HEALTH AND AGING TRAJECTORIES: SHARED AND COMPETING RISKS AND RESILIENCIES FOR CHRONIC DISEASES ASSOCIATED WITH AGING

SEPTEMBER 28-29, 2023
9:30 AM - 5:30 PM ET

PROGRAM BOOKLET

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WORKSHOP AGENDA

September 28, 2023

Welcome

9:30 a.m. – 9:40 a.m.

Workshop Co-chairs:

Zorina Galis, Ph.D., National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH)

Gabriela Riscuta, M.D., C.N.S., National Cancer Institute (NCI), NIH

Opening Remarks

9:40 a.m. – 10:00 a.m.

David C. Goff Jr., M.D., Ph.D., FACP, FAHA, Director, Division of Cardiovascular Sciences, NHLBI, NIH.

Philip E. Castle, Ph.D., M.P.H., Director, Division of Cancer Prevention, NCI, NIH.

Keynote Address

10:00 a.m. – 10:30 a.m.

Aging as environment for chronic diseases.

Luigi Ferrucci, M.D., Ph.D., Scientific Director, National Institute on Aging (NIA)

Keynote Address

10:30 a.m. – 11:00 a.m.

Extending healthspan using deep data and remote monitoring.

Michael Snyder, Ph.D., Stanford University

Break 11:00 a.m –11:10 a.m.

Session One: Do we age differently? How the aging process can increase the risk for diseases such as cancer, cardiovascular, and neurodegenerative diseases.

Workshop Co-chairs: Michael Snyder, Ph.D., Stanford University
Session Co-chairs: Malgorzata Klauzinska, Ph.D., NCI, NIH and Arya Biragyn, Ph.D., NIA, NIH

11:10 a.m. – 11:30 a.m.

Clonal hematopoiesis and potential mechanisms of impact on distal tissues.
Peggy Goodell, Ph.D., Baylor College of Medicine

11:30 a.m. – 11:50 a.m.

Age Against the Machine: How the aging microenvironment drives tumor progression.
Ashani T. Weeraratna, Ph.D., Johns Hopkins University

11:50 a.m. – 12:10 p.m.

Senescent Cells Contribute to Aging, Dysfunction and Disease of the Central Nervous System.
Miranda Orr, Ph.D., Wake Forest University

12:10 p.m. – 12:30 p.m.

Lifestyle effects on brain-body communication.
Filip Swirski, Ph.D., Icahn School of Medicine at Mount Sinai

12:30 p.m. – 12:50 p.m.

Mapping Disease Trajectories in Drug Discovery: Intersecting the Genome, Phenome, Exposome, and Psychome in Biomedical Research.
Tudor Oprea, M.D., Ph.D., University of New Mexico

12:50 p.m. – 1:10 p.m.

Moderated Discussion
Moderator: Michael Snyder, Ph.D., Stanford University

Lunch Break
11:00 a.m –11:10 a.m.

Session Two: Molecular mechanisms of chronic age-related diseases

Workshop Co-chairs: Louise D. McCullough, M.D., Ph.D., McGovern Medical School, UTHealth Houston

Session Co-chairs: Anil Wali, Ph.D., NCI, NIH and Svetlana Kotliarova, Ph.D., National Institute of Neurological Disorders and Stroke (NINDS), NIH.

1:50 p.m. – 2:10 p.m

Cellular Senescence, the SASP, and Senolytics: The Path to Translation.

James Kirkland, M.D., Ph.D., Mayo Clinic

2:10 p.m. – 2:30 p.m.

Targeting age-related senescence and inflammation with senotherapeutics.

Paul D. Robbins, Ph.D., University of Minnesota

2:30 p.m. – 2:50 p.m.

Exogenous mediators of cellular senescence.

Laura Niedernhofer, M.D., Ph.D., University of Minnesota

2:50 p.m. – 3:10 p.m.

Age-related stromal changes drive tumorigenesis.

Sheila A. Stewart, Ph.D., Washington University School of Medicine in St. Louis

Break 3:10 p.m. – 3:20 p.m.

3:20 p.m. – 3:40 p.m.

Healthy heartbeat trajectories wane as heartbeat dementia trajectories emerge inadvanced age in the context of whole-body frailty.

Edward G. Lakatta, M.D., National Institute on Aging, NIH

3:40 p.m. – 4:00 p.m.

Mechanisms and Consequences of Age-related Endothelial Dysfunction: Can We Intervene?

Moderator: Michael Snyder, Ph.D., Stanford University

4:00 p.m. – 4:20 p.m.

Targeting sulfur amino acid metabolism for longevity & tumor suppression.

Christopher Hine, Ph.D., Cleveland Clinic

4:20 p.m. – 4:40 p.m.

Environmental Determinants and Models of Lung-Vascular Senescence.
Patty J. Lee, M.D., Icahn School of Medicine at Mount Sinai

4:40 p.m. – 5:00 p.m.

Age-related changes in the microbiome in health and disease.
Louise D. McCullough, M.D., Ph.D., McGovern Medical School, UTHealth Houston

5:00 p.m. – 5:30 p.m.

Moderated Discussion
Moderator: Louise D. McCullough, M.D., Ph.D., McGovern Medical School, UTHealth Houston

5:30 p.m.

Adjournment of Day 1

September 29, 2023

Welcome

9:30 a.m. – 9:40 a.m.

Workshop Co-chairs:

Zorina Galis, Ph.D., NHLBI, NIH
Gabriela Riscuta, M.D., C.N.S., NCI, NIH

Opening Remarks

9:40 a.m. – 10:00 a.m.

Lyn Jakeman, Ph.D., Director, Division of Neuroscience, NINDS, NIH
Ronald A. Kohanski, Ph.D., Director, Division of Aging Biology, NIA, NIH

Keynote Address

10:00 a.m. – 10:30 a.m.

Data-driven elucidation of molecular tradeoffs between degenerative diseases and cancer risk during aging.

Christoph Kaleta, Ph.D., Kiel University

Session Three: Identifying and managing shared and competing disease risks.

Moderator: Karina Davidson, Ph.D., Feinstein Institutes for Medical Health, Northwell Health

Session Co-chairs: Janine Simmons, M.D., Ph.D., NIA, NIH and Ilsa I. Rovira, M.S., NHLBI, NIH.

10:30 a.m. – 10:50 a.m.

Predictors of Cognitive Decline and Resilience in Aging.

Susan M. Resnick, Ph.D., NIA, NIH

10:50 a.m –11:10 a.m.

Role of sickle cell trait in earlier manifestation of cognitive deficit.

Hyacinth I. Hyacinth, M.B.B.S.,M.P.H., Ph.D., University of Cincinnati College of Medicine

11:10 a.m. – 11:30 a.m.

Trajectories of Chronic Disease Accumulation – Vulnerabilities, Disparities, and Opportunitiesfor Intervention.

Anda Botoseneanu, M.D., Ph.D., M.B.A., University of Michigan-Dearborn

11:30 a.m. – 11:50 a.m.

Long COVID: Major research findings and impact on the population.

Hannah Davis, Patient-Led Research Collaborative

Break 11:50 a.m. – 12:00 p.m.

12:00 p.m. – 12:20 p.m.

Risk and protective factors in mild cognitive impairment.

