomarkers, and therapeutic strategies, her approach integrates advanced imaging and omics to extend healthspan.

##### Part II: What's the next Big Thing?

New, different, radical and on the horizon - what's on the horizon for healthspan?

##### Expert Perspectives:

- Zack Lynch, Managing Director, JAZZ Venture Partners, United States
- Dr. Elena Sergeeva, Faculty, Tufts University & the Wyss Institute at Harvard, United States

#### AI and Machine Learning in Healthspan Research

How artificial intelligence and machine learning are revolutionizing healthspan research by analyzing complex biological data, identifying novel biomarkers of aging, and accelerating the discovery of interventions to extend healthy lifespan.

##### Expert Perspectives:

- Jamie Heywood, CEO & Founder, Alden Scientific, United States
- Dr. Vijay S. Pande, Founding General Partner, a16z Bio + Health, United States

**Facilitator:** Dr. Jens Eckstein, Investment Partner, Hevolution Foundation, Saudi Arabia

14:45 - 15:30

#### Shifting From Aging to Intrinsic Health as a Target for Interventions

The Geroscience movement originally proposed increasing healthspan by targeting aging through interventions but debates on the nature and measurement of aging present challenges for operationalizing this vision. If it could be measured biologically and rigorously, health would be a more attractive target, as seen by increasing interest in subjects such as resilience. Here, we introduce the notion of intrinsic health, a field-like state emerging from the dynamic interplay of energy, communication, and structure within the organism, giving rise to robustness/resilience, plasticity, performance, and sustainability. We propose a roadmap to develop a rigorous measurement framework for intrinsic health that can serve as an integrative endpoint for intervention studies.

**Expert Perspective:** Dr. Alan A. Cohen, Biological Complexity & Healthy Longevity Associate Professor, Robert N. Butler Columbia Aging Center, Columbia University, United States

#### Beyond the Idea of the 'Solve-All Pill' - Advances in Precision Longevity and Mitochondrial Peptides

The promise of a "solve-all pill" for aging has long captivated science and the public imagination. Yet, current advances in precision medicine suggest that targeted, multi-faceted approaches are far more likely to extend healthspan effectively. Central to these efforts are mitochondrial peptides—small proteins that influence cellular health, energy production, and stress responses. By investigating how these peptides function at the cellular level and how they can be modulated in concert with personalized interventions, researchers hope to unlock new pathways for preventing age-related decline. This session explores the scientific underpinnings of precision longevity strategies, highlights breakthroughs in mitochondrial peptide research, and examines how these discoveries might one day translate into more refined, individualized treatments for an aging global population.

**Expert Perspective:** Dr. Pinchas Cohen, Dean, Leonard Davis School of Gerontology, University of Southern California, United States

### The Innovation Lab

### The Ideas Lab

15:45  
-  
16:30

#### Aging Gracefully - Metabolic Perspectives on Brain Health and Resiliency

Aging affects all cells in the body, including glial cells, which are vital for brain function. Astrocytes, a type of glial cell, support neurons by delivering energy substrates, particularly lactate, which is crucial for memory, neuroprotection, and antidepressant effects. Aging reduces brain glucose utilization, especially in individuals at risk for Alzheimers. Recent findings highlight impaired glucose uptake and lactate production in astrocytes from Alzheimer's patients, suggesting targeting astrocyte metabolism as a promising strategy for healthy brain aging and neuroprotection. In summary, how is targeting metabolism in brain aging, with a particular emphasis on glial-based processes is opening up new avenues for preventive and therapeutic interventions for brain aging?

**Expert Perspective:** Prof. Dr. Pierre Magistretti, VP of Research - KAUST, Saudi Arabia

#### Unlocking Organ-Specific Aging - The MOLE Clock and its Role in Precision Anti-Aging Solutions

The pursuit of precision anti-aging solutions has been significantly advanced by the development of organ-specific aging biomarkers. Here we present the Methylation-based Organ-Level agEing (MOLE) clock, and its application in the field of anti-aging. With the efforts in technology improvements, clinical research, and industrial applications, we combined the MOLE clock together with artificial intelligence-driven screening platforms can provide high-quality solutions. The MOLE clock's predictive accuracy is highlighted through its performance in Next-Generation Sequencing (NGS) datasets. with superior predictive capabilities compared to other technologies, and validated robustness and reliability in BioLearn and other publicly available datasets.

**Expert Perspective:** Dr. Gavin Zhou, Co-Founder & CTO, Regenerative Bio, United States

16:45  
-  
17:30

#### Stress, Resilience, and the Aging Brain - Rethinking Approaches to Alzheimer's

Join Dr. Heather Whitson for a revealing discussion on how the brain's stress responses and resilience pathways evolve as we age—and what that means for preventing cognitive decline. Dr. Whitson's work reframes Alzheimer's as fundamentally a disease of aging, triggered not only by genetic predisposition but by gradual changes in metabolism, inflammation, and immune function over time.

