The 2017 Harvard / Paul F. Glenn

Symposium on Aging

June 26, 2017

The Paul F. Glenn Center for the Biology of Aging Research

Welcome to the 12th Annual Harvard/Paul F. Glenn Symposium on Aging. Each year, the Paul F. Glenn Center for Aging Research hosts the Harvard Symposium on Aging with a mission to present new advances in aging research and to stimulate collaborative research in this area. The symposium has grown over the past 11 years to be one of the biggest events at Harvard Medical School. We have been fortunate to have many of the leaders in the aging field speak at the symposia and today is no exception.

We wish to acknowledge the generosity and vision of Paul F. Glenn, Mark Collins and Leonard Judson for their unwavering support of aging research through the Glenn Foundation for Medical Research. Thanks to their support, we now have a vibrant community of researchers who study aging and age-related diseases. Since the inception of the Paul F. Glenn laboratories at Harvard in 2005, this network has grown to include the Buck Institute, Albert Einstein College of Medicine, Mayo Clinic, MIT, Princeton University, Stanford University, Salk Institute, University of California, San Francisco, University of California, Berkeley and the University of Michigan.

The reasons for accelerating research into the molecular biology of aging are clear. First and foremost, the number of aged individuals in developed countries is growing rapidly, which will place an unprecedented burden on the social fabric and economic infrastructure. Because chronic illness in the elderly is a major medical cost, enormous savings would be achieved if the healthy lifespan were extended through a greater understanding of age-related diseases. A study by the RAND Corporation concluded that advances in medicine arising from aging research would be one of the most cost-effective approaches to age-related disease. Advances in aging research have shown that it is possible to extend the healthy lifespan of laboratory animals through genetic and pharmacological means. We anticipate that significant strides will be made in understanding how human health and lifespan are regulated, leading to novel therapeutic approaches to the diseases of aging, such as diabetes, cancer, Alzheimer's and heart disease.

Today's attendees come not only from the Harvard research community, but from across the nation and from overseas for this event. On behalf of The Paul F. Glenn Center for Aging Research and Harvard Medical School, we welcome you to this Special 12th Annual Harvard/Paul F. Glenn Symposium on Aging, 2017.

David Sinclair and Bruce Yankner
Co-Directors, Paul F. Glenn Center for Aging Research

Symposium on Aging
Agenda

June 26, 2017
1:00 PM - 5:00 PM

1:00 p.m.	**Welcome** Harvard Medical School Mr. Mark Collins, President Glenn Foundation for Medical Research
1:15 p.m	Judith Campisi, PhD
2:00 p.m	Marcia Haigis, PhD
2:45 p.m	Rajendra S. Apte, MD, PhD
3:30 p.m	Li-Huei Tsai, PhD
4:15 p.m	Public Social

Judith Campisi, PhD

Judith Campisi received a PhD in Biochemistry from the State University of New York at Stony Brook, and postdoctoral training in cell cycle regulation at the Dana-Farber Cancer Institute and Harvard Medical School. As an Assistant Professor at the Boston University Medical School, she studied the role of cellular senescence in suppressing cancer, and soon became convinced that senescent cells also contributed to aging. She left Boston University as an Associate Professor to become a Senior Scientist at the Lawrence Berkeley National Laboratory in 1991. In 2002, she started a second laboratory at the Buck Institute for Age Research, where she is a Professor. At both institutions, Campisi established a broad program to understand the relationship between aging and age-related disease, with an emphasis on the interface between cancer and aging. Her laboratory made several pioneering discoveries in these areas, and her research continues to challenge and alter existing paradigms.

In recognition of her research and leadership, Campisi received numerous awards, including two MERIT awards from the National Institute on Aging, awards from the AlliedSignal Corporation, Gerontological Society of America and American Federation for Aging Research, the Longevity prize from theIPSEN Foundation, Bennett Cohen award from the University of Michigan, Schober award from Halle University and the first international Olav Thon Foundation prize. She is an elected a fellow of the American Association for the Advancement of Science, and serves on numerous national and international editorial and scientific advisory boards.

Cellular Senescence, Aging and Cancer: Yin and Yang

Marcia Haigis, PhD

Marcia C. Haigis, Ph.D. is an Associate Professor in the Department of Cell Biology at Harvard Medical School and a member of the Paul F. Glenn Laboratories for Medical Research. Dr. Haigis received her Ph.D. in Biochemistry from the University of Wisconsin in 2002 studying protein chemistry. She performed postdoctoral research at MIT in 2006 where she made fundamental discoveries connecting sirtuin function to mitochondrial metabolism. Dr. Haigis joined the Harvard faculty as an Assistant Professor in 2006.