Yonas E. Geda, M.D., M.Sc., Barrow Neurological Institute, Dignity Health

12:20 p.m. – 12:40 p.m..

Pleiotropic interventions to improve clinically concurrent conditions.

Karina Davidson, Ph.D., Feinstein Institutes for Medical Health, Northwell Health

12:40 p.m.– 1:00 p.m.

Moderated Discussion

Moderator: Karina Davidson, Ph.D., Feinstein Institutes for Medical Health, Northwell Health

Lunch Break 11:00 a.m –11:10 a.m.

Session Four: Quo Vadis: increasing resilience, preventing and intercepting disease outcomes.

Moderator: James DeGregori, Ph.D., University of Colorado Anschutz Medical Campus

Session Co-chairs: Gabriela Riscuta, M.D., C.N.S., NCI, NIH and Laverne Brown, Ph.D., Office of Dietary Supplements (ODS), NIH.

1:40 p.m. – 2:00 p.m..

Understanding Resilience in Older Adults: An Overview of the Resilience World.

Peter M. Abadir, M.D., Johns Hopkins University

2:00 p.m. – 2:20 p.m.

Somatic evolution and its impact on resiliency and aging.

James DeGregori, Ph.D., University of Colorado Anschutz Medical Campus

2:20 p.m. – 2:40 p.m.

Can diet and exercise interventions increase resiliency in older adults? (and, if so, can thesebe scaled to optimize public health impact)

Wendy Demark-Wahnefried, Ph.D., The University of Alabama at Birmingham

2:40 p.m. – 3:00 p.m.

Age-related changes in cerebral hemodynamics: does exercise play a role?

Jill N. Barnes, Ph.D., University of Wisconsin-Madison

3:00 p.m. – 3:20 p.m.

Using Wearable Technology for Novel Insights into Risk and Resiliency with Aging.

Jennifer A. Schrack, Ph.D., Johns Hopkins University

3:20 p.m. – 3:40 p.m.

Moderated Discussion

Moderator: James DeGregori, Ph.D., University of Colorado Anschutz Medical Campus

Break 3:40 p.m.– 4:00 p.m.

Meeting Summary: Gaps, Opportunities, and Conclusions.

4:00 p.m. – 4:40 p.m.

Moderators:

Michael Snyder, Ph.D., Stanford University

Louise D. McCollough, M.D., Ph.D., McGovern Medical School, UTHealth Houston

Karina Davidson, Ph.D., Feinstein Institutes for Medical Health, Northwell Health

James DeGregori, Ph.D., University of Colorado Anschutz Medical Campus

Workshop Co-chairs:

Zorina Galis, Ph.D., NHLBI, NIH

Gabriela Riscuta, M.D., C.N.S., NCI, NIH

4:40 p.m.

Meeting Adjournment

DISCLAIMER: This content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health

WELCOME REMARKS

NHLBI DIVISION DIRECTOR

David Calvin Goff, Jr., M.D., PhD, FACP, FAHA Director

Director, Division of Cardiovascular Sciences, National Heart, Lung, and Blood Institute, National Institutes of Health

David Goff, M.D., Ph.D., is Director, Division of Cardiovascular Sciences, National Heart, Lung, and Blood Institute, National Institutes of Health. In this role, he leads a diverse team of scientists and administrators committed to turning discovery into cardiovascular health. Prior to joining the NHLBI, he served as Dean of the Colorado School of Public Health and as Chair of the Department of Epidemiology and Prevention at the Wake Forest School of Medicine. He received an M.D. from the University of North Carolina and a Ph.D. in epidemiology from the University of Texas-Houston School of Public Health. He trained in internal medicine at Baylor College of Medicine in Houston. He is an elected member of the American Epidemiological Society, and a Fellow of the American College of Physicians and the American Heart Association. He served the American Heart Association in multiple capacities, including as Chair of the Council on Epidemiology and Prevention, Chair of the Council on Quality of Care and Outcomes Research, President of the Mid-Atlantic Affiliate Board of Directors, and President of the Denver Metro Board of Directors. He received the American Heart Association Award of Meritorious Achievement in 2017. He received NIH Director's Awards in 2021 and 2022 for contributions to the NIH response to the SARS-CoV-2 pandemic. He has published over 300 manuscripts, book chapters, and other scientific reports. The major focus of his research has been on developing, testing, and implementing better strategies for promoting cardiovascular health and preventing cardiovascular disease.

NCI & NINDS DIVISION DIRECTORS

Philip E. Castle, Ph.D., M.P.H.

Director of the Division of Cancer Prevention (DCP), Senior, Tenured Investigator, Division of Cancer Epidemiology and Genetics (DCEG), National Cancer Institute (NCI), National Institutes of Health

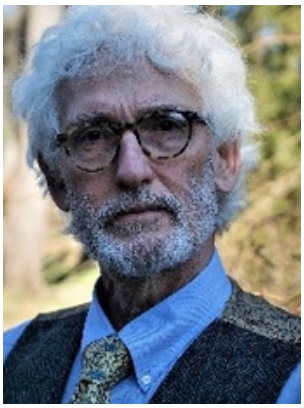
Philip E. Castle, Ph.D., M.P.H. is the Director of the Division of Cancer Prevention (DCP) and a Senior, Tenured Investigator in the Division of Cancer Epidemiology and Genetics (DCEG) at the U.S. National Cancer Institute (NCI) (Rockville, MD, USA). Previously, he was a Tenured Professor in the Department of Epidemiology and Population Health at Albert Einstein College of Medicine (Bronx, NY, USA)(2014-20), Chief Scientific Officer of the American Society for Clinical Pathology (ASCP) (2011-2), and Senior, Tenured Investigator (2010) and Tenure-Track Investigator (2003-10) in DCEG/NCI. Dr. Castle was a Cancer Prevention Fellow in DCP/NCI (1999-2002). Dr. Castle received a Ph.D. in Biophysics (1995) and M.P.H. in Epidemiology (2000) from the Johns Hopkins University (Baltimore, MD, USA) and his B.S. in Biological Sciences from Carnegie-Mellon University (1986).

Lyn Jakeman, Ph.D.

Associate Director, Division of Neuroscience, National Institute of Neurological Disorders and Stroke, National Institutes of Health

Dr. Lyn Jakeman leads the Division of Neuroscience at the National Institute of Neurological Disorders and Stroke (NINDS). In this role, Dr. Jakeman oversees program staff managing a broad spectrum of extramural awards, including programs focused on discovery of fundamental knowledge about the nervous system, laboratory and human studies to understand the causes of neurological disorders, and applied research leading to treatments to improve the lives of individuals living with neurological diseases and conditions. Brain disorders and chronic disability due to neurological conditions or trauma are becoming more prevalent with the aging of our population. By collaborating with our colleagues across the NIH Institutes and Centers, we hope to improve health across the lifespan through better understanding the intersection of aging and disease progression or recovery.

NIA DIVISION DIRECTORS



Ronald A. Kohanski, Ph.D.

