

**Cancer-Alzheimer's Disease Inverse Correlation (CADIC):
From Biological Mechanisms to Therapeutic Potential**
NIA & NCI Workshop

March 25-26, 2026

SPEAKER BIOGRAPHIES

Speaker: Erin Abner, PhD



Dr. Erin Abner is a Professor and Chair in the Department of Epidemiology and Environmental Health with joint appointments in the UK Sanders-Brown Center on Aging and the Department of Biostatistics. Dr. Abner is the author or co-author of more than 100 peer-reviewed publications, and her research focuses on clinical-pathological correlation, cognitive trajectories, and risk factors for ADRD. She is the Co-Leader of the Data Management and Statistics Core of the NIH/NIA Alzheimer's Disease Center.

Speaker: Jane A. Driver, MD



Dr. Jane A. “Jenny” Driver, MD, MPH is a geriatrician-oncologist with over 20 years of experience in clinical innovation, research, and healthcare administration. Dr. Driver is Associate Professor of Medicine at Harvard Medical School, a member of the Brigham and Women’s Hospital Division of Aging, and C-Founder of the Older Adult Hematologic Malignancy Program at Dana Farber Cancer Institute. She serves as Chief of Geriatrics and Extended Care Services at the VA Boston Healthcare System.

Dr. Driver’s career has been devoted to research and clinical innovation to improve healthcare for older adults. A recipient of many grants from VA, NIH, and various foundations, her work has made a national and international impact in epidemiology, geriatric oncology and transitional care. Dr. Driver has implemented many clinical innovations that improve quality of care for older patients with multicomplexity. She is currently leading a national dissemination of the Coordinated Transitional Care Program which provides vulnerable patients with extra support with transitions from hospital to home. She led the implementation of a Hospital-in-Home Program at VA Boston Healthcare System and has received major funding to create homecare coordination teams to promote Veteran’s aging in place. Dr. Driver has embedded geriatric care models in oncology, cardiology and renal outpatient clinical settings.

In 2021, Dr. Driver became Chief of Geriatrics and Extended Care at VA Boston where she is a major protagonist in VA’s effort to become the largest Age-Friendly Healthcare System in the nation.

Speaker: Joaquin Espinosa, PhD



Dr. Espinosa is the Executive Director of the Linda Crnic Institute for Down Syndrome at the University of Colorado, the largest center for Down syndrome research in the world. Dr. Espinosa directs the Human Trisome Project, a large and detailed study of the population with Down syndrome, as well as novel clinical trials to improve health outcomes in this population. A native of Argentina, he received his PhD in Biology from the University of Buenos Aires.

He later completed his training at the Salk Institute in San Diego, California, and began his independent appointment at the University of Colorado in 2004. After the creation of the Crnic Institute, he pivoted from a focus on cancer research to the study of Down syndrome. His research program demonstrated that individuals with Down syndrome display chronic immune dysregulation driven by the extra copy of chromosome 21, leading to several clinical trials testing the safety and efficacy of immunomodulatory strategies to improve health outcomes in this population.

Dr. Espinosa serves on several NIH-supported programs focused on Down syndrome as part of the NIH INCLUDE Project. He leads the Administrative and Outreach Core of the INCLUDE Data Coordinating Center, which administers the INCLUDE Data Hub, serves as contact PI for the INCLUDE Down Syndrome Biorepository, and is also the PI for the family registry known as Down Syndrome Connect (DS-Connect).

He will present on recent research advances pointing to potential mechanisms underlying the cancer – Alzheimer’s disease inverse correlation (CADIC) in people with Down syndrome.

