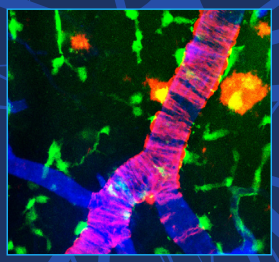
National Institutes of Health

Anti-Beta-Amyloid Passive Immunotherapy for Alzheimer's Dementia and Amyloid Related Imaging Abnormalities (ARIA): What's Next?

This program is sponsored by the National Institute of Neurological Disorders and Stroke in collaboration with the National Institute on Aging.



Courtesy of Dr. Laibaik Park (Weill Cornell Medicine)

NINDS:

Francesca Bosetti, PharmD, PhD, joined the National Institute of Neurological Disorders and Stroke (NINDS) in 2011, as a Program Director in the Neural Environment Cluster. Her areas of interest include ischemic stroke and blood-brain barrier. Prior to joining NINDS, Dr. Bosetti was the head of the Molecular Neuroscience Unit at the National Institute on Aging, where she investigated mechanisms regulating microglial activation in preclinical models of excitotoxicity, neuroinflammation, and neurodegenerative diseases.

Dr Bosetti holds a Pharm.D. from the University of Pisa, and a Ph.D. in Molecular and Experimental Medicine from the "Sant'Anna School of Advanced Studies" in Pisa, Italy. She has authored over 65 peer-reviewed publications and has been the program lead of many NIH workshops and notices of funding opportunities, including the Stroke Preclinical Assessment Network (SPAN); Innovative approaches or technologies to investigate regional, structural, and functional heterogeneity of CNS small blood and lymphatic vessels; Human studies of target identification, biomarkers, and disease mechanisms specific to CNS small blood and lymphatic vessels; and Molecular mechanisms of Blood-Brain Barrier function and dysfunction in Alzheimer's disease and Alzheimer's related dementias.

Rod Corriveau, PhD, joined the NINDS as a Program Director in 2010. He was responsible for the NINDS Alzheimer's disease portfolio until 2019 and is the Program Director for vascular contributions to cognitive impairment and dementia (VCID), an acronym that Dr. Corriveau coined in 2014. He is the NIH Program lead for the NIH Alzheimer's Disease-Related Dementias (ADRD) Summits (2013, 2016, 2019, 2022). These meetings are responsive to the National Plan to Address Alzheimer's Disease that set national priorities to guide research in the Alzheimer's-related dementias through 2025.

Dr. Corriveau received his bachelor's degree in biochemistry from Simon Fraser University, and his Ph.D. in Neurosciences from the University of California San Diego. His graduate and postdoctoral studies focused on gene expression and the role of electrical activity in neural circuit development. As an HHMI Postdoctoral Associate with Carla Shatz at UC Berkeley, he contributed to the discovery of a role for immune molecules in synaptic development and change. Dr. Corriveau was an Assistant Professor at the LSU Health Sciences Center where he investigated the role of NMDA receptor-dependent neural signaling in gene expression and naturally occurring neuronal cell death. Prior to joining NINDS, he was an Associate Professor at the Coriell Institute for Medical Research.

Lanier Heyburn, PhD, is a Health Program Specialist at NINDS, where she supports the Neural Environment cluster. Her areas of interest include blood-brain barrier biology, brain injury and repair, and neuroinflammation. Dr. Heyburn received her PhD in Neuroscience from Georgetown University, where she studied neurodegeneration and astrocyte dysfunction in a mouse model of amyotrophic lateral sclerosis (ALS) and frontotemporal lobar degeneration (FTLD). She completed her postdoctoral training at Walter Reed Army Institute of Research, focusing on rodent models of blast-induced traumatic brain injury.

Walter Koroshetz, MD, serves as Director of the National Institute of Neurological Disorders and Stroke. He joined NINDS in 2007 as Deputy Director and has co-led the NIH's BRAIN Initiative, the Neuroscience Blueprint, the Traumatic Brain Injury Center with the Uniformed Health Services University, the Helping to End Addiction Long Term (HEAL) Initiative, the Undiagnosed Disease, and the Acute to Chronic Pain Transition Programs, NIH Emergency Care Research and the Post Acute Sequalae of COVID-19 Initiative. Before NINDS, Dr. Koroshetz served as the Neurology Vice Chair and Director of stroke and neurointensive care, led neurology resident training at Massachusetts General Hospital as a Harvard professor.

Linda McGavern, PhD, joined the National Institute of Neurological Disorders and Stroke (NINDS) in 2009 and currently is a Program Director in the Neurodegeneration cluster where she is responsible for the NINDS Alzheimer's Disease portfolio, with a main focus on basic disease-related molecular mechanisms and shared pathways across neurodegenerative disorders. Previously, Dr. McGavern was a Scientific Project Manager in the NINDS Division of Translational Research where she administered the NINDS Cooperative Agreement Program in Translational Research and the Cooperative Research to Enable and Advance Translational Enterprises for Biotechnology Products and Biologics (CREATE Bio) Program to allow therapeutic development projects to successfully progress towards Investigational New Drug (IND) applications. Prior to joining NINDS, Dr. McGavern was a Project Manager at Favrille, Inc in San Diego, CA where she coordinated projects to support a Biologic License Application (BLA). Dr. McGavern received her PhD in Molecular Neuroscience from Mayo Graduate School, MN, and completed a postdoctoral fellowship at The Scripps Research Institute, CA where she studied NADPH oxidase enzyme complexes and the necessary protein subunit associations required for their function and regulation.

Clinton B. Wright, MD., MS, FAAN, FAHA, is a vascular neurologist and specialist in cognitive disorders. He is Associate Director for the National Institute of Neurological Disorders and Stroke and Director of the Division of Clinical Research and a member of the Stroke Branch within the Division of Intramural Research. Dr. Wright earned his M.D. from the College of Physicians and Surgeons, and his M.S. in epidemiology from the Mailman School of Public Health, at Columbia University, and completed a neurology residency and a vascular neurology fellowship at the Neurological Institute of New York.

