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Social, Environmental, and Biological Determinants of **DEMENTIA DISPARITIES**

MARCH 23-24, 2023

MILLER-WARD ALUMNI HOUSE
ATLANTA, GEORGIA

2023
Organizing Committee

Monica W. Parker, MD
Emory University

Jason Richardson, PhD
Florida International University

William Vega, PhD
Florida International University

David Weinshenker, PhD
Emory University

Ihab Hajjar, MD
The University of Texas Southwestern

Ambar Kulshreshtha, MD
Emory University

Antoine Trammell, MD, MPH
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Lenora Higginbotham, MD
Emory University

Nicholas Seyfried, PhD
Emory University

Cornelya Dorbin, MPA
Emory University

Karla Muñoz-Caamano, MBA, MSc
Florida International University

Crystal Davis, MPH
Emory University

Dasia Danzy
Emory University

Welcome to the 2023 Social, Environmental, and Biological Determinants of Dementia Disparities Conference Series!

On behalf of the organizing committee from Emory University and Florida International University (FIU) we would like to welcome you to our four-year research conference series sponsored by NIH, to address critical scientific issues associated with reducing Alzheimer's Disease and Related Dementia (ADRD) inequities among ethnic minorities in the United States. The conference series focuses on increasing understanding about how genetic factors are operating in concert with environmental exposures, family and personal health histories, and lifestyle factors to produce interactions that enhance or mitigate risk of ADRD within and between ethnic groups, specifically among African Americans, Latinos, and non-Latino Whites.

We are honored to have colleagues from numerous institutions bringing together scientists actively involved in basic, clinical and translational research in the areas of ADRD, neuroscience, and health disparities research. These complementary groups will provide an exciting opportunity for exploration of new hypotheses related to mechanisms of susceptibility in minority populations and theoretical model development to provide an agenda for future research guide new science and scientists.

The 4 related specific aims of the series are:

1. To understand how genes, individually or in combination, are differentially distributed by ethnicity and sex, and are associated with higher risk or protection against ADRD between and among higher risk ethnic groups.
2. To describe how genetic risk may be modulated by factors such as epigenetics, age, sex, environmental exposures, lifestyle/diet, family and personal health histories, social, and demographic factors between and within ethnic groups and women at disproportionate risk for ADRD.
3. To examine current knowledge about how comorbidities such as vascular diseases, diabetes, and mental health moderate or mediate the increase risk of ADRD in these under-represented populations.
4. To explore underlying theory, new findings, and innovative observation, instrument development and calibration for respondent or patient assessment, and measurement/analytic strategies to improve our understanding of the gene x environment interactions influencing ADRD risk and course, and how methods may be modified or adapted for use in specific research applications with higher risk minority populations and women.

The Goizueta Alzheimer's Disease Research Center at Emory University takes great pride in hosting educationally productive and inspiring conferences that create meaningful connections between presenters and attendees.

We hope this information will provide you with a better understanding of social, environmental, and biological determinants of dementia disparities in underrepresented groups.

Sincerely,

Monica W. Parker, MD   William Vega, PhD

Jason Richardson, PhD   David Weinshenker, PhD

DAY 1 | **AGENDA AT A GLANCE** | **SESSION I:** *Racial or Ethnic Differences in Biomarkers for Neurocognitive Disorders*

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AGENDA:

SESSION I
Racial or Ethnic Differences in Biomarkers for Neurocognitive Disorders

9:30-11:00am (ET)
Moderator:
Monica Parker, MD
Emory University

SESSION II
The Neural Exposome & Proteomics: Definitions & Implications for ADRD Research

11:35am-1:25pm (ET)
Moderator:
Nick Seyfried, PhD
Emory University

SESSION III
Broadening Outreach for ADRD Clinical Research Participation

1:35-3:10pm (ET)
Moderator:
Cornelya Dorbin, MPA
Emory University

Emerging Scholars Networking Social

3:30-5:00pm (ET)