Division Director of Aging Biology, National Institute on Aging, National Institute of Health

Ronald A. Kohanski, Ph.D., is the director of the Division of Aging Biology (DAB) at the National Institute on Aging. Dr. Kohanski obtained his Ph.D. in biochemistry with Robert L. Heinrikson at the University of Chicago in 1981. After a postdoctoral fellowship with M. Daniel Lane at the Johns Hopkins University School of Medicine, he held a faculty position at the Mount Sinai School of Medicine before returning as a faculty member at Johns Hopkins. His fields of research included enzymology and developmental biology of the insulin receptor. Dr. Kohanski joined the NIA Division of Aging Biology in 2005 as a program officer and became division deputy director in 2007.

He promotes research in all areas of the biology of aging, covering basic, applied and translational research through the diverse portfolios managed by DAB program officers. A long-standing principle of DAB, dating back 30 years to NIA's Longevity Assurance Genes funding opportunities, is to bring to the forefront the rate of aging as a guiding principle. This is based on the fundamental metric of lifespan and the influence of genetic, environmental, dietary, and pharmaceutical manipulations that later lifespan and health at older ages.

For several years, Dr. Kohanski has been a proponent for studies using heterochronic parabiosis and heterochronic blood exchange, which demonstrate the abilities of older animals to respond to "youthful signals" and are part of a broader program on regenerative biology and medicine. In addition, he has had a special interest in systems biology and signatures of aging as means to understand functional decline and the heterogeneity of aging. Dr. Kohanski strives to support expansion of research in the basic biology of aging in human populations, with special attention to health disparities.

Dr. Kohanski also is a co-founder and the current leader of the trans-NIH Geroscience Interest Group (GSIG). Initiated a decade ago by his predecessor Dr. Felipe Sierra, GSIG includes program officers from most NIH Institutes and Centers. Geroscience is an emerging scientific field built on the hypothesis that slowing the rate of aging will delay the onset and reduce the severity of chronic disease and dysfunction that occur late in adult life.

WORKSHOP CO-CHAIRS

WORKSHOP CO-CHAIRS

Zorina Galis, Ph.D.

Chief, Vascular Biology and Hypertension Branch, Division of Cardiovascular Sciences at the National Heart, Lung and Blood Institute (NHLBI)

Dr. Galis was trained in Physics, Biophysics, and Cell Biology, at University of Bucharest, Romania, in Pathology at McGill School of Medicine, Canada, and in Vascular Medicine at Harvard. She achieved tenured Cardiology and Biomedical Engineering positions in Emory School of Medicine and Georgia Institute of Technology in academia (Google Scholar), and Chief Scientific Officer for Cardiovascular R&D at Eli Lilly and Co.
Since joining NIH in 2011, Dr. Galis has served as the Chief of Vascular Biology and Hypertension Branch at National Heart Lung and Blood Institute (NHLBI), providing scientific leadership and enabling extramural research, from basic discovery through technology development, translation, to multi-site clinical trials. She also has spearheaded and led large interdisciplinary initiatives creating new funding opportunities recognized with NHLBI and NIH Director Awards, including the NHLBI Vascular Interventions/Innovations and Therapeutic Advances (VITA) Program, the NIH Common Fund Human BioMolecular Atlas Program (HuBMAP), and the Trans-NIH Lymphatic Coordination Committee.

Gabriela Ricuta, M.D., C.N.S., National Cancer Institute (NCI),NIH

Program Director in the Nutritional Science Research Group, Division of Cancer Prevention, National Cancer Institute, National Institutes of Health

Gabriela Riscuta is a Program Director in the Nutritional Science Research Group, Division of Cancer Prevention, National Cancer Institute, National Institutes of Health. In this capacity, she is responsible for directing, coordinating, and managing a multi-disciplinary research grant portfolio in nutrition and cancer prevention. Topics in her portfolio and research interest include: nutrition through the lifetime and lifestyle as relates to cancer prevention and resilience; aging as a risk factor for cancer; mechanisms through which microbiome impacts cancer risk, prevention, and interception. Dr. Riscuta graduated from University of Medicine and Pharmacy Bucharest, Romania and she also holds M.S. in Human Nutrition from University of Bridgeport, Connecticut. She is a member of American Nutrition Association. Dr. Riscuta received a prestigious NCI Merit award for her vision to create a dynamic webinar to update the medical and research community about current knowledge in nutrition and cancer prevention.

WORKSHOP ORGANIZING COMMITTEE

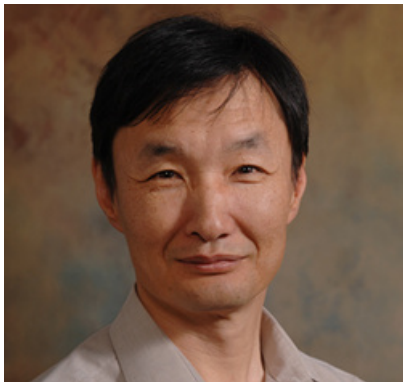
WORKSHOP ORGANIZING COMMITTEE

Zorina Galis, Ph.D. (co-chair)
National Heart, Lung, and Blood Institute, NIH

Gabriela Riscuta, M.D., C.N.S. (co-chair)
National Cancer Institute, NIH

Julia Berzhanskaya, Ph.D.
National Heart, Lung, and Blood Institute, NIH

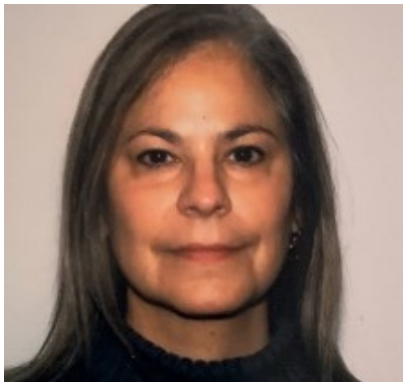
Malgorzata Klauzinska, Ph.D.
National Cancer Institute, NIH



Arya Biragyn, Ph.D.
National Institute on Aging, NIH

Janine Simmons, M.D., Ph.D.
National Institute on Aging, NIH

WORKSHOP ORGANIZING COMMITTEE



Ilsa I. Rovira, M.S.
National Heart, Lung, and Blood Institute, NIH

LaVerne Brown, Ph.D.
Office of Dietary Supplements, NIH

Ronit Yarden, Ph.D., M.H.S.A.
National Heart, Lung, and Blood Institute, NIH

Dan Xi, Ph.D.
National Cancer Institute, NIH

Anil Wali, Ph.D.
National Cancer Institute, NIH

Svetlana Kotliarova, Ph.D.
National Institute of Neurological Disorders & Stroke, NIH

KEYNOTE SPEAKERS

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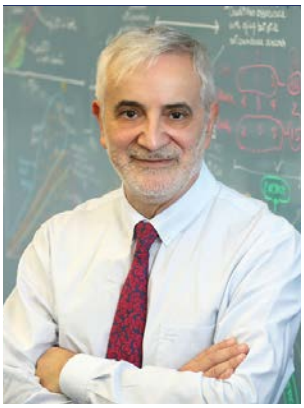


Luigi Ferrucci, M.D., Ph.D.