Before joining NINDS, Dr. Wright served as the Evelyn F. McKnight Chair for Learning and Memory in the Aging, and was a tenured professor of neurology, public health sciences, and neuroscience, as well as Chief of the Division of Cognitive Disorders in the Department of Neurology and the Leonard M. Miller School of Medicine of the University of Miami. He served as Scientific Director of the Evelyn F. McKnight Brain Institute at the University of Miami from 2008 until joining the NIH. Dr. Wright is a Fellow of the American Academy of Neurology and of the American Heart Association. His research focuses on the effects of vascular risk factors and vascular damage, including both subclinical cerebrovascular damage and clinical stroke, on brain structure and cognitive function. Dr. Wright earned his M.D. from the College of Physicians and Surgeons of Columbia University in New York City and completed a neurology residency and a vascular neurology fellowship at Columbia University Medical Center. During fellowship, he earned an M.S. in neuroepidemiology from the Mailman School of Public Health as part of a T-32 program.

NIA:

Akanni Clarke, PhD, is a Program Director in the Clinical Interventions and Diagnostics Branch in the Division of Neuroscience at the National Institute on Aging. He co-manages the Alzheimer's disease and related dementias pharmacological clinical trials research portfolio and oversees the implementation of data-sharing/resource-sharing plans.

Dr. Clarke received his B.S. in Biology and an M.S. in Molecular Biology from the University of Massachusetts – Amherst. He undertook doctoral training in Molecular Medicine with a concentration in developmental neuroscience/pharmacology from The George Washington University. Prior to joining NIA, Dr. Clarke completed his dissertation research and post-doctoral training in the National Institute of Neurological Disorders and Stroke (NINDS) Intramural Research Program. His research focused on understanding how signaling networks regulate the mechanisms of axon guidance.

Richard J. Hodes, MD, is the Director of the National Institute on Aging (NIA) at the National Institutes of Health (NIH). He has served in this position since 1993. Dr. Hodes has devoted his tenure to the development of a strong, diverse, and balanced research program. This has led to new and innovative ways to conduct research, share data, and translate findings into practice. Research in geriatrics is uncovering new ways to combat frailty and improve function with age. Behavioral and social research is deepening understanding of the individual behaviors and societal decisions that affect well-being.

A leading immunologist, Dr. Hodes' research laboratory in the NIH National Cancer Institute focuses on the cellular and molecular mechanisms that regulate the immune response. A graduate of Yale University, Dr. Hodes received his M.D. from Harvard Medical School.

He is a diplomate of the American Board of Internal Medicine; a member of The Dana Alliance for Brain Initiatives; a Fellow of the American Association for the Advancement of Science; and a member of the National Academy of Medicine at the National Academies of Sciences, Engineering, and Medicine.

Alessandra Rovescalli, PhD, MS, is a Program Director in the Clinical Interventions and Diagnostics Branch of the Division of Neuroscience at the National Institute on Aging. Dr. Rovescalli oversees a research portfolio that includes the discovery of biomarkers of cellular processes and physiological functions leading to or precipitating neurodegeneration, as well as the discovery, development and dissemination of new or emerging imaging (PET/SPECT) biomarkers for AD/ADRD research.

Dr. Rovescalli received her MS in Pharmaceutical Chemistry and Technology, her doctoral degree in Experimental Endocrinology and a PhD in Pharmacology and Toxicology from the University of Milan in Milan, Italy. She completed her research training at the Institute of Pharmacological Science, University of Milan, Italy, and in the laboratory of Nobel Laureate Marshall Nirenberg at the National Institutes of Health, Bethesda, MD, where she remained as staff scientist for 12 more years.

In 2014, she joined the NIH Center for Scientific Review, where she was the Scientific Review Officer for the Clinical Neuroscience and Neurodegeneration study section, as well as multiple other special emphasis panels within the Brain Disorders and Clinical Neuroscience Integrated Review Groups. Throughout her career she conducted and published research in multiple fields of neuroscience, including neuropharmacology (e.g., characterization and mechanisms of action of antidepressants and antipsychotics) neuroendocrinology (effects of drugs and neurotransmitters on the hypothalamus-pituitary-gonad axis), chronobiology (interactions between drugs, drugs receptors and circadian rhythms) and developmental neurobiology (transcriptional regulation of the development of the embryonic nervous system).

NINDS Anti-Beta Speaker Biographical Sketches

Katerina Akassoglou, PhD, is a Professor of Neurology at UCSF and a Senior Investigator at the Gladstone Institutes. She has pioneered studies on neurovascular regulation of inflammation and tissue repair and the molecular interface blood proteins utilize to interact with nervous system cells. She developed a first-in-class fibrin-targeting immunotherapy to neutralize blood toxicity in neurological diseases. She has published over 100 papers and was awarded the PECASE Award by the White House, the John J. Abel Award, the Dana Award in Brain and Immunoimaging, the Marilyn Hilton Award for Innovation in MS research, the Barancik and ISFP Prizes. She is an inventor on 11 issued patents, founder of the university spin-out Therini Bio and was named by the San Francisco Business Times among the 2021 Most Influential Women in Bay Area Business. Dr. Akassoglou is a fellow of the American Neurological Association (ANA), an elected Fellow of the National Academy of Inventors (NAI), American Society for Pharmacology and Experimental Therapeutics (ASPET), and Lifetime Fellow of the American Association for the Advancement of Science (AAAS).