She will share insights from her team's unique approach: enrolling participants as young as 25 and carefully tracking brain health long before hallmark signs like amyloid deposition appear. By identifying how stress regulation and resilience begin to falter in midlife, Dr. Whitson's research points the way toward earlier, more effective interventions. Attendees will gain insights into bolstering brain vitality across the lifespan, from lifestyle adjustments to innovative therapies, reinforcing the idea that protecting cognitive function begins decades before symptoms ever emerge.

**Expert Perspective:** Dr. Heather Whitson, Distinguished Professor of Neuroscience & Director, Duke Aging Center, Duke University, United States

#### Pioneering Prevention - The Future of Drug Development for Chronic Allergic Diseases

In this forward-thinking session, Nicole Kimes will explore the intersection of preventative drug development, chronic allergic diseases, and healthspan extension. Drawing from successful preventative approaches in HIV and pre-diabetes, Kimes will discuss how the pharmaceutical industry can effectively monetize prevention in the allergy space while contributing to overall healthspan improvement.

**Expert Perspective:** Dr. Nikole Kimes, Co-Founder & CEO, Siolta Therapeutics, United States

## The Forum

### Crisis or Opportunity? Depopulation, Aging and Planetary Strain

13:30

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14:30

As the global population trends toward aging and, in some regions, depopulation, the planet faces unprecedented ecological pressures. This session will explore the intricate relationships between these phenomena, focusing on their societal, economic, and environmental implications. Participants will examine how aging populations reshape economies, workforce dynamics, and healthcare systems, while depopulation offers both opportunities and challenges for resource management. Additionally, the conversation will address how these demographic shifts intersect with planetary strain, including climate change, biodiversity loss, and sustainable development.

**Contributors:**

- Dr. John Beard, Irene Diamond Professor & Director, International Longevity Center, Columbia University, United States
- Michael Oberreiter, Head of Global Access, Hoffmann-La Roche, Switzerland

**Host:** Edie Lush, Journalist, MC & Host, Communication Trainer

### Is There Such a Thing as “Longevity Medicine”?

14:45

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15:30

Is “longevity medicine” a genuine, transformative branch of healthcare, or just a convenient buzzword fueling biotech investments? Does the concept of ‘longevity’ medicine tally well with the concept of healthspan – living healthier, for longer? Does it oversimplify the complex biological phenomenon that is aging? What are the scientific, ethical and economic questions at stake? Are we seeing a radical paradigm shift in preventative, personalized healthcare? Join the debate, hear viewpoints - and counterpoints and engage in a dynamic, intellectual exchange.

**Contributors:**

- Dr. David Barzilay, Faculty & Trustee, Geneva College of Longevity Science, Switzerland
- Professor Andrea B. Maier, Director – Academy for Healthy Longevity, National University of Singapore, Singapore

**Host:** Dr. Sebastien Thuault, Chief Editor, Nature Aging

### Who Owns Healthspan?

15:45

-

16:30

This debate explores whether health and by extension healthspan is owned by the individual, society, or government. It will examine personal responsibility, societal health initiatives, and government intervention, challenging participants to consider the balance between individual autonomy, collective responsibility, and state involvement in promoting and protecting health. Plus, it provides perspectives on the interplay of the private, public and individual interplay between healthspan ownership, including on who owns innovations and has the right to their benefits. Get you thinking caps on and see where the discussion goes!

**Contributors:**

- Phil Newman, Founder & CEO, Longevity.Technology, United Kingdom
- Dr. Derek Yach, Director, Global Health Strategies, United States

**Host:** Declan Curry, TV Presenter and Journalist

The Plaza

13:00

- MoUs and Announcements

13:15

**New Investigators' Showcase - Emerging Voices in Healthspan Research**

How is the research ecosystem around healthspan and related areas developing in KSA? In this session, attendees have the opportunity to hear from Hevolution Foundation Grantees who will present their latest research, and to dive into the posters displayed around the Healthspan Hub. There will also be an opportunity for Q&A.

14:00

- **Contributors:**
- Dr. Anas Abdel Rahman, Clinical Scientist, King Faisal Specialist Hospital and Research Center, Saudi Arabia
  - Dr. Marwh Gassim AlDriwesh, Associate Professor, Clinical Scientist & Principal Investigator, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia
  - Dr. Majid AlHomrani, Associate Professor, Taif University, Saudi Arabia
  - Dr. Tlili Barhoumi, Research Scientist, King Abdullah International Medical Research Center, Saudi Arabia
  - Professor Valerio Orlando, Professor of Epigenetics, King Abdullah University of Science and Technology, Saudi Arabia

15:00

**Led by:** Dr. Ali AlHoshani, Program Officer, Hevolution Foundation, Saudi Arabia

**Feeding the Global Talent Pipeline - In Saudi and Beyond**

How can we attract more talent to healthspan? This session explores innovative strategies to attract and nurture top talent in the rapidly evolving field of healthspan research. As we push the boundaries of healthspan and well-being, it is crucial to inspire and engage the brightest minds across various disciplines.