Scientific Director, National Institute on Aging, National Institutes of Health

Dr. Luigi Ferrucci is a geriatrician and an epidemiologist who conducts research on the biological and phenotypical pathways leading to progressive physical and cognitive decline in older persons. He has made major contributions in the design of many epidemiological studies conducted in the U.S. and in Europe, including the European Longitudinal Study on Aging, the AKEA study of Centenarians in Sardinia, the Women's Health and Aging Study and more recently the GESTALT study. He was also the Principal Investigator of the In CHIANTI study, a longitudinal study conducted in the Chianti Geographical area (Tuscany, Italy) looking at risk factors for mobility disability in older persons. Dr. Ferrucci received a Medical Degree and Board Certification in 1980, Board Certification in Geriatrics in 1982 and Ph.D. in Biology and Pathophysiology of Aging in 1998 at the University of Florence, Italy. For many years, he was an Associate Professor of Biology, Human Physiology and Statistics at the University of Florence. Between 1985 and 2002 he was the Director of the Laboratory of Clinical Epidemiology at the Italian National Institute of Aging. In September 2002, he became the Chief of the Longitudinal Studies Section at NIA and redesigned the Baltimore Longitudinal Study of Aging to create an interface between the rising field of Geroscience and study of age-related changes of phenotypes, as well as physical and cognitive function. He is a member of the Association of American Physicians and has received numerous awards including the "Enrico Greppi" award, the IPSEN Longevity award and the "Cavaliere dell'Ordine della Stella d'Italia". Dr. Ferrucci collaborates extensively with many researchers in the US and Europe, has published more than 1500 peer-reviewed manuscripts on aging and age-related diseases and is considered as the most productive Italian Scientist in the area of medical science. Dr. Ferrucci is currently the Scientific Director of NIA, since May 2011.

KEYNOTE SPEAKERS

Michael Snyder, Ph.D.

Stanford B. Ascherman Professor and Chair, Department of Genetics
Director, Stanford Center for Genomics and Personalized Medicine
School of Medicine, Stanford University

Dr. Michael Snyder is the Stanford W. Ascherman Professor and Chair of the Genetics Department at Stanford Medicine. He was recruited by Stanford in 2009 to chair the Genetics Department and direct the Center for Genomics and Personalized Medicine. Under his leadership U.S. News & World Report has ranked Stanford University first in Genetics, Genomics, and Bioinformatics every year for the past decade. As the leading pioneer of 21st century healthcare, Dr. Snyder invented and significantly advanced many industry-standard approaches to personalized medicine. Most recently his research involving longitudinal baseline profiling and state-of-the-art "omic" technologies research has greatly accelerated the advancement of precision medicine. As an entrepreneur, Dr. Snyder's co-founded companies have collectively raised $242 million in venture capital and are worth more than $6 billion in value. Dr. Snyder also serves on the board for a number of other companies.

Christoph Kaleta, Ph.D.

Director, Medical Systems Biology lab, University of Kiel and the University Hospital Schleswig-Holstein

Christoph Kaleta is heading the Medical Systems Biology lab at the University of Kiel and the University Hospital Schleswig-Holstein. His work focuses on using data integration and metabolic modelling approaches to elucidate metabolic pathways that are causally involved in the pathogenesis of diseases and identifying therapeutic approaches to modulate them. In particular, his group is interested in the role of host-microbiome-interactions in aging and inflammatory diseases where they use integrated metabolic models of host as well as microbiota to causally trace metabolic pathways through which the microbiota modulates disease processes in the host in close interaction between data generation, metabolic modelling and experimental validation.

WORKSHOP SPEAKERS & MODERATORS

SPEAKERS & MODERATORS: SESSION 1

Peggy Goodell, Ph.D.

Professor and Chair of the Department of Molecular and Cellular Biology, Director of the Stem Cells and Regenerative Medicine Center at Baylor College of Medicine

Margaret ("Peggy") Goodell is Professor and Chair of the Department of Molecular and Cellular Biology, and Director of the Stem Cells and Regenerative Medicine Center, at Baylor College of Medicine, in Houston, Texas. Goodell's research is focused on mechanisms that regulate hematopoietic stem cells, and their dysregulation in malignancies. Goodell was elected to the National Academy of Medicine in 2019. She is a recipient of the Tobias Award from the International Society for Stem Cell Research (2020) and the Dameshek Prize from the American Society of Hematology (2012). Goodell is Chair of the Scientific Advisory Board of the Keystone Symposia and is a member of their Board of Directors. Goodell serves on the editorial boards of Cell Stem Cell and Cancer Cell and directs a laboratory of about 15 trainees.

Ashani T. Weeraratna, Ph.D.

E.V. McCollum Professor and Chair of Biochemistry and Molecular Biology at the Johns Hopkins Bloomberg School of Public Health, as well as the Associate Director for Laboratory Research at the Sidney Kimmel Cancer Center, Johns Hopkins School of Medicine.

Dr. Weeraratna is the Bloomberg Distinguished Professor of Cancer Biology, E.V. McCollum Chair of Biochemistry and Molecular Biology at the Johns Hopkins Bloomberg School of Public Health, as well as the Associate Director for Laboratory Research at the Sidney Kimmel Cancer Center, Johns Hopkins School of Medicine. She is the immediate Past President of the Society for Melanoma Research and was recently appointed by President Biden as a member of the National Cancer Advisory Board. Prior to joining Johns Hopkins, she was the Ira Brind Professor and Co-Program Leader, Immunology, Microenvironment & Metastasis Program Member at the Wistar Institute. Born in Sri Lanka and raised in Lesotho in Africa, Weeraratna first came to the United States in 1988 to study biology at St. Mary's College of Maryland. She earned a Ph.D. in Molecular and Cellular Oncology at the Department of Pharmacology of George Washington University Medical Center. From 1998 to 2000, she was a post-doctoral fellow at The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Oncology Center, before joining the National Human Genome Research Institute as a staff scientist. In 2003, she moved to the National Institute on Aging, where she started her own research program, before joining the Wistar Institute from 2011-2019.

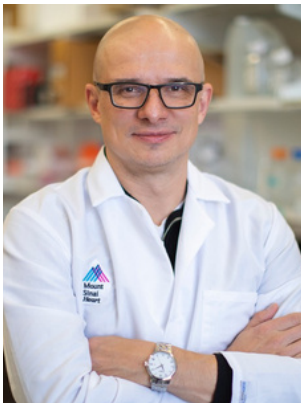
SPEAKERS & MODERATORS: SESSION 1

Miranda Orr, Ph.D.

Associate Professor of Internal Medicine in Geriatrics and Gerontology, Wake Forest University School of Medicine

Dr. Miranda Orr is an Associate Professor of Internal Medicine in Geriatrics and Gerontology at Wake Forest University School of Medicine, also serving as a Research Health Scientist at the W.G. (Bill) Hefner VA Medical Center in Salisbury, NC. She earned a Ph.D. in Neuroscience from Montana State University, specializing in mechanisms of tau pathogenesis using Alzheimer's disease stem cell and mouse models. As a Claude D. Pepper Center scholar at the Sam and Ann Barshop Institute for Longevity and Aging Studies in San Antonio, TX, she received postdoctoral training in the biology of aging and translational geroscience. Her research focuses on tau neurobiology and its role as a cellular stress response at the intersection between healthy brain aging and neurodegeneration. She made significant advancements in aging research and education, earning the prestigious Wake Forest School of Medicine Jarrahi Geroscience Scholar title in 2022. Her translational neurobiology program encompasses discovery science in cell and rodent models, neuropathological and spatial proteogenomic profiling of postmortem human brains, and early-stage clinical trials. Using this approach her laboratory discovered a link between intraneuronal tau accumulation, a defining neuropathology in Alzheimer's disease, and cellular senescence, a hallmark of aging. This seminal study established senescent cells as a therapeutic target for neurodegenerative diseases and helped ignite a new field of study. She has translated this finding to clinical testing where she is leading a multisite Phase II trial targeting senescent cell clearance in older adults with mild cognitive impairment or early Alzheimer's disease. For this work, she received the 2022 Melvin R. Goodes Prize for Excellence in Alzheimer's Drug Discovery from the Alzheimer's Drug Discovery Foundation and was featured in the January 2023 issue of National Geographic for identifying and imaging senescent cells in Alzheimer's disease.

