

Practical Applications of Mitochondria Research for Human Longevity and Space Medicine

Virtual Conference June 9 - 10 2021 5:00pm - 7:45pm BST



Kinexum



Kitalys
Institute

Practical Applications of Mitochondria Research for Human Longevity



9 June 2021 | 5 PM BST

Conference | Day 1



Kate Batz

Managing Partner,
Longevity.Capital



Franco Cortese

Director,
Aging Analytics Agency



Dr. Arkadi Prokopov

Expert Longevity Practitioner



Dr. Michael Zemel

Chief Scientific Officer,
NuSirt BioPharma



Thomas Seoh

Chief Executive Officer,
Kinexum



Dr. James Carroll

Chief Executive Officer,
Thor



Dmitry Kaminskiy

General Partner,
Deep Knowledge Group



David Brown

Ph.D., Senior Director, Scientific
and Technical Innovation,
Stealth BioTherapeutics

Practical Applications of Mitochondria Research for Human Longevity

June 9, 2021 (5 PM - 7:45 PM BST)

Opening Remarks

Kate Batz (Managing Partner, Longevity.Capital),
Franco Cortese (Director, Aging Analytics Agency)

Introduction and Overview of Scope of Topics and Speakers

Thomas Seoh (Chief Executive Officer, Kinexum)

Mitochondria as a Target for Practical Longevity

Dr. Michael Zemel (Chief Scientific Officer, NuSirt BioPharma)

Clinical Targeting of Mitochondria for Longevity and Other Indications

David Brown (Ph.D., Senior Director, Scientific and Technical Innovation, Stealth BioTherapeutics)

Targeting Mitochondria with Photobiomodulation

Dr. James Carroll (Chief Executive Officer, Thor)

Rejuvenating Mitochondria with Oxygen Waves – Hype or Breakthrough?

Dr. Arkadi Prokopov

SWOT Analysis and Personal Results of IHHT vs. HBOT vs. WHM Methods, Assessment of Practical Impact on Human Longevity

Dmitry Kaminskiy (General Partner, Deep Knowledge Group)

Panel Discussion

Closing Remarks

Dr. Michael Zemel (Chief Scientific Officer, NuSirt BioPharma)

Final Remarks

Kate Batz (Managing Partner, Longevity.Capital),
Franco Cortese (Director, Aging Analytics Agency)



Practical Applications of Mitochondria Research in Space Medicine



10 June 2021 | 5 PM BST

Conference | Day 2



Dr. Sarah Baatout

Head of Radiobiology Unit
Belgian Nuclear
Research Centre



Dr. Afshin Beheshti

KBR at NASA Ames
Research Center



Dr. Arkadi Prokopov

Expert Longevity Practitioner



Dmitry Kaminskiy

General Partner,
Deep Knowledge Group



Kate Batz

Managing Partner,
Longevity.Capital



Franco Cortese

Director,
Aging Analytics Agency

Practical Applications of Mitochondria Research in Space Medicine

June 10, 2021 (5 PM - 7:45 PM BST)

Opening Remarks

Kate Batz (Managing Partner, Longevity.Capital),
Franco Cortese (Director, Aging Analytics Agency)

Mitochondria Dysfunction Central in

Driving Health Risks Associated with Spaceflight

Dr. Afshin Beheshti (KBR at NASA Ames Research Center)

Personalised Medicine for Astronauts and Radiation Protection in View of Long Duration, Deep Space Missions

Dr. Sarah Baatout (Head of Radiobiology Unit
Belgian Nuclear Research Centre)

FemTech Healthcare Landscape Overview Q2 2021 (FemTech Analytics Report and IT-Platform)

Kate Batz (Managing Partner, Longevity.Capital)

Biomarkers of Human Longevity as the Critical Catalyst for Longevity Industrialization, Governance and Practical Applications

Franco Cortese (Director, Aging Analytics Agency)



Can Mitochondria Optimization Help Human Space Exploration?