15:15

- **Contributors:**
- Dr. Andrew Dillin, HHMI Investigator, UC Berkeley, United States
  - Dr. Laura Niedernhofer, Director, Institute on the Biology of Aging & Metabolism, University of Minnesota Medical School, United States

16:00

**Led by:** Dr. Ali AlHoshani, Program Officer, Hevolution Foundation, Saudi Arabia

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# The Healthspan Arena

## Day 2

Wednesday, 5 February 2025

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HEVOLUTION

Global Healthspan  
Summit 2025

08:30 Registration

**Day 2 Opening Proceedings**

Architecting the future together. What now, what next?

09:30

- Nina Ruge, Science Journalist & CEO, staYoung Media, Germany
- Dr. Eric Verdin, CEO & President, Buck Institute, United States

**Philanthropy for Impact**

**How can we architect the future of philanthropy to create positive impact?**

09:45

- H.R.H. Prince Turki bin Faisal Al Saud, Chairman, King Faisal Foundation, Saudi Arabia

**Moderator:** H.R.H. Princess Dr. Haya Bint Khaled Bin Bandar AlSaud, Senior Vice President of Research, Hevolution Foundation, Saudi Arabia

**Investing in Life: The Economic Calculus of Population Health**

Reimagining health as economic capital explores the transformative potential of proactive health strategies in driving economic growth. By challenging traditional healthcare models, this session unveils how targeted investments in population health can catalyze productivity, reshape GDP trajectories, and advance policy frameworks that position health as a critical driver of long-term economic sustainability.

10:00

- Professor Andrew J. Scott, Director, Economics Ellison Institute of Technology & Professor of Economics, London Business School, United Kingdom
- Sir Jon Symonds CBE, Chair, GSK, United Kingdom

**Moderator:** Dr. Mehmood Khan, CEO, Hevolution Foundation, Saudi Arabia

**Panel Discussion: Healthspan for All - A Pipe Dream?**

Confronting the ethical dilemmas and societal challenges arising from efforts to extend healthspan, including issues of equity, resource allocation, and the potential reshaping of human life cycles, while asking: How can we ensure that the benefits of healthspan extension are distributed fairly and contribute positively to society as a whole?

**Spotlight Talk:** Dr. Anshu Banerjee, Director, Department of Maternal, Newborn, Child & Adolescent Health & Ageing, World Health Organisation

10:20

**Panel:**

- Dr. Steven Austad, Senior Scientific Director/Protective Life Endowed Chair in Healthy Aging Research, American Federation for Aging Research/University of Alabama at Birmingham, United States
- Peter Ohnemus, Chairman, President & CEO, dacadoo, Switzerland
- Professor John Piggott AO, Scientia Professor of Economics & Director, Centre for Population Ageing Research, UNSW, Australia

**Moderator:** Declan Curry, TV Presenter and Journalist

**Navigating Complexity in Healthspan Implementation for All - Healthcare and other Ecosystem Challenges**

Strategies for implementing healthspan-focused approaches within complex healthcare systems, existing modes of interesting and addressing challenges such as interdisciplinary collaboration, data integration, and policy alignment.

**Spotlight Talk:** Dr. Christoph Benn, Director, JLI Center for Global Health Diplomacy, Switzerland

11:00

**Panel:**

- Dr. Sameera AlTuwaijri, Global Lead, Population and Development, World Bank
- Jonathan Dean, Head - Fund Management, Impact Private Equity & Natural Capital, AXA Investment Managers, United Kingdom
- Prof. Dr. Hanns-Peter Knaebel, President - Smart Health, Alat, Saudi Arabia
- Professor Pasi Penttinen, CEO, Gulf Center for Disease Prevention & Control
- Dr. Björn Zoéga, Deputy CEO, King Faisal Specialist Hospital Research Centre, Saudi Arabia

**Moderator:** Oliver Barrett MBE, Founder, Connector Unit, United Kingdom





**Access in Focus: Healthspan Access, and Enhancements**

As scientific advancements continue to extend human lifespan and healthspan, key questions emerge about access and funding. Who will benefit from these innovations, and how will resources be allocated? This session will explore the challenges and opportunities surrounding equity, societal impacts, and resource distribution as we aim to extend healthy living. It will also examine the limits of biomedical enhancements and the role of public policy in regulating these developments. Participants will tackle critical questions, such as how to effectively pursue extended healthspan, leverage early interventions to reduce future societal burdens, and navigate the broader implications beyond science and investment. This session offers a comprehensive framework for understanding the complex dimensions of healthspan research and its societal impact.