Helene Benveniste, MD, PhD, received her B.Sc. in Denmark majoring in Mathematics & Physics, and went on to the University of Copenhagen, for her MD and PhD (Doctor Medicinae). As a Research Fellow she trained in high field magnetic resonance imaging (MRI) at Duke University Medical Center and developed techniques for brain imaging focused on neurodegenerative diseases. She then went on to residency in Anesthesiology at Duke University. Dr. Benveniste started her own lab at Brookhaven National Laboratory in 2001, before moving to a faculty position in the Departments of Anesthesiology and Biomedical Engineering at Yale School of Medicine. Dr. Benveniste's laboratory explores the functioning of the 'glymphatic system' – the waste disposal system of the brain. Foremost, her lab studies how the brain gets rid of toxic waste and develops imaging platforms to track how the glymphatic and lymphatic systems are impacted in neurodegenerative disease states including cerebral amyloid angiopathy. The overall goal is to develop therapeutic strategies to sustain optimized waste clearance through the given life span to prevent cognitive impairment from amyloid beta build-up and tauopathy. Her research is supported by grants from the NIH, Cure Alzheimer's Fund, and the Leducq Foundation.

Marion Buckwalter, MD, PhD, is a Professor at Stanford School of Medicine in the Departments of Neurology and Neurological Sciences, and Neurosurgery, and a Deputy Director of the Wu Tsai Neurosciences Institute. In addition to work as a neurointensivist, her research focuses on improving short- and long-term outcomes after stroke. Her work spans mouse models and human studies of neuroinflammation and activated vasculature in stroke. In 2017, beginning with a "Big Ideas in Neurosciences" grant from the Wu Tsai Neurosciences Institute, she co-founded the Stanford Stroke Recovery Program, which she leads with Dr. Maarten Lansberg. The Stanford Stroke Recovery Program runs clinical studies to understand stroke recovery and to develop new treatments. One major study, StrokeCog, is a prospective cohort study that is investigating mechanisms of declining cognition after stroke.

Teresa Buracchio, MD, is Director of the Office of Neuroscience in the Office of New Drugs, Center for Drug Evaluation and Research, Food and Drug Administration (FDA). She oversees the review of new drug programs for neurologic and psychiatric diseases, including Alzheimer's disease, Parkinson's disease, ALS, neuromuscular diseases, neurogenetic disorders, major depressive disorder, and schizophrenia. Dr. Buracchio joined FDA in 2013, where she worked as a clinical reviewer in Alzheimer's disease and dementia and a team leader in epilepsy, and neuromuscular and neurogenetic diseases, and eventually served as Director of Division of Neurology 1. Prior to joining FDA, Dr. Buracchio worked at AbbVie as an Associate Medical Director for Neuroscience Clinical Development. Dr. Buracchio received her medical degree from Rush Medical College and completed a neurology residency at Rush University Medical Center in Chicago, Illinois. Dr. Buracchio completed fellowship training in geriatric neurology at Oregon Health & Science University and Portland Veterans Affairs Medical Center in Portland, Oregon.

Thierry Bussiere, PhD, is Scientific Director in the Neurodegenerative Diseases Research Unit at Biogen. His current responsibilities include all research programs targeting APP and Ab, with a special interest in Ab immunotherapy, mechanisms of ARIA, and new animal models for AD research. Dr. Bussiere obtained his Ph.D. in Neurosciences from Universite de Lille (France), under the supervision of Dr. Luc Buee, with a focus on Tau proteins in AD and Tauopathies. He then completed a first postdoctoral training at Mount Sinai School of Medicine in New York, conducting quantitative studies of Alzheimer's disease neuropathological features with Professor Patrick Hof. Consecutively, and prior to joining Biogen in 2005, Dr. Bussiere was a postdoctoral fellow at Elan Pharmaceuticals, as part of the Alzheimer's Immunotherapy Program (Bapineuzumab and AN1792 programs).

Maria C. Carrillo, PhD, As chief science officer, Dr. Carrillo sets the strategic vision for the Alzheimer's Association global research program. Under her leadership, the Association is the world's largest nonprofit funder of Alzheimer's research—currently investing over $250 million—and an internationally recognized pioneer in convening the dementia science community. Dr. Carrillo uses her platform as a noted public speaker to play an instrumental role in the Association's efforts to lobby for increased funding for the disease.

Dr. Carrillo oversees the implementation of the Association's growing portfolio of research initiatives, including the Alzheimer's Association International Conference® (AAIC®), the world's largest and most influential dementia science meeting, and the Research Roundtable, which enables international scientific, industry and government leaders to work together to overcome shared obstacles in Alzheimer's science and drug development. In addition, she leads the Association's direct involvement in research by serving as a co-primary investigator for the Association-funded and led U.S. POINTER study, a lifestyle intervention trial to prevent cognitive decline and dementia.

Dr. Carrillo earned her Ph.D. from Northwestern University's Institute for Neuroscience and completed a postdoctoral fellowship focused on Alzheimer's brain imaging and risk factors at Rush University Medical Center in Chicago.

Susan Catalano, PhD, is a pharmaceutical industry executive with over 20 years of experience in strategic and operational scientific leadership of neurobiology and oncology drug discovery and development companies. She currently serves as the Chief Scientific Officer of Capsida Biotherapeutics. Previously she served as the Chief Scientific Officer of CODA Biotherapeutics. Prior to this, she guided the discovery and development programs for Cognition Therapeutics, Inc. as co-founder, Chief Science Officer and member of the Board of Directors. The company made substantial progress under her leadership, progressing from an idea through a full Phase 2 clinical program to an initial public offering in October 2021 (NASDAQ: CGTX). Previously, she held scientific leadership positions at Acumen Pharmaceuticals, Inc., Rigel Pharmaceuticals and Roche. Dr. Catalano received her B.A. from Barnard College and Ph.D. in neurobiology from U.C. Irvine, with postdoctoral training at U.C. Berkeley and Caltech. She has authored numerous publications and patents and served as principal investigator of several NIH preclinical and clinical awards. She is a recipient of the Pittsburgh Venture Capital Association Outstanding Entrepreneur award, the Carnegie Science Center Entrepreneur award, and the EY Entrepreneurial Winning Women award. At the national level, she serves on the

External Advisory Board for several NIH clinical initiatives, NIH review panels in the areas of drug discovery and clinical development for neurodegenerative diseases, and peer reviewed scientific journal editorial boards.