9:30am **Welcome & Opening Remarks**

Monica Parker, MD
Emory University

Jason Richardson, PhD, MS
Florida International University

Moderator: Monica Parker, MD

9:45am **Session I Presentations**

James Lah, MD, PhD
Emory University

Q&A Session

Ihab Hajjar, MD
University of Texas Southwestern

Q&A Session

LUNCH

SESSION II: *The Neural Exposome & Proteomics: Definitions & Implications for ADRD Research*

SESSION III: *Broadening Outreach for ADRD Clinical Research Participation*

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Moderator: Nick Seyfried, PhD

Moderator: Cornelya Dorbin, MPA

11:35am   **Session II Presentations**

Dean Jones, PhD
Emory University

Q&A Session

Lenora Higginbotham, MD
Emory University

Q&A Session

David Jett, PhD
National Institutes of Health

Q&A Session

1:15pm   **Break/Refreshments**

1:25pm   **Session III Presentations**

Felicia Goldstein, PhD
Emory University

Q&A Session

Li-San Wang, PhD
University of Pennsylvania

Q&A Session

Elizabeth Cohn, PhD, RN
City University of New York

Q&A Session

Closing Remarks

3:30pm   **Emerging Scholars Networking Social**

DAY 2   **AGENDA AT A GLANCE**   **SESSION IV:** *Policy, Ethics, Genetics, & Environmental Determinants of ADRD (Pt. 1)*

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AGENDA:

SESSION IV
The Policy, Ethics, & Genetics of Alzheimer's Disease & Related Dementias

9:30-11:00am (ET)
Moderator:
  Jason Richardson, PhD, MS
  Florida International University

SESSION V
Environment, Genetics, & Social Determinants of Health as Risk Factors

11:35am-12:50pm (ET)
Moderator:
  Karla Muñoz-Caamaño, MBA, MSc
  Florida International University

SESSION VI
Landscape for Junior Investigators/Emerging Science

1:00-2:30pm (ET)
Moderators:
  Ambar Kulshreshtha, MD
  Emory University

  Antoine Trammell, MD, MPH
  Emory University

9:30am

Welcome & Opening Remarks

James Lah, MD, PhD
Emory University

Allan Levey, MD, PhD
Emory University

William Vega, PhD
Florida International University

Moderator: Jason Richardson, PhD, MS

9:45am

Session IV Presentations

Caleb Finch, PhD
University of Southern California

Q&A Session

Anke Huels, PhD
Emory University

Q&A Session

LUNCH

SESSION V: *Policy, Ethics, Genetics, & Environmental Determinants of ADRD (Pt. 2)*

Moderator: Karla Muñoz-Caamaño, MBA, MSc

11:35am **Session V Presentations**

Nick Seyfried, PhD
Emory University

Q&A Session

Thomas Wingo, MD
Emory University

Q&A Session

Jalayne Arias, JD, MA
Georgia State University

Q&A Session

12:50pm **Break/Refreshments**

SESSION VI: *Landscape for Junior Investigators/Emerging Science*

Moderator: Ambar Kulshreshtha, MD & Antoine Trammell, MD, MPH

1:00pm **Session VI Presentations**

John Morris, MD
Washington University

Q&A Session

Raina Levin
Massachusetts General Hospital

Michael Williams, MD, MSc
The University of Alabama at Birmingham

Lily Francis MD, MPhil
UTHealth San Antonio

Mayra Sainz, MPH
Emory University

Adaora Nwosu
Duke University School of Medicine

Closing Remarks

Jalayne J. Arias, JD, MA

Jalayne J. Arias is an Associate Professor in Health Policy & Behavioral Sciences in the School of Public Health at Georgia State University. Her research focuses on the policy, legal, and ethical questions that arise in Alzheimer's disease and related dementias, aging, and neurosciences. Her prior and ongoing studies have identified employment and insurance discrimination based on emerging techniques to identify risk for Alzheimer's disease, evaluated genetic datasharing guidelines in research, analyzed private payers' coverage policies for genetic testing, examined challenges to financing long-term care, and much more.