Speaker: Mark Gilbert, MD



Dr. Gilbert is an expert in clinical research, emphasizing both large, multi-institutional studies for malignant gliomas as well as smaller clinical trials that are designed to advance therapies for less common cancers. He is currently an adjunct faculty at the Fred Hutchinson Cancer Center. His prior position was a decade tenure as the Chief of the Neuro-Oncology Branch in the National Cancer Institute and National Institute of Neurologic Disorders and Stroke. Over the course of his career he published over 500 peer reviewed manuscripts and he led several important clinical trials in the field of Neuro-Oncology including the RTOG 0525 and RTOG 0825 studies. RTOG 0525 which accrued nearly 1200 patients tested whether a dose-dense schedule of temozolomide is therapeutically superior to standard dosing. RTOG 0825, published in the New England Journal of Medicine, evaluated the role of

bevacizumab for newly diagnosed glioblastoma. Upfront tumor collection and molecular stratification, in addition to the placebo-control design and expansion of the quality-of-life studies signify advances in clinical trial opportunities in the field.

Dr. Gilbert created and led the Brain Tumor Trials Collaborative, a 32-center national consortium, and the Collaborative Ependymoma Research Network which transformed knowledge and treatment of this rare cancer. This led to a Cancer Moonshot funded program, NCI-CONNECT, co-led with Dr. Terri Armstrong to study a variety of rare CNS cancers. Dr. Gilbert's long-term interest is in translational research by utilizing laboratory-based discoveries to create novel and hypothesis-based clinical trials. In his current role, he continues to teach, mentor and participate in grant reviews for colleagues and organizations worldwide.

Speaker: Delores Hambardzumyan, PhD, MBA



Dr. Hambardzumyan earned her Master of Science in Biochemistry from Yerevan State University in Armenia. She completed her Ph.D. in Biochemistry at the Buniatian Institute of Biochemistry, which is part of the National Academy of Sciences of the Republic of Armenia. Additionally, she holds an MBA from the Goizueta Business School at Emory University.

Dr. Hambardzumyan undertook postgraduate fellowships in cancer biology and radiation oncology at Memorial Sloan Kettering Cancer Center and neuronal plasticity and transplantation at the French National Institute of Health and Medical Research. Throughout her career, she has held academic positions at Memorial Sloan Kettering Cancer Center, Cleveland Clinic, Emory University and Icahn School of Medicine at Mount Sinai.

Dolores Hambardzumyan, Ph.D., MBA, is a neuroscientist specializing in neuro-oncology. Her research centers around the role of the brain tumor immune microenvironment in tumor progression and treatment response. In her laboratory, she has developed methods for immune profiling of brain tumors, creating novel

markers to distinguish and lineage trace various populations of myeloid cells, including monocytes, monocyte-derived macrophages, neutrophils, and resident brain microglia. This work aims to better define their roles in brain tumor growth.

Her research has demonstrated that glioblastoma-specific genetic driver mutations can influence the composition and function of the immune tumor microenvironment, as well as alter tumor responses to treatment. Dr. Hambardzumyan is particularly focused on developing novel combinatory therapies for treating both pediatric and adult high-grade gliomas by targeting not only the neoplastic but also the non-neoplastic compartments.

Speaker: Christoph Kaleta, PhD



Christoph Kaleta is a Professor of Medical Systems Biology and Speaker of the Institute for Experimental Medicine at Kiel University and University Hospital Schleswig-Holstein. He leads research at the interface of computational biology, microbiome science, and metabolism. His work focuses on developing and applying constraint-based metabolic modeling approaches to integrate multi-omics data and to gain mechanistic insights into the role of metabolism in disease, with a major emphasis on host-microbiome interactions in aging, chronic inflammation, and neurodegenerative disorders.

Dr. Kaleta received his training in computational and systems biology at the University of Jena, with a strong emphasis on genome-scale metabolic modeling and integrative data analysis. Over the course of his career, he has co-authored more than 110 peer-reviewed publications in leading journals and has been actively involved in national and international collaborative research initiatives investigating the role of host-microbiome-interactions in health and disease. His long-term vision is to translate mechanistic model predictions into effective therapies, with a particular focus on microbiome-based interventions - an approach his group is already actively pursuing in close collaboration with experimental and clinical partners.