Sherry Chou, MD, is a physician-scientist with expertise in clinical neurology, neurocritical care and vascular neurology and award-winning mentor. Dr. Chou's research program focuses on the role of inflammation and immune response in vascular brain injuries and biomarker discovery. Dr. Chou founded and leads the large Global Consortium Study on Neurological Dysfunction in COVID 19 (GCS-NeuroCOVID) and serves as an invited member to the World Health Organization forum on neurological impacts of COVID 19. Nationally, Dr. Chou serves on the Board of Directors and as research subcommittee chair of the Neurocritical Care Society.

David B. Clifford, MD, is the Melba and Forest Seay Professor of Clinical Neuropharmacology in Neurology at Washington University in St Louis. His career has focused on the development of therapeutics for a wide variety of brain disorders, with a particular interest in inflammatory and infectious brain conditions. He developed and led the Neurologic AIDS Research Consortium, an NIH supported national network that led the early development of treatment for HIV/AIDS and its complications in the nervous system. He has previously served as the Principal Investigator of the AIDS Clinical Trials Unit at Washington University which is the premier international NIH funded AIDS therapeutic network, as well as being active investigator in the CHARTER (CNS Hiv AntiRetroviral Therapy Effects Research) study, a multicenter epidemiologic group studying neuroAIDS. He currently participates as an investigator at the Knight Alzheimer Disease Research projects at Washington University and is committed to leading the Dominant Inherited Alzheimer Disease (DIAN) Treatment Unit serving as Associate Director and Medical Director.

Dr. Clifford grew up in Georgetown, Texas and attended Southwestern University, where he was graduated summa cum laude with majors in chemistry and history in 1971. From there, he moved to Washington University in St Louis where he received the M.D. degree in 1975, trained in internal medicine and in neurology at Barnes-Jewish Hospital, took a fellowship in neuropharmacology, then joined the faculty. He has remained at this institution for more than 50 years, serving in a variety of capacities including as interim chair of the department.

Dr. Clifford is the current Section Head of Neuro-Infectious Diseases and Neuroimmunology. He has been a dedicated teacher, serving as Residency Director for Neurology for a decade while building up this outstanding program, and consistently receiving teaching commendations for medical school education throughout his career. He served as Chief of Neurology at St Louis ConnectCare, a regional indigent care teaching hospital.

Dr. Clifford's research and scientific contributions have been substantial with more than 300 manuscripts in peer reviewed journals in press with an h-index of 94. The largest contributions have been related to the neurologic complications of HIV infection and the opportunistic diseases associated with immunodeficiency. In addition to HIV and its cognitive impact, Dr. Clifford is a leading world expert in progressive multifocal

leukoencephalopathy and has been involved in many trials seeking to better understand and treat this devastating viral brain disease. In more recent years, Dr Clifford has become a national leader in the development of therapeutics for neurosarcoidosis, and advocate for expansion of research relevant to this set of neurologic disorders.

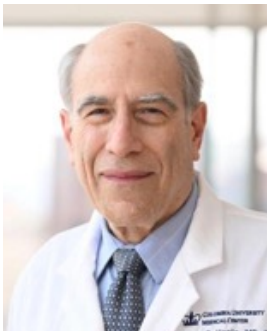
John Detre, MD, is a neurologist and neuroscientist at the University of Pennsylvania whose research focuses on physiological brain imaging methods and their applications in basic and clinical neuroscience. Much of his recent research focuses on mechanisms and neuroimaging biomarkers of cerebral small vessel disease and Alzheimer's neurodegeneration. He currently co-Directs the Penn Alzheimer's Disease Core Center Neuroimaging Core and the Penn Center for Advanced Magnetic Resonance Spectroscopy.

Mark Fisher, MD, is Professor of Neurology at University of California, Irvine School of Medicine where he holds appointments in the Departments of Anatomy & Neurobiology and Pathology & Laboratory Medicine, along with the Beckman Laser Institute, and is a member of UCI MIND. He received his MD from University of Cincinnati in 1975, completed Neurology training at UCLA-Wadsworth VA Medical Center, and joined the faculty in the Department of Neurology at University of Southern California in 1980 where he established the first stroke program in Southern California. At UCI, he served as Chair of the Department of Neurology from 1998-2006 and led the Department into the top ten for NIH research funding for Neurology Departments nationwide. He has had continuous NIH stroke research funding since 1984 and has received more than 50 citations of clinical excellence as a stroke neurologist from a variety of external organizations. He is currently engaged in clinical and basic vascular neurobiology research and interdisciplinary studies, and in 2023 received the UCI School of Medicine Innovation in Mentoring Award.

Steven M. Greenberg, MD, PhD, is Professor of Neurology at Harvard Medical School, Vice Chair of Neurology for Faculty Development and Promotions, and John J Conway Endowed Chair in Neurology at Massachusetts General Hospital. Under Dr. Greenberg's leadership, the MGH Hemorrhagic Stroke Research Program has become internationally recognized for ground-breaking studies on the causes, diagnosis, and treatment of the major small vessel disease cerebral amyloid angiopathy (CAA). Among Dr. Greenberg's milestones in the CAA field have been developing and validating the widely adopted Boston Criteria, identifying an array of markers and mechanisms for CAA-related brain injury, devising approaches to incorporating CAA markers and predicted hemorrhage risk into clinical decision-making, applying amyloid imaging to CAA detection, characterizing the syndrome of CAA-related inflammation and its close relationship to the Amyloid-Related Imaging Abnormalities observed in anti-amyloid immunotherapy trials, and creating the foundation for interventional trials in CAA including the first CAA immunotherapy trial. Dr. Greenberg is also a leader in the broader stroke and vascular cognitive impairment fields, receiving the 2017 AHA Feinberg Award and serving as