11:35

- Dr. Ammar Abdo Ahmed, Manager, Human Development Economic and Social Infrastructure, Islamic Development Bank (IsDB)
- Dr. Michael Devoy, Chief Medical Officer & EVP, Bayer AG, Germany
- Dr. Ann Kurth, President, New York Academy of Medicine, United States
- Michael Oberreiter, Head of Global Access, Hoffmann-La Roche, Switzerland
- Todd Park, Co-Founder & Executive Chairman, Devoted Health, United States

**Moderator:** Nisha Pillai, International Moderator

**Spotlight on Genome Medicine: Heritable Polygenic Editing - Ethical and Practical Implications**

The advent of heritable polygenic editing (HPE) represents a transformative frontier in genomic medicine, with the potential to significantly reduce the prevalence of complex diseases and enhance human healthspan - but how feasible is it and what are the ethical and societal considerations? From recent advancements in gene editing technologies, such as CRISPR-Cas9, and their potential to target multiple genomic variants associated with diseases like Alzheimers, schizophrenia, type 2 diabetes, coronary artery disease, and major depressive disorder, we look at how a small number of variants could lead to substantial reductions in disease risk, far surpassing current capabilities of embryo selection using polygenic scores. We also spotlight the ethical questions of gene editing.

12:05

**Professor Julian Savulescu, Chen Su Lan Centennial Professor in Medical Ethics & Director, Centre for Biomedical Ethics, National University of Singapore, Singapore**

**Panel: Advanced Data Analytics, Long-Term and Longitudinal Studies for Healthspan Research**

As aging research enters a new era, the convergence of large-scale data analytics, longitudinal studies, and clinical trials is revolutionizing our understanding of healthy aging. This session explores how advanced research methodologies are identifying aging biomarkers, predicting age-related diseases, and evaluating interventions to extend healthspan. Experts will highlight key initiatives like IHU HealthAge in France and the Our Future Health Initiative in the UK, showcasing the impact of longitudinal cohort studies, innovative clinical trial frameworks, and international collaboration in driving healthspan science forward.

12:15

**Spotlight Talk:** Professor Dr. Bruno Vellas, Founder, Institut Hospitalier Universitaire (IHU) HealthAge, CHU de Toulouse, France

**Response Panel:**

- Professor Raghieb Ali, CEO, Chief Investigator & Chief Medical Officer, Our Future Health, United Kingdom
- Dr. Nikole Kimes, Co-Founder & CEO, Siolta Therapeutics, United States
- Dr. Richard I. Morimoto, Bill & Gayle Cook Professor of Biology, Director of the Rice Institute for Biomedical Research, Northwestern University, United States

**Moderator:** Declan Curry, TV Presenter and Journalist

**12:45-13:45 Lunch, Posters and Networking**

**From Molecule to Medicine: Going all the Way from Journey of Drug Discovery and Development**

The path from discovering a promising molecule to delivering a life-saving medicine is a complex and multidisciplinary journey. This session will provide an in-depth exploration of the drug discovery and development pipeline, highlighting the critical scientific, technological, and regulatory milestones along the way.

13:45

- Dr. Frederick Beddingfield, CEO, Rubedo Life Sciences, United States
- Professor Klaus Dugi, CEO, Vandria, Switzerland
- Jerry McLaughlin, CEO, Life Biosciences, United States

**Moderator:** Oliver Barrett MBE, Founder, Connector Unit, United Kingdom



**Town Hall: Seeding the Future - Entrepreneurship and Innovation Ecosystems**

Healthspan is experiencing unprecedented interest, with new companies, technologies and investment opportunities coming into focus. Let's look at how entrepreneurs and investors can navigate and strengthen the innovation ecosystem in this field. Drawing on diverse experiences, we'll explore the unique challenges and opportunities that characterize this space, from identifying new breakthroughs for commercialization to creating the right partnerships and funding models.

14:15

- Dr. Matthias Evers, Biotech & TechBio Investor, Consultant & Board Member, Germany
- Dr. Johannes Fruehauf, CEO & President, LabCentral/BioLabs/Mission BioCapital, United States
- Anna Gräbner, CEO, Genolier Innovation Hub, Switzerland
- Dr. Gaurav Gupta, Managing Partner, Life Sciences Private Capital, United States
- Abby Levy, Co-Founder & Managing Partner, Primetime Partners, United States
- Manu Nair, Chair & Head of Corporate Development, Mayo Clinic, United States

**Moderator:** Dr. Jens Eckstein, Investment Partner, Hevolution Foundation, Saudi Arabia

**Panel: From Ripple to Wave - Healthspan Investment as the Next Big Thing?**

As advancements in health technology and shifting demographics drive interest in extending healthy living, could the healthspan sector emerge as key investment frontier? This session explores how investors are adapting strategies to balance financial returns with measurable impact, navigating short- and long-term opportunities in areas like biotech, preventative health, and healthspan-focused solutions.