SPEAKERS & MODERATORS: SESSION 1



Filip Swirski, Ph.D.

Arthur and Janet C. Ross Professor of Medicine (Cardiology) and Professor of Diagnostic, Molecular and Interventional Radiology at the Icahn School of Medicine at Mount Sinai, as well as Director of the Cardiovascular Research Institute.

Filip Swirski, Ph.D., is the Arthur and Janet C. Ross Professor of Medicine (Cardiology) and Professor of Diagnostic, Molecular and Interventional Radiology at the Icahn School of Medicine at Mount Sinai, as well as Director of the Cardiovascular Research Institute. He has secondary appointments at the Precision Immunology Institute and the BioMedical Engineering and Imaging Institute. Dr. Swirski is a leader in the field of innate immunity and inflammation in disease. He focuses on fundamental and translational cardiovascular science within the context of the hematologic, immune, metabolic, and nervous systems, with specific emphasis on cell development, communication, and function. Recently, his work has expanded to include lifestyle factors such as sleep, diet, and stress as critical modulators of cardiovascular health and hematopoiesis.

Tudor Oprea, M.D., Ph.D.

CEO, Expert Systems Inc, San Diego CA
Professor Emeritus, University of New Mexico School of Medicine

Tudor I. Oprea is a digital drug hunter with three decades of experience in knowledge management and artificial intelligence applied to target and drug discovery. He co-developed ChemGPS, the “lead-like approach”, systems chemical biology and a knowledge-based classification for human proteins. He co-discovered the first GPER agonist (orphan drug designated since 2021) and GPER antagonist, several GLUT transporter inhibitors and other chemical probes. His machine learning models include cheminformatics and drug discovery, disease and target biology. He co-developed DrugCentral and Pharos, as part of the NIH Common Fund project Illuminating the Druggable Genome Knowledge Management Center where he served as PI (2014-2022). In the last decade, he had Professorship appointments at the University of New Mexico School of Medicine, Technical University of Denmark, and University of Gothenburg. He is currently CEO of Expert Systems Inc, a Teal Ventures company based in San Diego, and Professor Emeritus, UNM School of Medicine. He co-authored over 330 publications, 11 granted US patents, and edited 2 books on informatics in drug discovery. His Google Scholar profile is at **https://bit.ly/oprea_ti**.

SPEAKERS & MODERATORS: SESSION 1

Michael Snyder, Ph.D.

SESSION MODERATOR

Stanford B. Ascherman Professor and Chair, Department of Genetics
Director, Stanford Center for Genomics and Personalized Medicine School of Medicine, Stanford University

SEE PAGE 22 FOR DR. SYNDER'S BIO

SPEAKERS & MODERATORS: SESSION 2

James Kirkland, M.D., Ph.D.

Noaber Foundation Professor of Aging Research, Mayo Clinic

James L. Kirkland, M.D., Ph.D., is the Noaber Foundation Professor of Aging Research at Mayo Clinic. Dr. Kirkland's research is on the contribution of fundamental aging processes, particularly cellular senescence, to age-related and chronic diseases and development of gerotherapeutics: agents and strategies for targeting fundamental aging mechanisms to treat age- and chronic disease-related conditions. Additional research areas include molecular and physiological mechanisms of age-related adipose tissue and metabolic dysfunction, frailty, and loss of resilience to infections and acute diseases in old age. Dr. Kirkland's laboratory published the first article about agents that selectively eliminate senescent cells - senolytic drugs. Dr. Kirkland demonstrated that senolytic agents enhance healthspan and delay, prevent, or alleviate multiple age-related disorders and diseases in mouse models. He published the first composite biomarker gerodiagnostic score of senescent cell burden that is sensitive to drug interventions in humans and the first clinical trials of senolytic drugs. He is preparing or conducting clinical studies of senolytics, including for COVID-19, frailty in elderly women, Alzheimer's disease, diabetes/obesity, osteoporosis, childhood cancer survivors, restoring function of organs from old donors to enable transplantation, idiopathic pulmonary fibrosis, pre-eclampsia, glioblastoma, and others.

Paul Robbins, Ph.D.

Professor of Biochemistry, Molecular Biology and Biophysics, Associate Director of the Institute on the Biology of Aging and Metabolism, University of Minnesota

Dr. Robbins received his B.A. from Haverford College, his Ph.D. from the University of California at Berkeley and then worked as a post-doctoral fellow in the laboratory of Dr. Richard Mulligan at the Whitehead Institute at MIT. He was an Assistant, Associate and then full Professor of Microbiology and Molecular Genetics at the University of Pittsburgh School of Medicine as well as Director of Basic Research for the Molecular Medicine Institute and Co-Director of the Paul Wellstone Cooperative Muscular Research Center. He then was a Professor of Molecular Medicine at Scripps Research in Jupiter, Florida and Director of the Center on Aging. He currently is a Professor of Biochemistry, Molecular Biology and Biophysics and Associate Director of the Institute on the Biology of Aging and Metabolism at the University of Minnesota. His current research is focused on developing therapeutic approaches to extend healthspan including senotherapeutics. He has co-authored more than 360 peer-reviewed manuscripts and 210 book chapters and reviews with an H-index of 137, i10-index of 500 and ~74,000 citations and has edited four books.

SPEAKERS & MODERATORS: SESSION 2

Laura Niedernhofer, M.D., Ph.D.

Professor, Department of Biochemistry, Molecular Biology and Biophysics, University of Minnesota

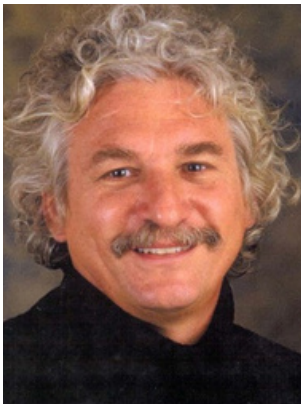
Laura Niedernhofer joined the University of Minnesota in July 2018 to create and direct the Institute on the Biology of Aging & Metabolism. She is a Professor in the Department of Biochemistry, Molecular Biology and Biophysics at UMN. Dr. Niedernhofer's expertise is in DNA damage and repair, genome instability disorders, cellular senescence, and aging. Her research program is centered on studying fundamental mechanisms of aging using mouse genetics and developing geroscience interventions. She contributed to the discovery of a new class of drugs called senolytics. Laura has served on study section for NCI, NIEHS and NIA. She has been awarded for research in aging, cancer, environmental health science, and her mentorship of young scientists. Laura was the 2018 recipient of the Vincent Cristafolo Rising Star in Aging Research awarded by the American Federation for Aging Research (AFAR) and nominated to The Academy for Health and Lifespan Research. She currently serves on the board of the Xeroderma Pigmentosum Family Support Group, National Initiative for Cockayne Syndrome, and AFAR.