coordinating center PI for the NIH-funded MarkVCID consortium for biomarkers of vascular cognitive impairment, co-PI of the NIH-funded DISCOVERY network for post-stroke cognitive impairment and dementia, chair of the 2022 American Heart Association Guidelines for Management of Spontaneous Intracerebral Hemorrhage Writing Group, 2014-2016 chair of the NIH Acute Neural Injury and Epilepsy study section, chair of the 2013 and 2014 AHA International Stroke Conferences, and session co-chair of the 2013 NINDS Alzheimer's Disease-Related Dementias Workshop. Among Dr. Greenberg's >350 original reports and >100 review articles/chapters are recent prominent publications on the pathophysiologic framework for CAA (Lancet Neurol 2023), validation of the Boston Criteria v2.0 for CAA (Lancet Neurology 2022), and the relationship between CAA and Alzheimer Disease (Nature Review Neurol 2020).

Dr. Greenberg received his undergraduate degree in Biochemistry from Harvard University and MD and PhD degrees from Columbia University under the graduate research training of Dr. James Schwartz. He performed internship at Pennsylvania Hospital, neurology residency at Massachusetts General Hospital, and post-doctoral fellowship at the Brigham and Women's Hospital Center for Neurologic Diseases before joining the Massachusetts General Hospital faculty.



Lawrence S. Honig, MD, PhD, is a Professor of Neurology at Columbia University Irving Medical Center, at the Vagelos College of Physicians and Surgeons (New York, NY), in the Department of Neurology (Division of Aging and Dementia), the Taub Institute for Research on Alzheimer's Disease and the Aging Brain, the Gertrude H. Sergievsky Center, and at New York Presbyterian Hospital. He directs the New York State Center of Excellence for Alzheimer's Disease, co-directs the Lewy Body Disease Association Research Center of Excellence, and the Progressive Supranuclear Palsy Center of Care, and is Deputy Director of the Alzheimer's Disease Research Center.

Dr. Honig obtained his MD medical degree from the University of Miami (Miami, Florida), and his PhD from the University of California at Berkeley (Berkeley, California). He underwent postgraduate internship in Medicine and residency in Neurology training at Stanford University Medical Center (California). He served on the faculty of the Neurology departments at Stanford University Medical Center, and then at the University of Texas Southwestern Medical Center in Dallas, prior to his arrival at Columbia University, where he has been on the faculty since the year 2000. He is a neuroscientist and board-certified clinical neurologist, with UCNS subspecialty certifications in Behavioral Neurology and Neuropsychiatry, and Geriatric Neurology. His clinical specialization focusses on Alzheimer's Disease, Lewy Body Dementia, Frontotemporal Dementias, Progressive Supranuclear Palsy, Creutzfeldt-Jakob disease, immune-mediated encephalitides, and other disorders of nervous system aging and degeneration. He is a principal investigator on both observational and clinical drug trials for neurodegenerative conditions including Alzheimer Disease, Frontotemporal Degeneration, Lewy Body Disease, and Progressive Supranuclear Palsy.

Costantino Iadecola, MD, is the Director and Chair of the Feil Family Brain and Mind Research Institute and the Anne Parrish Titzell Professor of Neurology at Weill Cornell Medicine. His research focuses on the basic mechanisms of neurovascular function and on the cellular and molecular alterations underlying ischemic brain injury and neurodegeneration. A pioneer in establishing the concept of neurovascular unit, Dr. Iadecola has championed the involvement of neurovascular dysfunction in neurodegenerative diseases, and the role of innate immunity and the microbiome in stroke.

Dr. Iadecola has received the McHenry Award from the American Academy of Neurology, two Jacob Javits Awards from the NIH, the Willis Award from the American Heart Association (AHA), the Zenith Award from the Alzheimer's Association, and the Excellence Award in Hypertension Research (Novartis) from the AHA. A member of the Association of American Physicians, Dr. Iadecola was awarded the Basic Research Prize by the AHA in 2021 and received the Lifetime Achievement Award from the International Society of Cerebral Blood Flow and Metabolism in 2022. Since 2018, Clarivate Analytics listed Dr. Iadecola as one of world's "Highly Cited Researchers" for ranking in the top 1% of the most-cited authors in neuroscience and behavioral sciences.

Michael C. Irizarry, MD, MPH, is Senior Vice-President of Clinical Research and Deputy Chief Clinical Officer at Eisai, responsible for the overall strategy and clinical development of the neurosciences portfolio. He earned undergraduate and medical degrees from Georgetown University and an MPH from the Harvard School of Public Health. He completed neurology residency and Memory Disorders Fellowship at Massachusetts General Hospital and continued as Harvard Medical School faculty in the Massachusetts Alzheimer's Disease Research Center. His research encompassed molecular mechanisms, clinical-pathological correlations, animal models, biomarkers, and epidemiology of neurodegenerative diseases, especially Alzheimer's disease. Prior to joining Eisai in 2018, Dr. Irizarry held a series of leadership positions at Eli Lilly (Vice-President, Early Clinical development, Neurosciences), and GlaxoSmithKline (including acting Vice President for Worldwide Epidemiology).

David Knopman, MD, is a 1972 graduate of Dartmouth College, a 1973 graduate of Dartmouth Medical School and a 1975 graduate of the University of Minnesota Medical School. He did his internship at Hennepin County Medical Center, Minneapolis, a Neurology residency at the University of Minnesota and a fellowship in Behavioral Neurology at Hennepin County Medical Center and the University of Minnesota. He is a Professor of Neurology in the Mayo Clinic College of Medicine, a Consultant in Neurology at the Mayo Clinic, and a co-investigator in the Mayo Alzheimer's Disease Research Center. His research and clinical interests are in dementing illnesses. He is an author on over 600 articles on various topics in dementia including aspects of clinical trials, epidemiology, vascular dementia, frontotemporal dementia and Alzheimer's . He was an Associate Editor 2007-2009 and Deputy Editor of Neurology from 2009 to 2015, Omsbudsman from 2017-2020, and currently Scientific Integrity Officer for the Journal. He was co-chair of the NIA-AA committee that drafted the revised criteria for Alzheimer's disease dementia in 2011. He served as a chair of the Medical and Scientific Advisory Council of the Alzheimer's Association 2016-2018. He served as chair of the Medical Advisory Council of the Association for Frontotemporal Degeneration from 2015 to 2017. He has been a member

of the NSD-K study section of the NINDS from 2015 to 2022, and chair from 2019-2022. In 2019, he won the Khachaturian Award from the Alzheimer's Association.