15:00

- Dr. Srinivas Akkaraju, Managing General Partner, Samsara BioCapital, United States
- Dr. Collin Ewald, Associate Director - Diseases of Aging & Regenerative Medicine, Biomedical Research Novartis, Switzerland
- Mike Goguen, Founder and Managing Partner, Two Bear Capital, United States
- Anthony Liveris, CEO, Proto Axiom, Australia
- Dr. Christoph Westphal, Co-Founder & General Partner, Longwood Fund, United States

**Moderator:** Jim Scopa, Director, Hevolution, United States

**In Review: Aging and Alzheimers - Where is the Science, Where are we Heading?**

Alzheimer's disease and aging represent critical challenges for global health and society. This panel brings together leaders from biopharma, policy, and research to discuss the current state of science and future directions. The discussion will provide insights into advancements in drug discovery, policy initiatives, and collaborative opportunities to accelerate progress. It will highlight breakthroughs, address barriers, and explore innovative approaches to improving outcomes for individuals and communities affected by Alzheimer's and aging-related issues.

15:40

- Dr. Andrew Dillin, HHMI Investigator, UC Berkeley, United States
- Fraser Hall, President & Head of Intercontinental Region, Biogen, United States
- Mark Roithmayr, CEO, Alzheimer's Drug Discovery Foundation, United States

**Moderator:** Steven Papermaster, Chairman and CEO, Nano Cures International, United States

**Future Focus: Into the Future - Healthier, Longer Lives through Science, Closing Townhall**

Closing reflections and thoughts plus looking ahead to the future.

16:15

- Dr. Ana Maria Cuervo, Distinguished Professor & Co-Director, Institute for Aging Research, Albert Einstein College of Medicine, United States
- Dr. Pad Chivukula, Co-Founder, Chief Scientific Officer & Chief Operating Officer, Arcturus Therapeutics, United States
- Akira Matsuno, Co-Founder, President & CFO, Tune Therapeutics, United States

**Moderator:** Dr. Michael Ringel, US Board Member, Hevolution Foundation

**Closing Proceedings**

16:45

- Dr. Mehmood Khan, CEO, Hevolution Foundation, Saudi Arabia



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# The Healthspan Hub

Foundry

Innovation Lab

Ideas Lab

Forum

Plaza

## Day 2

Wednesday, 5 February 2025

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HEVOLUTION

Global Healthspan  
Summit 2025

## The Foundry

### Hevolution Investment Earlyies

#### Investors Morning Coffee Meet-up and Hevolution Earlyies: The Biotech Entrepreneurs Exchange

Demystifying essential elements of building a successful biotech company, including navigating funding challenges, translating scientific innovations into marketable products, and understanding the regulatory landscape, while questioning whether the current entrepreneurial ecosystem truly supports sustainable growth in the biotech sector.

08:30

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09:45

**Hosted by:** Dr. William Greene, Chief Investment Officer, Hevolution Foundation, Saudi Arabia and Dr. Lorenz Mayr, Entrepreneur in Residence, Hevolution Foundation

#### Biotech Leaders:

- Dr. Meshari F. AlWashmi, CEO, Amplifai Health, Saudi Arabia
- Dr. Ann Beliën, Founder & CEO, Rejuvenate Biomed, Belgium
- Jordi Naval, Sector Head - Biotech, Neom, Saudi Arabia
- Dr. Marco Quarta, Chief Scientific Officer, Rubedo Life Sciences, United States
- Robin Mansukhani, CEO, Deciduous Therapeutics, United States
- Matthew Scholz, CEO, Oisín Biotechnologies, United States

### The Ethics Exchange

How do we navigate the moral frontiers that healthspan confronts us with? This dialogue-based session, with audience Q&A examines the intersection of scientific innovation, societal implications, bioethics and beyond to explore critical questions surrounding equitable access, technological boundaries and fundamental questions embedded in the field of healthspan.

10:00

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11:00

**Chaired by:** Professor Julian Savulescu, Chen Su Lan Centennial Professor in Medical Ethics & Director, Centre for Biomedical Ethics, National University of Singapore, Singapore

#### Contributors:

- Dr. Mansour AlHajlah, Managing Partner, LegisLead, Saudi Arabia
- Dr. Ann Kurth, President, New York Academy of Medicine, United States
- Zoe Lewczak, Bioethics Student, Harvard Medical School, United States

### The Science Exchange

Cutting-edge developments in healthspan science, and how the ecosystem is interacting and evolving, with experts from different fields. The contemporary healthspan science ecosystem represents a critical confluence of technological innovation, interdisciplinary research, and transformative potential, positioning itself at the intersection of biology, technology, and clinical translation. This emerging landscape is characterized by unprecedented convergence across multiple domains, challenging traditional research paradigms and reimagining human health optimization.