Dr. Arkadi Prokopov

Global SpaceTech Industry Q2 2021 Landscape Overview by SpaceTech Analytics (with Spotlight on Space Medicine)

Dmitry Kaminskiy (General Partner,
Deep Knowledge Group)

Introduction to Panel Discussion

Kate Batz (Managing Partner, Longevity.Capital),
Franco Cortese (Director, Aging Analytics Agency)

Panel Discussion

Closing Remarks

Kate Batz (Managing Partner, Longevity.Capital),
Franco Cortese (Director, Aging Analytics Agency)

Thomas Seoh (Chief Executive Officer, Kinexum)



Thomas Seoh is an entrepreneur/executive who has held senior leadership positions in public and private, pharmaceutical, biotech and medical device companies for over 25 years.

After practicing corporate law in New York and London and serving as General Counsel for several companies, including Viratek in Costa Mesa, which developed the antiviral, VIRAZOLE®, and engaged in antisense oligonucleotide research, he joined Guilford Pharmaceuticals in Baltimore, which commercialized GLIADEL® wafer for glioblastoma multiforme and developed the propofol pro-drug LUSEDRA® and small molecules for Parkinson's disease. Thomas began as Guilford's VP, General Counsel and Secretary, and later served as SVP Corporate and Commercial Development.

He was then CEO of venture-backed Faust Pharmaceuticals in Strasbourg, France, developing a repurposed compound in Phase II for Parkinson's patients, a re-positioned molecule for Duchenne muscular dystrophy and a GPCR drug discovery platform. He also served on the Board of Directors of Arbios Systems, a Cedars Sinai spin-out with an ex vivo liver dialysis device in clinical development.

He has additionally served as President of NexGen Medical Systems of Melbourne, Florida, commercializing a novel mechanical thrombectomy device for Deep Vein Thrombosis and stroke and a state-of-the-art neurocatheter, CEO of Eqalix, a regenerative medicine device company in Reston, VA, developing the first plant-based skin substitute wound dressing, and a member of the Hopkins Alliance, an industry-faculty advisory board at Johns Hopkins School of Medicine. Thomas holds an AB in Philosophy and History and a JD from Harvard University.

Dr. Michael B. Zemel (Chief Scientific Officer, NuSirt BioPharma)



Michael B. Zemel is a Chief Scientific Officer of NuSirt and a CSO of Kinexum. He founded NuSirt Sciences following a 30+ year academic career with the intent of translating molecular and cellular studies of energy sensing and metabolism into concrete solutions for diseases of over-nutrition and aging. He has led both the discovery and translational programs for NuSirt, resulting in significant intellectual property development; these efforts have led to 25 US patents (with corresponding international patents) granted since 2012, most of which have been successfully translated into clinical assets in obesity, NASH and diabetes.

Before starting NuSirt, he served as Professor of Medicine and of Nutrition at the University of Tennessee and prior to that was Professor of Endocrinology and Nutrition at Wayne State University with a concurrent position as Research Endocrinologist at the VA.

Dr. Zemel is author of over 140 refereed publications primarily describing investigations of the role of cell calcium regulation in obesity, insulin resistance and hypertension. His current work focuses on obesity genetics, the regulation of human adipocyte lipogenesis and lipolysis via calcium-linked mechanisms, and novel modulation of obesity by dietary calcium and dairy products.

David Brown, Ph.D. (Senior Director, Scientific and Technical Innovation, Stealth)



David Brown, Ph.D., is Senior Director, Scientific and Technical Innovation at Stealth, an innovative biopharmaceutical company developing therapies to treat mitochondrial dysfunction associated with genetic mitochondrial diseases and common diseases of aging. Their team works with patients and advocacy organizations to better understand their journey and raise awareness of the unmet need our programs seek to address.

Stealth collaborates with top-tier academic and medical institutions, scientific thought leaders, and clinical key opinion leaders in developing the first generation of targeted therapies focusing on mitochondrial dysfunction as it presents in these rare genetic diseases and common diseases of aging. With these collaborative efforts, they continue to advance our platform of late-stage clinical programs and novel pipeline candidates.