Elizabeth Cohn, PhD, RN

Dr. Elizabeth Cohn is a Professor of Nursing, an Obama White House Champion of Change in Health Equity, and the Associate Dean of Research for the Hunter-Bellevue School of Nursing in the City University of New York. She is a Board member of the Communities of Harlem Health Revival, a group of faith-based and community-based organizations in Harlem, New York that fosters health in mind, body and spirit for residents of Central Harlem.

Caleb Finch, PhD

Dr. Caleb Finch is a Professor of Gerontology and Biological Sciences at the University of Southern California. His recent work focuses on gene-environment interactions of the ApoE alleles in the context of the Gero-Exposome. In 2010, he began studies on air pollution and brain aging, based on its strong associations with cardiovascular disease. Dr. Finch has also studied biological mechanisms in aging using a systems approach to cell and organ interactions and pioneered concepts that brain neurotransmitter functions change progressively without pathology, beginning in midlife, shown for rodents and healthy humans.

Felicia Goldstein, PhD, MA

Dr. Felicia Goldstein is currently a Professor of Neurology at Emory University. As a neuropsychologist specializing in geriatrics, her clinical and research focus involves cognitive disorders including memory and executive functioning that are associated with normal and pathological aging. Areas of investigation include 1) Vascular comorbidities and their relationship to neurobehavioral features and cerebral white matter changes in patients with Alzheimers disease and mild cognitive impairment; and 2) Neurobehavioral features and recovery from traumatic brain injury in older adults.

Ihab Hajjar, MD

Dr. Ihab Hajjar is a Professor in the Department of Neurology and the Department of Internal Medicine at UT Southwestern Medical Center. He specializes in geriatric medicine, Alzheimer's disease, and hypertension. He holds the Pogue Family Distinguished University Chair in Alzheimer's Disease Clinical Research and Care, in Memory of Maurine and David Weigers McMullan. His research focuses on the role of hypertension and its treatment on both cognitive function and cerebrovascular characteristics.

Lenora Higginbotham, MD

Dr. Lenora Higginbotham is a Neurologist and Assistant Professor of Neurology at Emory University, specializing in Movement Disorders. Her research interests include network-based proteomics, which enables the mapping of complex biological systems, to develop a marker for Lewy Body dementia diagnosis.

Anke Huels, PhD, MSc

Dr. Anke Huels is an Assistant Professor of Epidemiology and Environmental Health at the Rollins School of Public Health at Emory University. She has led several research projects within the Emory Healthy Aging Study, the Emory Healthy Brain Study, and the brain bank maintained by the Emory Goizueta Alzheimer's Disease Research Center (ADRC). A major focus of her work is to understand how air pollution affects our health, including cognitive health and dementia. She is particularly interested in the interplay between environmental and psychosocial risk factors and how they jointly affect our cognitive health as well as in the molecular signatures of air pollution exposures and related consequences for the brain.

David Jett, PhD

Dr. David A. Jett is Director of the Office of Neural Exposome and Toxicology (ONE-TOX) Research Program and the NIH Countermeasures Against Chemical Threats (CounterACT) Program. He also serves as Program Director and Scientific Team Leader within the Division of Translational Research at the National Institute of Neurological Disorders and Stroke (NINDS). Dr. Jett's scientific interest is in the impact of chemical agents on nervous system function, including the molecular and cellular mechanisms of cognitive and neural development. Specifically he has expertise and experience with pesticides and nerve agents.

Dean Jones, PhD

Dr. Dean P. Jones is a Professor in the Department of Medicine (Pulmonary Division) and the Department of Biochemistry at Emory University. He is a member of the Cell and Molecular Biology Research Program at Winship Cancer Institute, and his central research focus is on redox mechanisms of oxidative stress. Dr. Jones currently directs the Emory Clinical Biomarkers Laboratory, which is focused on oxidative stress biomarkers and applications of 1H-NMR spectroscopy and Fourier-transform mass spectrometry for high-throughput clinical metabolomic analyses of nutritional and environmental factors in human health and disease.