The Haigis lab seeks to understand the role that mitochondria play in human aging and age-associated diseases. In particular, the lab uses cellular and mouse models to study the mitochondrial and metabolic responses to cellular stresses, such as DNA damage or nutrient challenge. Recent studies have identified roles for the sirtuin family of NAD-dependent deacylases in regulating the metabolic response to DNA damage. Additionally, the lab has used proteomic and metabolomic approaches to identify novel sirtuin targets, further defining how mitochondria adapt to stress.

In recognition of these scientific achievements, Dr. Haigis has received a Brookdale Leadership in Aging Award, the Ellison Medical Foundation New Scholar Award and an American Cancer Society Research Scholar Award.

New Modes of Mitochondrial Regulation in Aging and Disease

Rajendra S. Apte, MD, PhD

Dr. Rajendra S. Apte is the Paul A. Cibis Distinguished Professor at Washington University School of Medicine in St. Louis, Missouri, where he serves as the Director of Translational Research in the Department of Ophthalmology and Visual Sciences, and is a Professor in the Department of Developmental Biology and Medicine. Dr. Apte received his medical degree from the University of Bombay and joined Washington University School of Medicine after obtaining a Ph.D. in Immunology at the University of Texas Southwestern Medical Center in Dallas, Texas, and post completion of a retinal vascular and vitreo-retinal surgery fellowship at The Johns Hopkins University School of Medicine in Baltimore, Maryland. Dr. Apte was recruited to Washington University in 2003 and became a tenured professor at the School of Medicine in less than ten years. Dr. Apte is a vitreoretinal surgeon and clinician scientist. His basic research focuses on the role of inflammation in cell survival and angiogenesis. His clinical research includes understanding the pathobiology of medical and surgical retinal diseases. Dr. Apte has published extensively in basic and clinical peer reviewed journals and has participated as a principal investigator in numerous clinical trials.

Dr. Apte has won numerous awards, honors, and educational scholarships, recent highlights of which include the 2017 J. Wayne Streilein Award Lecture in Immunology, 2017 Macula Society W. Richard Green Award, 2016 Research to Prevent Blindness Nelson Trust Award, 2014 Research to Prevent Blindness Sybil B. Harrington Physician-Scientist Award for Age-Related Macular Degeneration, 2014 ASRS Presidents' Award, 2013/2014 Carl Camras Translational Award, the Macula Society Young Investigator Award in 2013, Julie Martin Mid-Career Award in Aging Research from AFAR in 2012, the Macula Society Retina Research Foundation Cox Research Award in 2010, the American Retina Foundation Research Award in 2008, the Washington University Nominee for the Ellison Foundation New Scholars Award in Aging in 2005, the Research to Prevent Blindness Career Development Award in 2004, and the Research to Prevent Blindness Physician Scientist Award in 2014. These awards accompany his 100+ peer-reviewed publications.

Lipid Homeostasis in Aging and Disease

Li-Huei Tsai, PhD

Professor Li-Huei Tsai is the Director of the Picower Institute for Learning and Memory at the Massachusetts Institute of Technology, a Picower Professor of Neuroscience, and an Associate Member of the Broad Institute. She obtained Ph.D. from University of Texas Southwestern Medical Center in Dallas and postdoctoral training at Cold Spring Harbor Laboratories and Massachusetts General Hospital. Tsai became Assistant Professor of Pathology at Harvard Medical School and was promoted to tenure Professor at Harvard in 2002. She relocated to Massachusetts Institute of Technology in 2006. She was an Investigator of the Howard Hughes Medical Institute from 1997 to 2013. Tsai is also a Fellow of the American Association for the Advancement of Science, a member of the National Academy of Medicine, and an Academician of the Academia Sinica in Taiwan.

Tsai is interested in elucidating the pathogenic mechanisms underlying neurological disorders that impact learning and memory. She takes a multidisciplinary approach to investigate the molecular, systems, and circuit basis of neurodegenerative disorders. Recent contributions include the identification of chromatin remodeling as a means to regulate memory gene expression and enhance cognitive function during neurodegeneration. Her lab also conducts epigenomic analysis of mouse and human Alzheimer's disease (AD) brain samples and has identified important contributions of dysregulated immune response genes in AD. Currently, the Tsai lab uses induced pluripotent stem cell (iPSCs) derived from human subjects to model AD and large scale imaging, optogenetics, and in vivo electrophysiology to study the brain circuitry affected by AD.

Network Level Approaches to Studying Alzheimer's Disease

Notes

Notes

Nearby locations for lunch:

1. Elements Café
located at Harvard Medical School, New Research Building

2. Bertucci's
(at Children's), 1 Blackfan Circle (Exit rear of Harvard Medical School)

3. Galleria Longwood Food Court
342 Longwood Avenue