11:15

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12:30

**Chaired by:** Dr. Brian Kennedy, Distinguished Professor & Programme Director, Healthy Longevity Translational Research Programme, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

#### Contributors:

- Dr. Holly Brown-Borg, Professor, University of North Dakota School of Medicine & Health Sciences, United States
- Dr. Vera Gorbunova, Professor & Director, Aging Research Center, University of Rochester, United States
- Prof. Ravindra Gupta, Professor of Clinical Microbiology, University of Cambridge, United Kingdom
- Daniel Oliver, Co-Founder & CEO, Rejuvenate Bio, United States
- Dr. John M. Sedivy, Professor & Director, Center on the Biology of Aging, Brown University, United States

## The Foundry

### The Technology in Healthspan Exchange

13:30

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14:30

Benefit from first-hand insights into the MIT Technology Review (Spain) report on the latest state of technology in healthspan and gain expert insights into how new technologies are enabling us to push the boundaries of healthspan: from epigenetic reprogramming to alter gene expressions, theranostic approaches integrating diagnostics and therapy simultaneously, or AI to speed up and decrease the costs of experimentation. The panel will benefit from the contributions of practitioners and experts to discuss the implications of these technologies, as well as the ethical concerns regarding equitable access, empowering people to manage their aging, or approaching healthy aging from a broader perspective that recognizes the impact of purpose or community as much as the purely physical aspects.

**Chaired by:** Pedro Moneo, CEO and Founder, Opinno, Spain

**Contributors:**

- Dr. Fady Hannah-Shmouni, Founder & CEO, Healthspan Digital, Canada
- Dr. Joshua Hare, Founder & CSO, Longeveron, United States
- Dr. Samir Ounzain, Scientific Co-Founder & CEO, HAYA Therapeutics, Switzerland

### The Hevolution New Investigators Exchange - Pioneering the Future of Healthspan

14:45

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Presented by Hevolution Foundation, this showcase spotlights the next generation of pioneers in healthspan research through its New Investigators program. Rising researchers will share their latest scientific breakthroughs, offering fresh insights into aging and healthspan. This interactive platform encourages attendees to engage with these promising investigators, fostering discussions that could spark future collaborations. Witness how these new voices are shaping the future of healthspan science.

**Chaired by:** Dr. Khaldoun AlRomaih, Science Executive Director, Hevolution Foundation, Saudi Arabia

**Contributors:**

- Dr. Bhanu Priya Ganesh, Associate Professor, The University of Texas Health Science Center Houston, United States
- Dr. Simone Sidoli, Assistant Professor, Albert Einstein College of Medicine, United States



The Innovation Lab

The Ideas Lab

08:45

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Hevolution Earlies

**Aging Deconstructed - Why, How and Mysteries Unsolved**

Healthspan - the emphasis on the length of time an individual lives in good health, free from chronic diseases and disabilities signifies a significant paradigm shift in aging research and how we approach aging. But what exactly is aging, why is there so much debate about it and what are the biological mechanisms and other factors behind it that contribute to what our healthspan might look like? How useful is the concept of aging? This special session will revisit and outline key concepts, controversies and look at how we are unravelling the mystery and detail of aging.

**Contributors:**

- Dr. Maddalena Adorno, Co-Founder & CEO, Dorian Therapeutics, United States
- Dr. Alan A. Cohen, Biological Complexity & Healthy Longevity Associate Professor, Robert N. Butler Columbia Aging Center, Columbia University, United States
- Dr. Dario Riccardo Valenzano, Group Leader & Scientific Director, Leibniz Institute on Aging, Germany

**Led by:** Dr. Laura Niedernhofer, Director, Institute on the Biology of Aging & Metabolism, University of Minnesota Medical School, United States

**Cities, Communities and Clinics as Testbeds for Human Exposome and Aging Research**

There is a growing recognition of the importance of factoring in wider determinants of health that have profound effects on the human health trajectory and overall resilience as people age. The 'human exposome' encapsulates external exposures (spanning social, psychological and behavioral factors) and their interaction with internal factors (such as genetics, epigenetics and physiology) that affect health trajectories and overall resilience. We look at how understanding human exposome is now possible with clinics, communities and cities acting as real-world testbeds to track people's daily behaviour, as well as internal and external exposures. Taking a 'cells to cities' approach, the identification of exposome markers that track biomarkers of aging offer an opportunity to develop standards, protocols, guidelines, and surveillance tools to combat negative exposures through preventive medical and public health interventions.

**Expert Perspective:**

Tina Woods, Executive Director, International Institute of Longevity and Founder & CEO, Collider Health, United Kingdom

**Gut-Brain-Immune Connections: Unlocking Microbiome Potential for Healthy Aging**

This session delves into the intricate interactions between the gut microbiome, immune system, and central nervous system in the context of aging and healthspan. Key topics include the mechanistic role of gut-derived metabolites in immune modulation and neuroprotection, sex-specific differences in microbiome-immune dynamics, and the implications for chronic inflammation and neurodegeneration. Findings from longitudinal and experimental studies will elucidate how targeted microbiome interventions influence aging trajectories and resilience.

**Expert Perspectives:**

- Dr. Dario Riccardo Valenzano, Group Leader & Scientific Director, Leibniz Institute on Aging, Germany
- Dr. Bhanu Priya Ganesh, Associate Professor, The University of Texas Health Science Center Houston, United States

### The Innovation Lab

### The Ideas Lab

11:45

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#### Biomarkers - Right Track or New Track?

Critical examination of the evolving role of biomarkers - are current approaches effectively enhancing scientific understanding or following established paths and 'innovation-light'?