James Lah, MD, PhD

Dr. James J. Lah is the Director of Emory's Cognitive Neurology Program and Clinical Core Leader of the National Institutes of Health (NIH)-funded Alzheimer's Disease Research Center. His research is driven by the goal of understanding basic pathogenic mechanisms in neurodegenerative disorders. Specific topics of interest include: regulation of amyloid precursor protein (APP) processing through control of intracellular trafficking and characterization of new genes involved in Alzheimers disease, Parkinsons disease, Frontotemporal Dementia, and other neurodegenerative disorders.
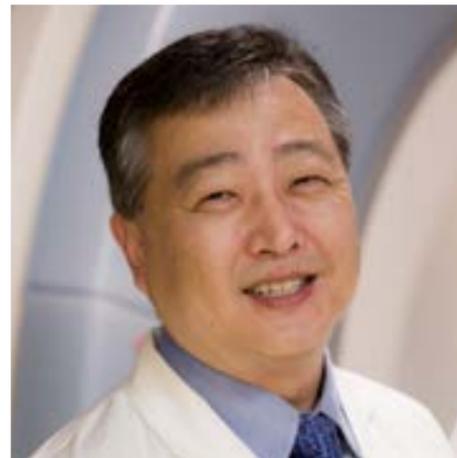
Allan Levey, MD, PhD

Allan Levey, MD, PhD, is a Professor at Emory University's School of Medicine, as well as the director of Emory's Alzheimer's Disease Research Center. He has secondary faculty appointments in the Departments of Pharmacology, Psychiatry and Behavioral Sciences. His research interests include fundamental research into the cause of Alzheimer's disease and related neurodegenerative disorders, and development of new biomarkers and treatments.

John Morris, MD

Dr. John C. Morris is the Harvey A. and Dorismae Hacker Friedman Distinguished Professor of Neurology; Professor of Pathology and Immunology; Professor of Physical Therapy; Professor of Occupational Therapy; and Director of the Charles F. and Joanne Knight Alzheimer's Disease Research Center at Washington University School of Medicine. Dr. Morris' research interests include healthy aging and Alzheimer dementia, antecedent biomarkers for Alzheimer disease, and trials of investigational drugs for the treatment of Alzheimer dementia.

Monica Parker, MD

Dr. Monica Parker an Associate Professor of Neurology and the Director of the Outreach, Recruitment and Education (ORE) and Minority Engagement Cores (MEC) of the Emory Goizueta Alzheimer's Disease Research Center at Emory University. She is a National Institutes of Health (NIH) funded investigator for several projects and has co-authored several articles for peer reviewed journals in the areas of Alzheimer's and Related Dementias, aging and disparities for people of color.

Nick Seyfried, MD

Dr. Nick Seyfried is a Professor in the Departments of Biochemistry and Neurology at Emory University. He is also Co-Director of the Biomarker Core for the Emory Goizueta Alzheimer's Disease Research Center (ADRC). His group utilizes integrated proteomic approaches for basic and translational research discoveries in neurodegenerative diseases. He currently serves as a principal investigator of the Accelerating Medicine Partnership for Alzheimer's Disease (AMP-AD) grant at Emory, where his research team has developed network-based approaches to quantify specific classes of proteins that reflect early mechanisms and biomarkers of Alzheimer's Disease and related neurodegenerative diseases.

Li-San Wang, PhD

Dr. Li-San Wang is the Peter C. Nowell, M.D. Professor of Pathology and Laboratory Medicine at the University of Pennsylvania. He is also Co-Director of Penn Neurodegeneration Genomics Center (PNGC) and the Genome Center for Alzheimer's Disease (GCAD). His research interests include genetics of Alzheimer's Disease and Related Dementia, and computational methods for big data in genomics research, and his research team applies high throughput genotyping and sequencing technologies to analyze tens of thousands of genomes and find novel genes.