Cynthia A. Lemere, PhD, a Scientist in the Ann Romney Center for Neurologic Diseases at Brigham & Women's Hospital and Associate Professor of Neurology at Harvard Medical School in Boston.

Dr. Lemere's research focuses on understanding and using the immune system therapeutically to prevent and treat Alzheimer's disease. Dr. Lemere earned a bachelor's degree in psychology and education from Mount Holyoke College and a master's in neurobiology from SUNY Albany. Dr. Lemere examined Alzheimer's-related brain changes in people with Down syndrome in the Selkoe Laboratory at Brigham and Women's Hospital (BWH) while pursuing her doctorate in Pathology at Boston University School of Medicine. After receiving her Ph.D., she remained at the BWH Ann Romney Center for Neurologic Diseases within the Department of Neurology where she is an associate professor. Her current research involves: 1. non-clinical studies of antibody treatments targeting a pathogenic form of amyloid-beta protein in Alzheimer's disease; 2. the role of complement signaling in aging and Alzheimer's disease; and 3. the effects of deep space galactic cosmic radiation on brain aging and the risk of Alzheimer's disease in studies in mouse models and human neural cells in preparation for NASA's first manned mission to Mars in the 2030s. Her lab is funded by NIH and NASA. Dr. Lemere is a member and the past chair of the Alzheimer's Association's Medical and Scientific Advisory Group and a former member of the Association's board of directors. She is a member of the Cure Alzheimer's Fund Research Leadership Group. In addition, she serves as a scientific advisor for several foundations, conferences and companies.

Shari Ling, MD, is the Deputy Chief Medical Officer for the Centers for Medicare & Medicaid Services (CMS). Dr. Ling contributes her clinical expertise to the Agency as a geriatrician, gerontologist, internist and rheumatologist, supporting CMS's actions to improve health outcomes for beneficiaries, families, and caregivers through the delivery of high quality, person-centered care across settings. She has represented CMS on the National Alzheimer's Plan for more than 10 years, and also leads CMS efforts to address the nation's mental and behavioral health needs through the CMS Behavioral Health Steering Committee.

Dr. Ling earned a Master's in Gerontology from the University of Southern California, and MD degree from Georgetown University School of Medicine. She performed postgraduate fellowships in rheumatology at Georgetown University Hospital and in Geriatric Medicine at the Johns Hopkins University School of Medicine. She is a volunteer member of the dementia care team and provides clinical services to Veterans in Baltimore, Maryland.

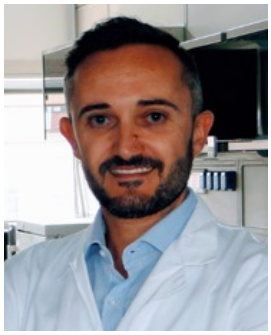
Hanzhang Lu, PhD, is the Elias A. Zerhouni Professor of Radiology at Johns Hopkins University School of Medicine. Dr. Lu obtained his Bachelor's degree from Shanghai Jiao Tong University and his PhD degree from the Johns Hopkins University. Dr. Lu's research is focused on understanding brain physiology and pathophysiology using non-invasive magnetic resonance imaging (MRI) techniques, with a special emphasis on their relationship to brain aging, cerebrovascular diseases, and cognitive impairment.

Jonas Neher, PhD, studied chemistry and neurobiology in Germany and Ireland before receiving a Gates Cambridge scholarship to perform his PhD at the University of Cambridge (UK), focusing on microglial contributions to acute neurodegeneration. He then obtained a Roman Herzog Postdoctoral Fellowship to study the role of microglia in Alzheimer's disease at the Hertie Institute for Clinical Brain Research and the German Center for Neurodegenerative Diseases (DZNE) in Tuebingen, where he became an independent group leader in 2015. His current research interests are the mechanisms of innate immune memory in the brain and its contribution to neurodegenerative disease as well as the impact of amyloids on cerebrovascular dysfunction during aging and Alzheimer's disease.

Jonas has accepted an offer for a full professorship at the Ludwig-Maximilians-University in Munich, Germany, which he will take up this fall.

James Nicoll, MD, was appointed to the Chair of Neuropathology at the University of Southampton in 2001. Having graduated in Medicine from the University of Bristol, he trained in Pathology in Oxford and Cardiff and returned to Bristol to undertake specialist training in Neuropathology. He completed his MD in Bristol investigating the role of herpes simplex virus in neurological disease using molecular tools. He then held a clinical academic post in Neuropathology at the Institute of Neurological Sciences/University of Glasgow. While in Glasgow he developed interests in the parallels between the response of the brain to acute injury, for example due to trauma or stroke, and Alzheimer's disease; specifically that they share common cellular reactions, upregulation of similar proteins and possibly share genetic influences.

In Southampton, Prof Nicoll has continued his research interests in neuroinflammation, neurodegeneration and cerebrovascular disease. His work closely links diagnostic neuropathology and neuroscience research. He and his colleagues were the first to describe and characterise the effects on the human brain of immunotherapy targeting Aβ, now being used as therapy for Alzheimer's disease.