**Expert Perspectives:** Dr. Vadim Gladyshev, Professor of Medicine, Harvard Medical School, United States and Dr. Steve Horvath, Principal Investigator, Altos Labs, United Kingdom

**Facilitator:** Dr. Bashayer AlMubarak, Director of Scientific Research, Hevolution Foundation, Saudi Arabia

#### The Complex Interplay of Science, Economics and Practice around Healthspan

Economic implications of extending healthspan, examining how investments in healthy aging can yield significant returns through reduced healthcare costs, increased productivity, and new market opportunities.

**Expert Perspective:** Dr. John Beard, Irene Diamond Professor & Director, International Longevity Center, Columbia University, United States

**Facilitator:** Phil Newman, Founder & CEO, Longevity Technology, United Kingdom

#### Klotho Unveiled - The Next Frontier in Cognitive Vitality

Dive into the transformative power of Klotho, a pivotal hormone reshaping our understanding of brain resilience and cognitive health. This session illuminates its discovery, reveals the neuroprotective mechanisms behind its profound influence on aging, and showcases robust findings from both model systems and human studies. Gain insight into the translational potential of Klotho-based therapies in preventing and combating neurodegenerative diseases—offering renewed hope for conditions like Alzheimer's and Parkinson's.

**Expert Perspective:** Dr. Dena Dubal, Professor of Neurology, University of California, San Francisco, United States

#### Rewiring Cellular Power - The Emerging Geroscience of Mitochondrial Power

Mitochondria, the powerhouses of the cell, have emerged as pivotal players in understanding and addressing the challenges of aging and age-related diseases. This session will explore the critical role of mitochondrial function in elder health, bridging insights from rare genetic disorders that mimic accelerated aging to prevalent age-related conditions such as macular degeneration, heart failure, and muscle decline. Drawing from extensive clinical and scientific work, this session applies mitochondrial biology to improve healthspan Plus, first-hand insight into the development of the first drug directly targeting mitochondria, which is poised for potential FDA approval for a rare genetic disease.

**Expert Perspective:** Dr. Reenie McCarthy, CEO, Stealth BioTherapeutics, United States

#### Big Data Approaches to Understand Aging and Disease

Age-related conditions are the leading causes of death and healthcare costs. Retarding the ageing process would have enormous medical and financial benefits. A large number of genes and drugs extending lifespan in model organisms already exist, yet given long validation times, only a small fraction of them can be explored for humans clinical applications. Therefore, prioritizing drugs and gene targets is imperative. Discover how big data and machine learning/AI approaches for can be used to predict longevity genes and compounds, validated experimentally. Plus, dive into integrative, multi-dimensional approaches that provide insights into longevity pathways and their role in age-related diseases.

**Expert Perspective:** Professor João Pedro de Magalhães, Chair of Molecular Biogerontology, University of Birmingham, United Kingdom

#### Decoding Dormancy: Gene Function and Regulation in Aged Quiescent Cells

Quiescent cells contribute to aging and disease but are under-studied. Many unknown genes may play roles in cellular quiescence and aging. This talk will highlight research on genome regulation and function during cellular aging using fission yeast and turquoise killifish as model systems. This includes the characterization of a long non-coding RNA, which decreases the cellular ribosome content and prolongs the lifespan of quiescent cells.

**Expert Perspective:** Professor Jürg Bähler, Director, Institute of Healthy Ageing, University College London, United Kingdom

The Innovation Lab

The Ideas Lab

15:30

16:15

Rewriting the Aging Script - The Connection between DNA Damage and Nutrition

Groundbreaking research shows how DNA damage and reduced caloric intake intersect with aging. Studies using DNA repair-deficient mouse models and human progeroid syndromes reveal that unrepaired DNA lesions drive systemic aging by blocking transcription, while calorie restriction mitigates damage, extends lifespan, and improves neurofunction. These findings transform guidelines for rare DNA repair disorders and highlight universal interventions against age-related decline. How does this shift reshape treatments and unlock broader anti-aging strategies?

Expert Perspective: Professor Dr. Jan H.J. Hoeijmakers, Group Leader, Princess Máxima Center for Pediatric Oncology & Onco Institute, Netherlands

A Deeper Dive into Measuring Aging - What Are Biomarkers Telling us and how Do They Relate to Healthspan Measures?

As the pursuit of longevity accelerates, biomarkers of aging have emerged as critical tools for measuring biological age, predicting health outcomes, and assessing interventions. But how well do they truly reflect healthspan, and which metrics are most reliable? This deep dive explores the evolving landscape of aging biomarkers—from epigenetic clocks to metabolic and proteomic signatures—and their role in shaping the future of precision longevity medicine.

Expert Perspective: Dr. Brian Kennedy, Distinguished Professor & Programme Director, Healthy Longevity Translational Research Programme, Yong Loo Lin School of Medicine, National University of Singapore, Singapore



The Macro Case

What next?



State Of The Science

Where do we stand?



Ecosystem Trends

How do we develop the ecosystem?



