



Acknowledgements

We wish to thank the mentors and their laboratory teams for outstanding contributions to the success of the summer training programs and to the students for their participation.

Many thanks also go to the Hypertension & Vascular Research Center Staff for their outstanding support and contributions to the success of the summer training programs.



2021

**Excellence In Cardiovascular Sciences
(EICS)**

&

**Enhancing Undergraduate Education
And Research in Aging to Eliminate
Health Disparities (ENGAGED)**

**SUMMER RESEARCH
POSTER SYMPOSIUM**

**Friday, July 30, 2021
9:00 am – 12:00 pm**

**Biotech Place Atrium
575 N. Patterson Avenue
Winston-Salem, NC 27101**

The **EXCELLENCE IN CARDIOVASCULAR SCIENCES (EICS) SUMMER RESEARCH PROGRAM FOR DIVERSITY** is funded by an R25 training grant from the National Heart, Lung, and Blood Institute. Drs. Debra Diz, Ann Tallant, and David Soto-Pantoja are the directors of the program, which has provided summer research training in cardiovascular-related topics for ~340 undergraduate students from groups underrepresented in the biomedical sciences over the past twenty-seven years. Of our former EICS participants who have completed their undergraduate degrees, approximately 31% obtained graduate degrees or are in graduate school and 80% are in biomedical sciences and health professional careers. Four recent EICS participants are currently working toward their PhD at Wake Forest University.

The **ENHANCING UNDERGRADUATE EDUCATION AND RESEARCH IN AGING TO ELIMINATE HEALTH DISPARITIES (ENGAGED)** is funded by an R25 training grant from the National Institute on Aging. Drs. Tina Brinkley, Debra Diz, TanYa Gwathmey, Jill Keith and Gary Miller are the directors of the program. Over the past three years, the grant supported ~40 underrepresented undergraduate students participating in aging-related educational and research activities during the academic year (from Wake Forest University and Winston Salem State University) and during the summer (for students at any U.S. college/university). The goal is to enhance the diversity of the biomedical, behavioral, and clinical research workforce in Medicine, Science, Technology, Engineering and Mathematics (MSTEM) fields as they relate to aging.

Program Support:

Wake Forest School of Medicine

- Surgery-Hypertension
- Hypertension & Vascular Research Center
- Cardiovascular Sciences Center
- J. Paul Sticht Center for Healthy Aging and Alzheimer's Prevention

Wake Forest University

- Graduate School of the Arts & Sciences

Winston-Salem State University

National Heart, Lung & Blood Institute (NHLBI)

- R25HL092618 (EICS)

Research Initiative for Scientific Enhancement

National Institute on Aging (NIA)

- R25AG060912 (ENGAGED)

ENGAGED PARTICIPANTS

David Morton (Wake Forest University)

Mentor: Christina Hugenschmidt, PhD
Internal Medicine, Section on Gerontology and Geriatric Medicine, J. Paul Sticht Center for Healthy Aging and Alzheimer's Prevention

"Dual Task and Gait Variability"

Drew Nwokeafor-Laz (Wake Forest University)

Mentor: Bethany Kerr, PhD
Cancer Biology, Comprehensive Cancer Center

"Effect of SCF and DCC-2618 Treatment on Prostate Cancer Bone Homing"

Bryonna Peeples (Tuskegee University)

Mentor: Justin Moore, PhD
Public Health Sciences, Department of Implementation Science
"A Coordinated Parent/Child Dyad Weight Loss Intervention: Dyad Plus Feasibility"

Moriah Wells (Winston Salem State University)

Mentor: Ashley Sanderlin, PhD
Internal Medicine, Section on Gerontology and Geriatric Medicine

"Sleep Oxygen Saturation Association with Mood and Behavior in MCI"

Albi Zhiva (Forsyth Technical Community College)

Mentor: Kristen Beavers, PhD
Health and Exercise Science, Wake Forest University

"Trajectories of Upper and Lower Body Strength Gains in Men and Women Participating in the INVEST Study"

EICS PARTICIPANTS

Don Asafu-Adjaye (Emory University)

Mentor: Mark Chappell, PhD
Surgery – Hypertension, Cardiovascular Sciences Center

"Optimal Conditions for Assessment of the SARS-COV-2 Binding Protein ACE2 in Human Serum"

Alex Bart (Lafayette College)

Mentor: Allison Caban-Holt, PhD
Associate Director, Maya Angelou Center for Health Equity

"Is Cigarette Smoking Good for Problem Solving?"