SPEAKERS & MODERATORS: SESSION 2

Sheila A. Stewart, Ph.D.

Gerty T. Cori Professor of Cell Biology and Physiology in the Department of Cell Biology and Physiology and Medicine at Washington University in St. Louis, Vice Chair of Cell Biology and Physiology, Associate Director for Basic Science at the Siteman Cancer Center

Dr. Stewart is the Gerty T. Cori Professor of Cell Biology and Physiology in the Department of Cell Biology and Physiology and Medicine at Washington University in St. Louis, the Vice Chair of Cell Biology and Physiology, and the Associate Director for Basic Science at the Siteman Cancer Center. She received her Ph.D. in Microbiology and Immunology from UCLA in 1997 where she studied HTLV and HIV biology and completed her postdoctoral fellowship in Cancer Biology at the Whitehead Institute at MIT in Robert Weinberg's laboratory. In her own laboratory, Dr. Stewart has studied telomere dynamics and spent the majority of her time trying to understand how age-related changes in the tumor microenvironment impact tumorigenesis. Her laboratory has shown that aged stromal cells, similar to cancer associated fibroblasts, express a plethora of p38MAPK/MK2-dependent pro-tumorigenic factors and has developed murine models to explore the role senescent stromal cells play in the preneoplastic and premetastatic niches. Through this work, her group has focused on how inhibition of the p38 MAPK/MK2 pathway can make metastatic disease susceptible to immunotherapy. More recently, her group has begun to explore how some of these same changes contribute to therapy-induced comorbidities including chemotherapy-induced bone loss and peripheral neuropathy. In addition, the laboratory is examining how age-related changes in the premetastatic niche facilitate tumor cell seeding, dormancy and outgrowth and how these changes alter the local immune response to facilitate tumor cell proliferation.



Edward G. Lakatta, M.D.

Founder and Director of the Laboratory of Cardiovascular Science, Intramural Research Program, National Institute on Aging, National Institutes of Health

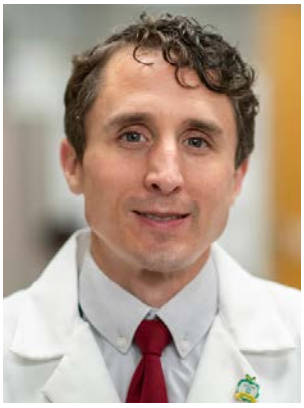
Dr. Edward Lakatta is a Physician-Scientist who specializes in cardiovascular disease. He received his M.D. from Georgetown University School of Medicine, Washington, D.C. He completed his residency in internal medicine at Strong Memorial Hospital, University of Rochester School of Medicine. Dr. Lakatta continued his training with an internship and cardiology fellowships at Georgetown and Johns Hopkins University Hospitals, and basic research training at NIH and at the Department of Physiology, University College, London, England. Dr. Lakatta is the founder and Director of the Laboratory of Cardiovascular Science, Intramural Research Program, National Institute of Aging, National Institutes of Health. He also holds adjunct appointments as Professor, Department of Physiology, University of Maryland School of Medicine, and Professor, Cardiology Division, Johns Hopkins School of Medicine.

SPEAKERS & MODERATORS: SESSION 2

Lisa Lesniewski, Ph.D.

Professor of Internal Medicine, Division of Geriatrics, The University of Utah

Dr. Lisa Lesniewski is a Professor of Internal Medicine in the Division of Geriatrics at the University of Utah. She received her Ph.D. in kinesiology from Texas A&M University and performed postdoctoral training in metabolism at the University of California San Diego and vascular aging research at the University of Colorado at Boulder. She co-directs the Translational Vascular Physiology Laboratory and is an investigator in both the Cardiovascular Research and Training Institute at the University of Utah and the Geriatrics Research Education and Clinical Center at the Salt Lake City Veterans' Affairs Medical Center. Her overarching research interest is in elucidating the mechanisms of age-related vascular and metabolic dysfunction and disease. Using cellular and animal models, her current research seeks to understand the interactions of immune cells and senescence in the metabolic impairments that accompany advancing age, as well as to elucidate the role of the endothelial glycocalyx in age-related vascular dysfunction and disease.

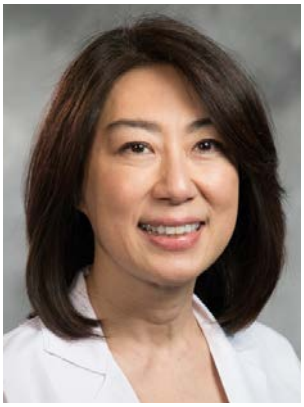


Christopher Hine, Ph.D.

Assistant Staff, Department of Cardiovascular and Metabolic Sciences, Assistant Professor of Molecular Medicine, Cleveland Clinic

Dr. Christopher Hine is Assistant Staff in the Department of Cardiovascular and Metabolic Sciences and Assistant Professor of Molecular Medicine at the Cleveland Clinic. He earned his Ph.D. in biochemistry from the University of Rochester under the guidance of Dr. Vera Gorbunova studying tumor suppressive mechanisms of long-lived rodents and the utilization of cancer-specific gene promoters. He then performed postdoctoral studies in the Department of Genetics and Complex Diseases at the Harvard T.H. Chan School of Public Health in the lab of Dr. James Mitchell examining dietary preconditioning and geroscience therapies to improve surgical outcomes. He established his independent laboratory in 2016 at Cleveland Clinic and explores the application and mechanisms of anti-aging interventions. Specifically, his lab focuses on sulfur amino acid metabolism via the transsulfuration pathway and hydrogen sulfide production, metabolism, and signaling as therapeutic targets for aging-associated diseases such as glioblastoma and iron dysregulation.

SPEAKERS & MODERATORS: SESSION 2



Patty J. Lee, M.D.

Professor, Medicine, Pulmonary, Critical Care and Sleep Medicine, Icahn School of Medicine at Mount Sinai

I received my Bachelor of Arts and Medical Degrees from Brown University, Providence, RI. I was an Osler Internal Medicine house staff at the Johns Hopkins School of Medicine (Janeway firm) in Baltimore, MD – where I remained for fellowship training in Pulmonary, Critical Care & Sleep medicine. I was recruited as Instructor to Yale University School of Medicine in 1998 where I remained until 2019, when I was recruited to Duke University School of Medicine, as Chief of the Pulmonary, Allergy & Critical Care division. My career as a physician-scientist led to discoveries that link innate immune signaling in lung endothelial cells and the vasculature to endogenous, cytoprotective molecular mechanisms. Our basic science discoveries led to our identification of novel immune-senescence pathways in health and diseased lungs, culminating in a recently awarded Senescent Cell Evaluations in Normal Tissues (U54) from the NIH Commons Fund. In parallel with impactful, clinically-relevant discoveries in lung-vascular molecular-cellular mechanisms, I have successfully mentored and advised faculty, research scientists, trainees and students across institutions, inspiring most to pursue medicine and/or biomedical research. During my tenure at Duke, despite COVID, I expanded my research and leadership skills by spearheading inter-disciplinary, translational and clinically-impactful projects, while building inter-disciplinary teams of scientists, project managers, coordinators and trainees to embark on large, funded research awards. At the Icahn School of Medicine at Mount Sinai, I will build and lead an inaugural IDEAS center / institute - Inter-disciplinary Experimental Aging Sciences.