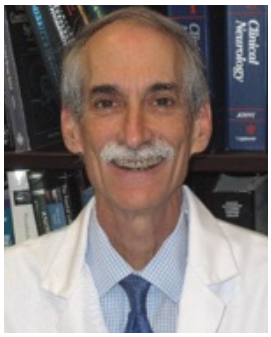
Fabrizio Piazza, PhD, is the founding Member and Coordinator of the inflammatory CAA and AD βiomarkers International Network (iCAβ), the largest worldwide Longitudinal Cohort Registry and Biorepository of CAA and CAA-related inflammation (spontaneous ARIA) from real clinical practice.

The iCAB is a Pan-EU research framework initiative which involves 36 leading Centers of Excellence from 12 different Countries around the Globe. Main object of the iCAβ is deciphering the complex pathogenic mechanisms of ARIA in an interdisciplinary and multidisciplinary cooperative open design between Academia, Pharma Industries, Society of Patients, and Research Societies.

Precision Medicine and the establishing of an interdisciplinary and multidisciplinary research framework for the discovery and validation of diagnostic, prognostic, and response-to-treatment monitoring Biomarkers for Spontaneous and Iatrogenic ARIA in CAA-ri and in amyloid-lowering immunotherapy trials is the main mission of Prof. Piazza Research at the University of Milano Bicocca (UNIMIB).

The Prof. Piazza Laboratory at UNIMIB is the National Coordinating Hub for CAA Research of the CAA Study Group of the Italian Society of Neurology-dementia (SINdem), the European Alzheimer's Disease Centers of Excellence Consortium (EADC), the Alzheimer's Association (ALZ), and the International CAA Association (ICAA).

Gary Rosenberg, MD, is Professor of Neurology and Director of the University of New Mexico Memory and Aging Center. He trained in neurology at the Albert Einstein College of Medicine in the Bronx. After being chairperson of Neurology at UNM for 30 years, he founded the UNM Center for Memory and Aging where is currently PI on two program projects: MarkVCID and the UNM exploratory ADRC. Dr. Rosenberg's current research focus is on biomarkers in dementia.



Stephen Salloway, MD, is an internationally recognized leader in clinical trials for the prevention and treatment of Alzheimer's disease. He received his MD from Stanford Medical School and completed residencies in neurology and psychiatry at Yale University. He is the founding Director of the Memory and Aging Program at Butler Hospital, Associate Director of the Brown Center for Alzheimer's Disease Research, and Professor of Neurology and Psychiatry at the Department of Psychiatry and Human Behavior, Warren Alpert Medical School of Brown University. Dr. Salloway has been a lead author for key publications in Alzheimer's biomarker and treatment research in the New England Journal of Medicine, Nature and other top-tiered journals that have helped shaped the field of Alzheimer's research. He is an expert on amyloid-related imaging abnormalities and its management and is a member of the Alzheimer's Disease and Related Disorders Therapeutic Work Group developing appropriate use recommendations to safely guide the clinical use of new disease-modifying treatments. Dr. Salloway has published over 400 scientific articles and abstracts and edited 3 books and lectures widely about the early diagnosis and prevention of Alzheimer's disease.

John Sims, MD, joined Eli Lilly in 2009 as Medical Advisor for early phase Neuroscience Development. He joined the Biomedicines Unit as a Senior Medical Director in support of Phase 3 studies in 2014. He currently serves in the Neuroscience Business unit supporting multiple assets in development phase. In his prior roles, he was acting Early Phase Medical Director-Neuroscience in Lilly Research Laboratories overseeing planning and execution of Phase 1 and Phase 2 trials. Dr. Sims has experience in various disease states including Alzheimer's, Parkinson's, Epilepsy, Pain, and Phase 3 trials for Alzheimer's disease, devices and diagnostics.

Prior to joining Eli Lilly and Company, Dr. Sims was an Assistant Professor of Neurology at Harvard Medical School and Director of the Neurocritical Care Unit at Massachusetts General Hospital. In addition, he ran an NIH-funded, basic science research laboratory focused on brain injuries and neural regeneration. He was board certified in Neurology, Vascular Neurology and Neurocritical Care.

Karen Smirnakis, MPH, MD, PhD, serves as Senior Vice President, Global Head, Safety and Benefit Risk Management at Biogen. She is accountable for safety and benefit risk strategy and decision-making for all development and marketed products at Biogen, ensuring that benefit risk decisions are based upon medical and scientific excellence, and underpinned by compliant and robust pharmacovigilance and quality processes. Dr. Smirnakis has deep expertise in benefit risk management and drug development, having worked in multiple therapeutic areas and multiple aspects of drug development over the past 18 years, with 10 years of experience at Biogen in Safety and Benefit Risk Management.

Dr. Smirnakis is board certified in Internal Medicine and Nephrology. She completed internal medicine and nephrology training at Massachusetts General Hospital (MGH) and served as Chief Resident in Medicine at MGH. Prior to that, she earned her M.D. and Ph.D. in Biochemistry and Molecular Biology from Pennsylvania State University, and her M.P.H. from the Harvard School of Public Health.

Reisa Sperling, MD, is a neurologist focused on the detection and treatment of Alzheimer's disease (AD) at the earliest possible stage. Dr. Sperling is a Professor in Neurology at Harvard Medical School, and Director of the Center for Alzheimer Research and Treatment (CART) at Brigham and Women's Hospital and Massachusetts General Hospital. Dr. Sperling is the co-Principal Investigator of the Harvard Aging Brain Study, and the Alzheimer's Clinical Trial Consortium (ACTC). Dr. Sperling chaired the 2011 NIA-Alzheimer's Association workgroup to develop guidelines for the study of "Preclinical Alzheimer's disease." She co-led the Anti-Amyloid Treatment in Asymptomatic Alzheimer's disease (A4) and LEARN Studies, and currently co-leads the AHEAD 3-45 Studies. Dr. Sperling received the 2015 Potamkin Prize from the American Academy of Neurology, a Lifetime Achievement Award from CTAD in 2022 and was elected to the National Academy of Medicine in 2021.