A scientist, communicator, and innovator specializing in rare diseases, David is expert in metabolism, notably inherited and acquired mitochondrial diseases. Technical expertise spans basic science through transnational clinical endpoints, and is used to advance discovery pipelines, educate others, and track emerging technologies. Established author of scientific manuscripts, regulatory documents, medical affairs training modules, and corporate presentations. Fascinated by innovative mitochondrial medicines and relentless in pursuit of novel rare disease therapies.

Dr. James Carroll (Chief Executive Officer, Thor)



Dr. James Carroll is an internationally recognized authority on Photobiomodulation (PBM) / Low Level Laser Therapy (LLLT) who collaborates with many universities and research centers on PBM, including Harvard Medical School and School of Public Health, MIT, Massachusetts General Hospital, and Leiden University Medical Centre (in Amsterdam). James has presented at a multitude of healthcare meetings literally around the world including both the United Nations Global Health Impact Forum and US Congress on the science and value that PBM has in healthcare.

Dr. James Carroll is a Fellow of The Royal Society of Medicine and has served on the Board of Directors for both World Association for Laser Therapy (WALT) and North American Association for Light Therapy (NAALT). He is an expert editorial reviewer for Public Library of Science (PLoS ONE), Photomedicine and Laser Surgery, Photomedicine and Photochemistry and the Journal of Photochemistry and Photobiology Biology - Annals of Biomedical Engineering. James is one of the most recognized authorities in the world on PBM's low level light therapies mechanisms of action, dose, dose rate effects and the measurement and reporting of parameters.

He is the Biomedical Optics Society Conference Chairman and founded THOR Photomedicine Ltd. in June of 1998 and has been the Chief Executive Officer since its inception.

Dr. Afshin Beheshti (KBR at NASA Ames Research Center)



Dr. Beheshti completed his PhD from Florida State University in physics and made a transition to cancer, systems biology, and radiation biology for his postdoctoral training. In 2014 he became an Assistant Professor at Tufts University School of Medicine/Tufts Medical Center where he continued his research as a systems biologist studying various aspects of cancer including microRNAs, aging and cancer, cancer drug targets, and development of novel immunotherapy.

In April 2017, Dr. Beheshti joined KBR, NASA Ames Research Center to be part of the GeneLab project assisting with developing the platform. In addition, Dr. Beheshti also has obtained his own grants where he is conducting research on how microRNAs will affect space biology and potential use for countermeasures to mitigate space radiation and microgravity.

Lastly, Dr. Beheshti currently also holds a Visiting Researcher appointment at Broad Institute of MIT and Harvard and is the Lead of a non-profit formed on March 2020 working on COVID-19 called COVID-19 International Research Team ([COV-IRT](#)).

Dr. Sarah Baatout (Head of Radiobiology Unit Belgian Nuclear Research Centre)



Prof. Dr. Sarah Baatout is the director of the Radiobiology Unit at SCK CEN (Belgian Nuclear Research Centre), Mol, Belgium. She is also guest-professor at Ghent University and KULeuven (Belgium) teaching and directing research in the field of radiation biology, radiation protection, space biology and medicine.

For more than 20 years, her lab has been investigating the impact of ionizing radiation on health through the development of better radiotherapy treatments for cancer patients, the discovery of innovative biomarkers for personalized medicine of astronauts and patients to ensure a better risk prediction and understanding of radiation susceptibility of each individual. She is also currently studying the impact of cosmic radiation on European astronauts and Russian cosmonauts to better understand how human physiology is affected by space radiation and how to better prepare astronauts for longer missions to the Moon or to Mars.

Recently, she received the award of the “BeSpace personality of the year”, a recognition for her research and outreach achievement in the space sector and was recognized by various magazines as one of the women that make Belgium move. In 2020, she was awarded by the King and Queen of the Belgians the title of woman of the year for her strong and bright engagement towards society.



Dr. Arkadi Prokopov is biogerontologist, mitochondrial researcher and physician for integrative medicine with three decades of experience in normobaric intermittent hypoxic training/therapy.

He also has a great deal of history in spacetechnology and space medicine in particular, having graduated from the Moscow Medical Academy (1st. MMA) in 1979, and from 1980 to 1991 working in the Moscow Institute of Biomedical Problems as a medical researcher and diving physician. His dissertation topic was: "Application of pharmacological agents and preconditioning interventions to increase performance and augment stress-resistance in saturation divers".