Louise D. McCullough, M.D., Ph.D./ SESSION MODERATOR

Roy M. and Phyllis Gough Huffington Distinguished Chair, Professor of Neurology, McGovern Medical School at UTHealth

Dr. Louise McCullough is the Roy M. and Phyllis Gough Huffington Distinguished Chair and Professor of Neurology at McGovern Medical School at UTHealth. She is a physician-scientist and a practicing vascular neurologist with clinical expertise in sex/gender disparities, the microbiome, stroke and aging, and acute stroke treatments. A renowned investigator, she is well recognized for her work in cerebral vascular disease and is known for her research identifying sex differences in cell death pathways during stroke, which have now been shownto be a major factorin the response to ischemic insult. Working closely with the Society for Women's Health Research (SWHR) and the Office of Research on Women's Health (ORWH), she was instrumental in the National Institute of Health's requirement to include female animals in basic and translational studies. Among Dr. McCullough's many honors and awards are the prestigious National Institute of Neurological Disorders and Stroke (NINDS) Javits Neuroscience Investigator Award, the NINDS Landis Award for Outstanding Mentorship, the Inaugural American Heart Association (AHA) Outstanding Stroke Research Mentor Award and the AHA Merit Award.

SPEAKERS & MODERATORS: SESSION 3

Susan M Resnick, Ph.D., Senior Investigator

Chief, Laboratory of Behavioral Neuroscience and the Brain Aging and Behavior Section, National Institute on Aging, National Institutes of Health

Dr. Resnick received her Ph.D. in Differential Psychology and Behavioral Genetics from the University of Minnesota and completed a postdoctoral fellowship in Neuropsychology and Neuroimaging at the University of Pennsylvania. She was Research Assistant Professor of Psychology in Psychiatry at the University of Pennsylvania prior to joining the Intramural Research Program of the NIA in 1992. She is currently Chief of the Laboratory of Behavioral Neuroscience and the Brain Aging and Behavior Section at the NIA.Her research program investigates early markers of cognitive decline and impairment, including Alzheimer's disease, and factors that promote cognitive resilience. She initiated the neuroimaging stubstudy of the Baltimore Longitudinal Study of Aging (BLSA) to study brain-behavior associations in aging and examines neuroimaging and fluid biomarkers that may predict memory and other cognitive changes in older individuals. Through these BLSA studies and studies in the Women's Health Initiative Memory Study (WHIMS), she also investigates hormonal and genetic modulation of age-associated cognitive and brain changes.

Hyacinth I. Hyacinth, M.B.B.S., M.P.H., Ph.D.

Professor, Dorothy Woods Whitaker and D. Elizabeth Price Chair in Brain, Department of Neurology and Rehabilitation Medicine, University of Cincinnati College of Medicine

Dr. Hyacinth is a Professor and the Dorothy Woods Whitaker and D. Elizabeth Price Chair in Brain, in the department of Neurology and Rehabilitation Medicine at the University of Cincinnati College of Medicine. His research is focused on understanding the biological factors underpinning racial disparity in stroke, cognitive impairment and dementia. His research is partly focused on examining the role of the sickle cell mutation and other genetic variants in the incidence and prevalence of cerebral macro and microvascular pathologies in individuals of African Ancestry. His research approach is described as reverse translational in going from population to animal models and then back to the patient/population. He currently leads research effort to identify sources of racial/ethnic differences in stroke, cognitive impairment and dementia. His long term research goals is to (1) identify and characterize biological and environmental factors that underpin racial disparity in brain health, (2) use cellular and animal models to understand the underlying mechanism and (3) identify new preventative or therapeutic (or repurpose existing therapy) that could lead to reduction in racial/ethnic disparity in stroke, cognitive impairment and dementia.

SPEAKERS & MODERATORS: SESSION 3

Anda Botoseneanu, M.D., Ph.D., M.B.A.

Professor of Health Policy Studies, Associate Research Scientist, University of Michigan

Anda Botoseneanu is Professor of Health Policy Studies and Associate Research Scientist at the University of Michigan. Her research is rooted in the life course approach to health and aging, with a particular interest in developmental trajectories of body weight across the life course and the consequences of obesity for the functional and cognitive health of aging adults. Her recent research and publications are focused on the role of obesity and mental health conditions in determining the course and racial/ethnic and social disparities in trajectories of chronic disease accumulation in older adults. Dr. Botoseneanu earned a Ph.D. in Health Services Organization and Policy from the University of Michigan with postdoctoral work in geriatric clinical epidemiology at Yale University. She also holds an M.D. degree from the Hebrew University of Jerusalem, Israel, with practice in women's health, and an MBA in finance and healthcare from the University of Iowa.

Hannah Davis

Co-founder of the Patient-Led Research Collaborative (PLRC)

Hannah Davis is a co-founder of the Patient-Led Research Collaborative (PLRC), a team of Long Covid patients with research, policy, data, design, and medical backgrounds. PLRC did the first research on Long Covid in April 2020; their second paper on characterizing Long Covid is in the most viewed medical papers and was highlighted in the announcement of the $1.15 billion in Long Covid funding for the NIH. More recently, they awarded **$5 million in grants for biomedical research into Long Covid and ME/CFS**, launched a publication highlighting patient-generated hypotheses, created scorecards for researchers to improve patient engagement in research, and co-wrote a **Long Covid research review paper** that has been downloaded over 1 million times since January 2023. Hannah has a background in data analysis and machine learning, with a focus on tools for countering bias in machine learning datasets and on generative art & music.

SPEAKERS & MODERATORS: SESSION 3

Yonas E. Geda, M.D., Ph.D.

Professor and Program Director of the Behavioral Neurology and Neuropsychiatry fellowship program, Barrow Neurological Institute, (BNI)

Dr. Geda is originally from Africa, specifically from Ethiopia, where he received his Doctor of Medicine (M.D.) degree from Addis Ababa (Haile Selassie) University, Ethiopia. Then he trained at Mayo Clinic, Minnesota in psychiatry (1995-2000), behavioral neurology (2000-2001), and received an MSc in biomedical science/clinical research. He became full-time faculty at Mayo Clinic rising to the rank of Professor of Neurology and Psychiatry. After a total of 25 years career at Mayo Clinic, he joined Barrow Neurological Institute (BNI) in Phoenix, Arizona in July 2020 as Professor of Neurology, Department of Neurology at BNI. Dr. Geda's guiding value in academia is the pursuit of knowledge as an end in itself. However, he is pragmatic enough to seek extramural funding from 2004 to present (NIH K01 research career development grant, Harold Amos Medical Faculty Development Program, CTSA career transition grant, and R01 as PI, and he is co-I on several NIH funded grants). His research focuses on lifestyle factors and neuropsychiatric symptoms in the context of aging and mild cognitive impairment. Since 2003, Dr. Geda has been a member of the steering committee of the population-based Mayo Clinic Study of Aging that has made landmark contributions to the field of brain aging, mild cognitive impairment and dementia. He has won several awards, including the 2022 Alzheimer's medal and monetary prize for best paper of the year for Journal of Alzheimer's Disease, the Mayo Brothers Distinguished Fellowship Award (1998), and the Medal of the City of Marseille, France (2003). Dr. Geda has over 175 peer reviewed publications with an h-index of 62. Dr. Geda is a professor and program director of the Behavioral Neurology and Neuropsychiatry fellowship program at BNI. Additionally, Dr. Geda is a research professor at the Center for Biosensors and Bioelectronics, Arizona State University.