Speaker: Katherine King, MD, PhD



Katherine Y. King, MD, PhD is Professor of Pediatric Infectious Diseases at Baylor College of Medicine and Texas Children's Hospital, where she is part of the faculty for the Stem Cells and Regenerative Medicine Center and serves as Co-Director of the BCM Medical Scientist Training Program. Dr. King received her BA in Biochemical Sciences from Harvard University and her MD and PhD degrees from Washington University in St. Louis. A board-certified pediatric infectious diseases physician, Dr. King's research focuses on the molecular mechanisms by which inflammation affects blood and immune cell production and clonal competition by hematopoietic stem cells in the bone marrow.

Dr. King discovered that infections activate hematopoietic stem cell division. She showed that persistent hematopoietic stem cell division during chronic infectious and inflammatory conditions can drive bone marrow failure. Further, she showed that inflammatory activation of hematopoietic stem cells contributes to clonal hematopoiesis, a condition associated with cardiovascular disease and other diseases of aging. Dr. King's work has made a significant impact on explaining disease phenotypes such as why infections impede stem cell engraftment after transplant, and why immunotherapy patients develop persistent cytopenias.

In 2025, Dr. King described mutation-specific effects of clonal hematopoiesis on Alzheimer's disease pathophysiology (Matatall et al, Cell Stem Cell). Ongoing work addresses the impact of clonal hematopoiesis mutations on immune cell function, including infiltration to the central nervous system, as well as the interactions between microbiome, hematopoiesis, and innate immune memory.

Dr. King has been the recipient of the NHLBI R35 Emerging Investigator Award, the Presidential Early Career Award for Scientists and Engineers (PECASE), and the 2025 E. Mead Johnson Award of the Society for Pediatric Research. She is an elected member of the American Pediatric Society and the American Society for Clinical Investigation.

Speaker: Lindsay Kobayashi, PhD



Lindsay Kobayashi is an Associate Professor of Epidemiology at the University of Michigan School of Public Health and the Associate Director for Research, Center for Global Health Equity. She holds a PhD in Epidemiology and Public Health from University College London and completed a David E. Bell Postdoctoral Fellowship at the Harvard Center for Population and Development Studies.

Her research program is funded by the NIA and NCI and focuses on life course social and economic influences on cognitive aging and the epidemiological relationship between cancer and dementia.

Speaker: Besim Ogretmen, PhD



Besim Ogretmen is a professor at the College of Medicine, Department of Biochemistry and Molecular Biology, and the SmartState Endowed Chair in Lipidomics and Pathobiology at the Medical University of South Carolina (MUSC). Dr. Ogretmen is an Associate Director of Basic Science at the Hollings Cancer Center. He also serves as an Assistant Vice President of Research at MUSC. He received his B.S. from the Middle East Technical University in Turkey. He then completed his Ph.D. in Biology from the Illinois Institute of Technology in Chicago, focusing on Biotechnology and Molecular Biology. Before coming to MUSC, he completed a postdoctoral fellowship in Hematology/Oncology at the University of Chicago.

Dr. Ogretmen's research focuses on sphingolipid metabolism, lipid signaling, cancer cell death pathways, and mechanisms of cancer therapeutics, including immune cell metabolism and immunotherapy. Moreover, Dr. Ogretmen's academic studies led to the successful completion of a phase II clinical trial in 60 patients with advanced prostate cancer using a sphingosine kinase inhibitor, Opaganib (Red Hill Biopharma), as part of his Program Project Grant. In addition to his academic accomplishments, Dr. Ogretmen is the co-founder and CEO of Lipo-Immuno Tech, a spinoff biotech company from MUSC that was established in 2018 in Mount Pleasant, SC. With Dr. Ogretmen's leadership, Lipo-Immuno Tech develops novel chemo-immunotherapeutic products for treating cancer and neurodegenerative disorders, including Alzheimer's Disease. Lipo-Immuno Tech received multiple STTR awards from NCI to support the commercial development of its technologies and products. In addition, with Lipo-Immuno Tech's patented rapid CAR-T expansion formulation and technology, refractory patients with advanced lymphomas have been treated at the Hollings Cancer Center, yielding preliminary data on the approach's highly promising safety and efficacy.