The main practical results of his work turned out to be useful not only in divers and cosmonauts, but also in preventative medicine in general and in rehab medicine in particular. In 1994 Arkadi moved to Germany, and practiced general and integrative medicine there, using the knowledge and experience gained in his research. From 2000 to 2005 he was working in the US company that manufactured equipment for simulated altitude training. Since 2008 he lives and works in Mallorca, Spain.

Dmitry Kaminskiy (General Partner, Deep Knowledge Group)



Dmitry Kaminskiy is an innovative entrepreneur, investor, author and philanthropist dedicated to impact investment and ethical business, with a focus on engineering the accelerated trajectory of progressive technological development for the benefit of humanity.

Mr. Kaminskiy is a co-founder and managing partner of Deep Knowledge Group - a consortium of commercial and non-profit organizations active on many fronts in the realm of DeepTech and Frontier Technologies (AI, Longevity, Precision Medicine, FinTech, GovTech, InvestTech), ranging from scientific research to investment, entrepreneurship, analytics, policy and philanthropy.

He leads the activities of the consortium's venture arms - Deep Knowledge Ventures, an investment fund focused on DeepTech and advanced science projects, and Longevity.Capital, which prioritizes the convergence of Longevity and Artificial Intelligence, areas in which it has unparalleled investment and exit strategies.

Franco Cortese (Director, Aging Analytics Agency)



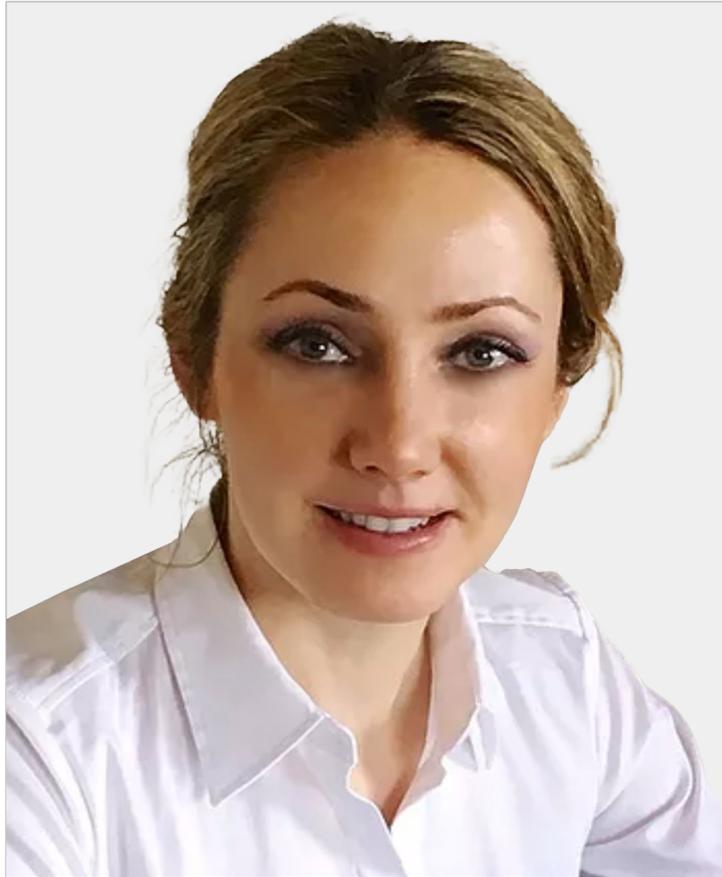
Franco Cortese is Director of Aging Analytics Agency, and has been a member of the company's executive management team since its inception.

He is one of the co-creators of the Longevity Industry Framework behind many of the company's Longevity Industry analytics, benchmarking and forecasting.