Thomas Wingo, MD

Dr. Thomas Wingo is an Associate Professor of Neurology and Human Genetics at Emory University. He is a cognitive neurologist with post-doctoral training in statistical genetics and bioinformatics. His research primarily focuses on identifying genetic and molecular causes of Alzheimer's Disease (AD) and related dementias using human-derived omics data (e.g., proteomics, transcriptomics, epigenetics, etc.). He is also keenly interested in the shared genetic risk among mid-life conditions (e.g., high cholesterol and depression) and late-life neurodegenerative diseases and explores these connections using genetics from biobank data.

2023 Emerging Scholars

Lily Francis MD, MPhil
UTHealth San Antonio

Madelyn C. Houser, PhD
Emory University

Yolanda Jackson, MS
University of Kentucky

Sushraya Jay
Emory University

Raina Levin
Massachusetts General Hospital

Adaora Nwosu
Duke University

Divinity Amos Richards, MPH
Emory University

Deborah Rose, MD
Duke University

Mayra Sainz, MPH
Emory University

Ferass Sammoura
Florida International University

Antoine Trammell, MD, MPH
Emory University

Michael Williams, MD, MSc
The University of Alabama at Birmingham

Isha Mhatre-Winters, MS, PhD
Florida International University

Conference Series Publication Program

The FIU-Emory University Conference series is implementing a publication program that addresses major gaps in knowledge about social and biologic factors and processes associated with cognitive decline and neurodegenerative Alzheimer's Disease and other dementias. The series is focused on disadvantaged subpopulations at highest dementia risk, such as African Americans and Latinos in the United States. We undertake this effort, relying on the expertise of our outstanding public health, biological, and genetic scientists participating in our conference series, to advance research of understudied populations. To that end we want to inform you of our intent to organize a collection of articles suitable for a special section of a peer reviewed journal. We will be contacting presenters after the conference to initiate this process and encourage your participation. We will provide presenters with an outline of manuscript preparation requirements with adequate timing for deadlines.

Conference Series Core Theme

The conference presenters are leading experts. Our approach is comparative, interdisciplinary and intentionally integrative across disciplines. The objective is to stimulate new thinking across disciplines, and take deep dives into longstanding issues that seem to have disproportionate impact on African Americans and Latinos. We strive to explore potential explanations, and prompt new research questions, in order to address longstanding unresolved issues in the field associated with patterns of older adult cognitive decline and onset of neurodegenerative diseases.

The Peer Review Aim and Production Process

African Americans in the US experience higher risk of dementia, especially AD. There is an urgent need to rapidly disseminate new critical findings, models, and methods through publication that reduces ADRD disease burden. The conference series focuses on addressing complex issues that have implications for prevention and remediation of neurodegenerative diseases among African Americans and Latinos in the United States. Research forthcoming from the conference series will be conserved and disseminated through peer reviewed publications. Our conference faculty will curate a collection of outstanding presentations from each iteration of the annual conference for a special section of a scientific journal in the field. The journal selected may vary from year to year in accordance with the subject matter. We have established a publication committee and the entire conference faculty is also potentially available to support the various facets of the publication program. This includes article and journal selection, guidelines for authors, writing orienting introductions for the special section, participating in the peer review process, and editorial technical assistance. At a later date, the publication program could consider publication of edited books sponsored by the conference series by major publishers such as Springer or Oxford.

Please contact Dr. William Vega at wvega@fiu.edu for more information.

"The launch of ADLARITY demonstrates the value of Corium's innovative CORPLEX™ technology and our commitment to providing treatment options that address unmet needs for CNS conditions. I want to thank our people, whose tireless commitment made the possibility of helping millions of people in the U.S. living with Alzheimer's disease a reality."

- Perry Sternberg, President/CEO of Corium

To learn more about ADLARITY, please visit www.adlarity.com

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The Social, Environmental, and Biological Determinants of Dementia Disparities Conference Series will bring together researchers and emerging scholars to discuss how social, environmental and biological factors affect African Americans, Latinos and other ethnic minorities in the U.S. The free conference is hosted by the Robert Stempel College of Public Health & Social Work at Florida International University and Emory University School of Medicine.

For more information, please visit ddconference.fiu.edu or email outreach.recruitment@emory.edu.

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