Speaker: Andrew Saykin, PsyD, ABCN



Andrew J. Saykin, PsyD, ABCN is the Raymond C. Beeler Professor of Radiology and Imaging Sciences and Professor of Medical and Molecular Genetics at the Indiana University School of Medicine where he serves as director of the Indiana ADRC and IU Center for Neuroimaging. He leads the ADNI Genetics Core and is a MPI of several NIA-sponsored consortia (CLEAR-AD, KBASE, AI4AD).

He has also served as a PI and MPI on NCI and NIA sponsored R01s on cognitive and neuroimaging changes before and after treatment for non-CNS cancer. His current research program focuses on systems biology approaches to understanding pathways driving AD/ADRD, leveraging multimodal neuroimaging, multi-omics biomarkers, and AI-based strategies.

Speaker: Marina Sirota, PhD



Marina is currently a Professor and the Interim Director at the Bakar Computational Health Sciences Institute at UCSF. Prior to that she has worked as a Senior Research Scientist at Pfizer where she focused on developing Precision Medicine strategies in drug discovery. She completed her PhD in Biomedical Informatics at Stanford University under the mentorship of Dr. Atul Butte. Dr. Sirota's research experience in translational bioinformatics spans nearly 20 years during which she has co-authored over 170 scientific publications. Her research interests lie in developing computational integrative methods and applying these approaches in the context of disease diagnostics and therapeutics with a special focus on women's health. The Sirota laboratory is funded by NIA, NLM, NIAMS, Pfizer, March of Dimes and the Burroughs Wellcome Fund. As a young leader in the field, she has been awarded the AMIA Young Investigator Award in 2017. She leads the UCSF March of Dimes Prematurity Research Center at UCSF as well as co-directs ENACT, a center to study precision medicine for endometriosis. Dr. Sirota also is the founding director of the AI4ALL program at UCSF, with the goal of introducing high school girls to applications of AI and machine learning in biomedicine.

Speaker: Sohail Tavazoie, MD, PhD



Dr. Sohail Tavazoie is the Leon Hess Professor and Head of the Meyer Laboratory of Systems Cancer Biology at The Rockefeller University. He is the director of the Black Center for Metastasis Research. He received his undergraduate degree from the University of California at Berkeley and his M.D. and Ph.D. degrees from Harvard Medical School.

Following internship and residency training at Brigham and Women's Hospital and postdoctoral training at Harvard, he conducted oncology fellowship training at Memorial Sloan Kettering Cancer Center. Sohail has been the recipient of the NIH Innovator Award, the NCI Outstanding Investigator Award and the DOD Era of Hope Award. He is an elected member of the National Academy of Medicine and the past president of the American Society of Clinical Investigation.

Metastasis causes most cancer deaths, yet its genetic and physiological origins remain unresolved. Our lab studies the molecular mechanisms underlying this fascinating biological process, where rare cancer cells achieve extreme gene expression states that enable travel to distal organs and formation of lethal metastatic colonies that evade multiple physiological barriers. The prevailing view has held that rare "metastasis-driver" somatic mutations arise within tumors and enable this process. Decades of sequencing have not revealed such causal drivers. I will present evidence for an alternative model in which germline genetic variation can establish metastatic potential before tumor formation. Our work has shown that common human APOE genetic variants differentially promote or suppress melanoma metastasis by altering immune, vascular, and tumor biology. Our findings reveal clinically relevant trade-offs for APOE across melanoma progression, Alzheimer's disease risk, and infectious disease. If time allows, I will finally describe a complementary story describing a causal role for sensory neurons and the substance P neuropeptide in breast cancer metastasis. Together, these studies reframe metastasis as an outcome resulting from inherited gene variants and neural signals interacting with tumor programs, with implications for risk stratification, prevention, and therapeutic targeting of neural and inherited genes.