He is also one of five co-authors behind the proposal that led to the World Health Organization's addition of a new extension code for aging-related diseases (XT9T) during ICD-11, and the author of over a dozen scientific papers in peer-reviewed journals such as:

- Scientific Reports (Nature Publishing Group),
- Experimental Gerontology, Aging,
- The Journals of Gerontology Series A: Biological Sciences and Medical Sciences (Oxford Academic),
- Sleep (Oxford Academic),
- Human Gene Therapy,
- Frontiers in Genetics,
- Rejuvenation Research,
- Oncotarget,
- Translational Neurodegeneration

Kate Batz (Managing Partner, Longevity.Capital)



Kate Batz is Managing Partner of Longevity.Capital, a specialized investment fund focused on the Longevity Industry.

She is also Director of Strategy and Business Development at Deep Knowledge Ventures Group, comprising of Deep Knowledge Ventures, Aging Analytics Agency, and Deep Knowledge Analytics.

Kate is an experienced corporate attorney by background, licensed to practice law in California, New York, and Russia, with extensive sales and marketing experience.

At the beginning of her career, Kate was involved with international litigation when she worked for a former Pennsylvania state senator. As a corporate attorney, Kate worked with many Fortune 500 clients.

Compelled by the paradigm-shifting advances in science and technology in the fields of aging and Longevity, Kate joined Deep Knowledge Ventures Group. Kate is based in San Francisco, California.

About Kinexum

[Kinexum](#) was founded a decade ago to support efficient translational research to accelerate and advance healthcare product innovation. Providing multidisciplinary expertise for management and execution of early stage development programs, Kinexum is a proven leader in virtual translational development strategy and program management to advance innovative healthcare products toward commercialization.

They are the co-organizer of the annual [Metabesity Conference Series](#) in Washington D.C., one of the USA's largest Longevity-focused events.

Kinexum has been a leader in the underlying issues, complications, and unmet needs of metabolic diseases including diabetes, obesity, metabolic syndrome, cardiometabolic, inflammation, immune modulation, oncology, retinopathy, neuropathy, and more. Kinexum guides, designs, and manages strategic and operational solutions to the regulatory, manufacturing, nonclinical, clinical development, and business challenges necessary to take scientific discoveries to proof of concept and through the product life cycle.

Kinexum teams supplement the strengths of large and small organizations to reach high-value milestones effectively and efficiently. Kinexum specializes in crafting creative but sound and integrated solutions across scientific disciplines, therapeutic areas, product modalities, and business stages. We respond to emergencies and as well as requests for problem prevention and complex long-range planning.



About Kitalys Institute

Dr. Alexander Fleming, founder of Kinexum, a strategic advisory firm that provides regulatory and clinical development guidance for life science product development, observed many barriers to translating breakthroughs into public health protocols, including: (i) lack of a clear regulatory pathway for approval of therapeutic interventions; (ii) the need for clinical trials that are too large and last too long to attract funding to demonstrate prevention or delay of chronic diseases; and (iii) misalignment of incentives for a payer to reimburse an intervention today that might only benefit another reimburse years later.

Dr. Fleming re-imagined the regulatory system and our national health focus around aging to increase the speed (with safety) of scientific advances and make geroscience an integral part of public health. He believed that a not-for-profit organization could play a leading role in catalyzing stakeholders to take the moonshot to increased healthspan for all.

Therefore, in the spring of 2020, Kinexum decided to form the not-for-profit, The Kitalys Institute, to organize the Metabesity conferences and related events, Project Healthspan, and other initiatives to translate emerging science into the material, accessible gains in public health.



About Aging Analytics Agency

[Aging Analytics Agency](#) is the flagship Longevity-focused analytical subsidiary of Deep Knowledge Group, current serving as a supporting partner for the UK All-Party Parliamentary Group for Longevity, a Founding Partner of the APPG for Longevity Secretariat Longevity International, and an official member organization of the United Nations NGO Committee on Ageing.

It is the only specialized analytics agency in the world that focuses exclusively on the emerging Longevity Industry. They are recognized internationally as the premier analytics agency for advanced data analysis, industry reports and next-generation infographics on the topics of Aging and Longevity.

Now in its 7th year, Aging Analytics Agency has been on the frontlines of Longevity Analytics since the inception of the industry.



Kinexum

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The logo for Kitalys Institute features a stylized circular icon with a grid pattern above the text.

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The logo for Aging Analytics Agency features a stylized hourglass icon.

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