R. Scott Turner, PhD, MD, FANA, FAAN, is Vice Chair for Clinical Research and Professor in the Department of Neurology, and Director of the Memory Disorders Program at Georgetown University, Washington, D.C. He received his doctorate and medical degrees from Emory University, Atlanta, followed by an internship in Internal Medicine, residency in Neurology, and a Howard Hughes Medical Institute-sponsored fellowship in behavioral neurology at the University of Pennsylvania, Philadelphia. He is board-certified in psychiatry and neurology. Prior to moving to Georgetown, he was Chief of the Neurology Service at the VA Ann Arbor Healthcare System and Associate Professor and Associate Chair in the Department of Neurology, University of Michigan, Ann Arbor.

Dr. Turner directs the Memory Disorders Program at the MedStar Georgetown University Hospital. His research is focused on developing new treatments and biomarkers for neurodegenerative diseases of aging, particularly Mild Cognitive Impairment and dementia due to Alzheimer's disease. He has published over 100 peer-reviewed papers, reviews, and book chapters (h-index = 55, Google Scholar). Dr. Turner is on the steering committees of the Alzheimer's Disease Cooperative Study (ADCS) and the Alzheimer's Therapeutic Research Institute (ATRI) and is a site PI for the NIH-funded Alzheimer's Clinical Trials Consortium (ACTC). He is currently PI or Site PI on several multi-center, randomized, placebo-controlled clinical trials.

For more information on Dr. Turner and the Memory Disorders Program at MedStar Georgetown University Hospital, please see memory.georgetown.edu.

William E. Van Nostrand, PhD, has been working in Alzheimer's disease (AD)research for more than 30 years, He was the first to purify and characterize amyloid precursor protein (APP), the progenitor of amyloid-beta (A-beta). Van Nostrand's research focuses on vascular-mediated aspects of cognitive impairment and dementia, which are key elements of AD and related disorders. Current studies include the causes of abnormal accumulation of A-beta in AD and a related condition called cerebral amyloid angiopathy (CAA). Van Nostrand has also developed transgenic animal models of disease which has helped to provide key insights into disease processes.

Dr. Van Nostrand is the Co-Executive Director of the George & Anne Ryan Institute for Neuroscience, Herrmann Professor of Neuroscience Professor, Department of Biomedical and Pharmaceutical Sciences at the University of Rhode Island. Dr. Van Nostrand's laboratory investigates pathogenic mechanisms in ADRD with a focus on cerebral amyloid angiopathy and cerebral small vessel disease. His laboratory also generates and refines rodent models of these disorders as investigational platforms for pathogenesis, biomarker development, and therapeutic testing.

Anand Viswanathan, MD, PhD, is the Director of Telestroke Services at Mass General Brigham and Associate Professor of Neurology at Harvard Medical School. He is a staff neurologist in the Stroke Service and in the Memory Disorders Unit at Massachusetts General Hospital.

Dr. Viswanathan is an executive member of the Massachusetts Alzheimer's Research Center (MADRC). His research program at the J. Philip Kistler Stroke Research Center focuses on the contribution of stroke and vascular risk factors to dementia. His group has engaged in numerous multidisciplinary interactions and collaborations ranging from laboratory studies to epidemiology and health policy, to better understand how cognitive impairment and dementia develop in aging populations.

Lary C. Walker, PhD, is the Marie and E.R. Snelling Professor of Neurology (emeritus), Research Professor of Neuropharmacology and Neurologic Diseases at the Emory Primate Center, and former Associate Director of the Alzheimer's Disease Research Center at Emory University. He earned his Ph.D. at Tulane University, followed by postdoctoral training at Emory and Johns Hopkins. His research has been devoted to understanding the pathological basis of Alzheimer's disease and other neurodegenerative disorders, for which he received the 2014 MetLife Foundation Award for Medical Research.

Donna Wilcock, PhD, is Professor of Neurology and Director of the Center for Neurodegenerative Disorders at Indiana University School of Medicine. She is also the Barbara and Larry Sharpf Professor in Alzheimer's Disease Research and a member of the Indiana Alzheimer's Disease Research Center (I-ADRC). Dr. Wilcock's research focuses on the intersection of Alzheimer's disease and vascular cognitive impairment and dementia. Using mouse models and patient samples, Dr. Wilcock is exploring the role of neuroinflammation and dysregulated angiogenesis in VCID. In addition, she has several active projects exploring the underlying mechanisms of beta-amyloid immunotherapy-related ARIA. Her research is funded by the NINDS and NIA.

Berislav V. Zlokovic, MD, PhD, is University Professor, Director of the Zilkha Neurogenetic Institute, and Professor and Chair of the Department of Physiology and Neuroscience at the University of Southern California (USC). He studies the role of cerebral blood vessels in Alzheimer's disease and stroke. He identified the cellular and molecular mechanisms of blood-brain barrier (BBB) breakdown, and showed that BBB breakdown can initiate neurodegenerative process, and is an early biomarker of human cognitive dysfunction. Dr. Zlokovic identified genes and receptors at the BBB that regulate brain levels of Alzheimer's amyloid-beta toxin. His discoveries contributed to phase 2/3 trials in Alzheimer's disease, and Phase 2/3 trials for ischemic stroke. Thomson Reuters/Clarivate Analytics listed Zlokovic as one of "The World's Most Influential Scientific Minds" for ranking in top 1% of the most-cited authors in the field of neurosciences and behavioral sciences for 21 consecutive years from 2002-2023. He received MetLife Award, Potamkin Prize,

MERIT Award (NIA), Javits Award (NINDS), and USC Associates Award for Creativity in Research. He is a fellow of the AAAS, the Danna Alliance for Brain Initiative, and the European Academy of Sciences. He co-founded ZZ Biotech, a biotechnology company dedicated to developing new treatments for stroke and neurological disorders.