SPEAKERS & MODERATORS: SESSION 3

Karina Davidson, Ph.D./ SESSION MODERATOR

Donald and Barbara Zucker Endowed Professor in Health Outcomes
Dean of Academic Affairs
Senior Vice President, Research
Zucker School of Medicine & Northwell Health

Dr. Karina Davidson is the Dean of Academic Affairs, Director of the Institute of Health System Science at the Feinstein Institutes for Medical Research, Endowed Donald and Barbara Zucker Professor in Health Outcomes at the Zucker School of Medicine and Senior Vice President, Research at Northwell Health. For more than 25 years Dr. Davidson has served in leadership roles for teams focused on the advancement of scientific and patient care missions, through both the generation and implementation of research-based evidence. Dr. Davidson has been the principal investigator of more than 29 federally funded grants and authored over 350 peer-reviewed articles. Dr. Davidson's research focuses on innovations in personalized trials and healthcare systems to manage chronic disease and patient symptoms that incorporate patient preferences and values. Personalized (N-of-1) Trials are designed to identify a single patient's symptoms, conditions, or behaviors, and promote their overall health. Dr. Davidson served as Chair of the United States Preventive Services Task Force. She has a Ph.D. in Clinical Health Psychology and a M.A.Sc in Industrial/Organizational Psychology.

SPEAKERS & MODERATORS: SESSION 4

Peter M. Abadir, M.D.

Associate Professor of Medicine (Geriatrics), Computer & Electrical Engineering Division of Geriatric Medicine and Gerontology
Johns Hopkins University School of Medicine
Johns Hopkins Whiting School of Engineering

Dr. Peter Abadir is a physician-scientist and an associate professor of medicine at the Johns Hopkins University School of Medicine with a secondary appointment in the Electrical and Computer engineering department at the Johns Hopkins Whiting School of Engineering. He is the Salisbury Family Center for Innovative Medicine Human Aging Project Scholar. His clinical expertise is geriatrics medicine, with special emphasis on the intersection between physical and cognitive decline with aging using his bedside care of older adults to inform his laboratory work and translate findings into novel disease therapies. Dr. Abadir is the molecular core director of an NIA-funded P30 award focused on frailty, and a U2/U3 award focused on physical resiliency in aging. Dr. Abadir is co-director of an NIA-funded T-32 focused on postdoctoral fellowship training in aging-translational research. Dr. Abadir is also currently leading (co-PI) a new NIA-funded (P30) Artificial Intelligence and Technology Collaboratory center, an alliance between the Johns Hopkins clinical research Aging enterprise and the Whiting School of Engineering that was established for the development and implementation of effective artificial intelligence approaches and technologies to promote the maintenance of the independence of older individuals, including persons with dementia and their caregivers. Dr. Abadir is the director of the Johns Hopkins GeroTech Incubator Program, a multidisciplinary effort within the Human Aging Project that brings together teams of Hopkins healthcare providers, engineers, and business professionals to develop and implement novel scalable engineered solutions for health problems affecting older adults

SPEAKERS & MODERATORS: SESSION 4

James DeGregori, Ph.D./ SESSION MODERATOR

Professor, Department of Biochemistry and Molecular Genetics; Deputy Director, University of Colorado Cancer Center

James DeGregori is a Professor in the Department of Biochemistry and Molecular Genetics and Deputy Director of the University of Colorado Cancer Center. He has a B.A. Microbiology from the University of Texas at Austin and a PhD Biology from the Massachusetts Institute of Technology, with postdoctoral training at Duke University. He holds the Courtenay and Lucy Patten Davis Endowed Chair in Lung Cancer Research, and is Editor-in-Chief of the journal Aging And Cancer.
His lab studies the evolution of cancer, in the context of their Adaptive Oncogenesis model, with a focus on how aging, smoking, and other insults influence fitness landscapes. The lab has developed this model based on classic evolutionary principles, and substantiated this model by theoretical, experimental and computational studies.

Wendy Demark-Wahnefried, Ph.D., R.D.

Professor and Webb Endowed Chair of Nutrition Sciences, University of Alabama at Birmingham (UAB)

Wendy Demark-Wahnefried, Ph.D., R.D. is Professor and Webb Endowed Chair of Nutrition Sciences at the University of Alabama at Birmingham (UAB) and also is Associate Director for Cancer Prevention and Control at the O'Neal Comprehensive Cancer Center at UAB. Her research ranges from determining mechanisms of nutrition-based therapies to developing, testing, and disseminating home-based interventions that improve diet, physical activity and functional status among populations at increased risk for cancer. To date, this research has been supported by 17 NIH grants and has resulted in over 350 peer-reviewed publications. Dr. Demark-Wahnefried has been recognized as a Komen Professor of Survivorship and an American Cancer Society Clinical Research Professor. She has served on several committees, including the National Cancer Policy Forum of the National Academy of Sciences, and guidelines panels of the American Cancer Society, World Cancer Research Fund, American College of Sports Medicine, and the American Society of Clinical Oncology.

SPEAKERS & MODERATORS: SESSION 4

Jill N. Barnes, Ph.D.

Associate Professor in the Department of Kinesiology at the University of Wisconsin-Madison with an affiliate faculty appointment in the Division of Geriatrics and Gerontology in the Wisconsin School of Medicine and Public Health

Dr. Jill Barnes is an Associate Professor in the Department of Kinesiology at the University of Wisconsin-Madison with an affiliate faculty appointment in the Division of Geriatrics and Gerontology in the Wisconsin School of Medicine and Public Health. Dr. Barnes received her undergraduate degree at the University of Michigan, her M.S. and Ph.D. from the University of Texas at Austin, and completed a postdoctoral fellowship in Integrative Physiology at Mayo Clinic. Her primary line of research is focused on understanding the effect of aging on the structure and function of the blood vessels in humans and how this relates to the risk of cardiovascular disease and dementia. Her current laboratory projects are funded through the National Institutes of Health and the Department of Defense. Dr. Barnes is an Associate Editor for Journal of Applied Physiology, a Senior Editor for the Experimental Physiology journal, and serves as the Councilor for Exercise Physiology for the American Physiological Society.

Jennifer A Schrack, Ph.D.

Associate Professor of Epidemiology and Medicine, Director of the Center on Aging and Health, Johns Hopkins University

Jennifer Schrack, Ph.D., M.S. is an Associate Professor of Epidemiology and Medicine and the Director of the Center on Aging and Health at the Johns Hopkins University. Her research focuses on the intersection of movement and health, with the goal of maintaining mobility and functional independence with aging. She holds a Masters in Kinesiology from the University of Michigan and a Ph.D. in Epidemiology from the Johns Hopkins Bloomberg School of Public Health. She is MPI of the National Health and Aging Trends Study, a platform for studying late life disability, as well as the PI/MPI of three R01s from that NIA to study the intersection of movement and brain health in older adults