Radical Change

What will it take?



The Long View

Where will this lead in the future?



## The Forum

### Back to Basics or Forward to Applications?

10:15

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11:15

The contentious role of fundamental biology in advancing human healthspan: should we prioritize basic biological research in aging, or have we reached a point where resources would be better spent on translating existing knowledge into interventions?

**Contributors:**

- Dr. Ana Maria Cuervo, Distinguished Professor & Co-Director, Institute for Aging Research, Albert Einstein College of Medicine, United States
- Dr. Thomas A. Rando, Director, Eli & Edythe Broad Center of Regenerative Medicine & Stem Cell Research, University of California Los Angeles, United States

**Host:** Dr. Richard I. Morimoto, Bill & Gayle Cook Professor of Biology, Director of the Rice Institute for Biomedical Research, Northwestern University, United States

### Clinical Trials on Trial

11:30

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12:30

Pre-clinical trials have traditionally been conducted in controlled laboratory environments, which often fail to accurately reflect the complex and variable conditions that animals encounter in real-world settings. This discrepancy has contributed to the low success rate of translating animal trial results into effective human treatments in the current drug development framework. Critical questions arise: How should we approach pre-clinical and clinical trials in today's context? Is the existing drug development system still fit for purpose? How can we improve the translation rate of pre-clinical trials into successful human clinical trials, thereby minimizing resource wastage and accelerating the development of effective treatments?

**Contributors:**

- Dr. Steven Austad, Senior Scientific Director/Protective Life Endowed Chair in Healthy Aging Research, American Federation for Aging Research/University of Alabama at Birmingham, United States
- Dr. Laura Niedernhofer, Director, Institute on the Biology of Aging & Metabolism, University of Minnesota Medical School, United States

**Host:** Dr. Paul D. Robbins, Associate Director, Institute on the Biology of Aging & Metabolism, University of Minnesota, United States

### How can we Usher in the 'Gutenberg Moment' of Healthspan?

13:45

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14:45

How well does %99.9 of the global population actually understand health and can we provide an increase in healthspan without greater understanding of health? What does the data say now?

**Contributors:**

- Peter Ohnemus, Chairman, President & CEO, dacadoo, Switzerland
- Professor Andrew J. Scott, Director, Economics Ellison Institute of Technology & Professor of Economics, London Business School, United Kingdom

**Host:** Edie Lush, Journalist, MC & Host, Communication Trainer

## The Forum

### AI - The Greatest Scientist in Waiting?

This provocative session will challenge the scientific community by proposing that AI is poised to become the ultimate scientist, surpassing human capabilities in hypothesis generation, experimental design, and data analysis, while questioning whether human researchers will soon become obsolete in the face of superintelligent machines capable of making groundbreaking discoveries at an unprecedented pace.

15:15

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16:15

#### Contributors:

- Dr. Christoph Benn, Director, JLI Center for Global Health Diplomacy, Switzerland
- Jamie Heywood, CEO & Founder, Alden Scientific, United States
- Dr. Jens Eckstein, Investment Partner, Hevolution Foundation, Saudi Arabia

**Host:** Declan Curry, TV Presenter and Journalist



**The Macro Case**

What next?



**State Of The Science**

Where do we stand?



**Ecosystem Trends**

How do we develop the ecosystem?



**Radical Change**

What will it take?



**The Long View**

Where will this lead in the future?

## The Plaza

### Saudi Biotech Pitchfest by Hevolution, Part 1 and Part II

10:00

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12:30

Saudi Arabia has an emerging and ambitious focus on growing and unlocking a homegrown biotech sector, as well as a National Biotech Strategy to advanced Saudi Arabia's self-sufficiency in vaccines, biomanufacturing and genomics. In front of a seasoned set of investors as judges, and Global Healthspan Summit Attendees, 12 Saudi biotech companies of differing size and maturity will showcase their ideas and solutions to demonstrate how they can contribute to the growth of healthspan. With a cash prize of 150,000 SAR for the winner, the top three contestants will be announced before the end of GHS 2025 as we work to build capacity in the Kingdom.

#### Judges:

- H.R.H. Prince Khaled bin Alwaleed bin Talal AlSaud, Founder & CEO, KBW Ventures, Saudi Arabia
- Dr. Abdulrahman AlOlayan, CEO, BetaLab, Saudi Arabia
- Zack Lynch, Managing Director, JAZZ Venture Partners, United States
- Dr. Jarod Rutledge, Venture Partner, Starbloom Capital & Biomarkers Lead, Amaranth Foundation, United States
- Dr. William Greene, Chief Investment Officer, Hevolution Foundation, Saudi Arabia

12:45

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13:00

### MoUs and Announcements

13:45

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14:15

Saudi Biotech Pitchfest by Hevolution Winners' Announcement and In-Conversation and Networking Mixer.

**Host:** Dr. Nasser AlQahtani, Business Strategy Executive Director, Hevolution Foundation, Saudi Arabia



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2025

**Thank you**