Dana Carreno (Johns Hopkins University)

Mentor: Joanne Sandberg, PhD
Family and Community Medicine

"Diabetes Inheritance and Causation: Lay Beliefs among Latina Immigrants with Limited Education"

Evelyn Farkas (Georgia State University)

Mentor: Ken Kishida, PhD
Physiology and Pharmacology, Cardiovascular Sciences Center

"Adaptive Choice Behavior and Subjective Feelings are Predictive of Clinical Outcomes in Depression"

Mya Hopper (Winston Salem State University)

Mentor: Joanne Sandberg, PhD
Family and Community Medicine, Comprehensive Cancer Center

"Aspects of Effective Patient-Provider Communication between African American Prostate Cancer Patients and Physicians"

Mi-Tien Lee (Georgia State University)

Mentor: Nicole Levi-Polyachenko, PhD
Plastic and Reconstructive Surgery, Comprehensive Cancer Center

"Bismuth-Silicone Nanocomposite Contained Within a Polymer Mesh as a Non-migrating Breast Biopsy Marker"

EICS PARTICIPANTS

Glenn Myatt (Wake Forest University)

Mentor: David Soto-Pantoja, PhD, Co-Mentor: Steven Bronson, DVM
Surgery - Hypertension, Comprehensive Cancer Center

"Thrombospondin-1 Decreases Cellular Bioenergetics as a Potential Mechanism of Mediating Cardiac Damage"

Savannah Pollock (Wesleyan College)

Mentor: Rong Chen, PhD
Physiology and Pharmacology, Cardiovascular Sciences Center

"Atorvastatin Disrupts Actin Dynamics"

Dejanae Potter (Xavier University of Louisiana)

Mentor: David Soto-Pantoja, PhD, Co-Mentor: Jessica Mackert, PhD
Surgery - Hypertension, Comprehensive Cancer Center

"Ubiquilin-1/Plic-1 Knockdown Differentially Regulates Cardiac and Cancer Cell Growth"

Olivia Smith (North Carolina State University)

Mentor: Katherine Cook, PhD
Surgery - Hypertension, Comprehensive Cancer Center

"Endocrine Therapy and Diet-mediated Interactions Influence Cardiac Function in a Murine Model"

Erian Watkins (Washington University in St. Louis)

Mentor: David Soto-Pantoja, PhD, Co-Mentor: Yismeilin Feliz Mosquea, Graduate Student
Surgery - Hypertension, Comprehensive Cancer Center

"Role of IRE1 Signaling in Chemotherapy-related Cardiac Toxicity"

ENGAGED PARTICIPANTS

Laurence Bangert (Perdue University)

Mentor: Ashley Weaver, PhD
Biomedical Engineering

"Wearable Insoles & Finite Element Modeling to Assess Femoral Stresses & Strains During Gait"

Elili Brown (Occidental College)

Mentor: Christopher Schaich, PhD; Nildris Cruz-Diaz, PhD
Surgery - Hypertension, Cardiovascular Sciences Center

"Visit-to-visit Glucose Variability and its Association with Dementia-related Neuroimaging Markers: Preliminary Analyses from the Multi-Ethnic Study of Atherosclerosis (MESA)"

"Young Hypertensive Male and Female Rats Have Increased Carotid Arterial Stiffness"

Beatrice Gar (North Carolina A&T State University)

Mentor: Andrew South, MD, MS
Pediatric Nephrology; Cardiovascular Sciences Center

"The Association between Health Insurance Type and Blood Pressure Severity in Youth with Hypertension"

Christian Johnson (Virginia Commonwealth University)

Mentor: Jeff Williamson, MD
Internal Medicine, Section on Gerontology and Geriatric Medicine; Program Director, Sticht Center for Healthy Aging and Alzheimer's Prevention

"Association of Dementia Caregiver Family Relationship with Depression and Stress"

Sophia Lino (Florida State University)

Mentor: Giselle Melendez, MD, Co-Mentors: Nazli Gharrae, Research Fellow; Jessica Lacy, Research Lab Technician
Internal Medicine - Cardiology, Cardiovascular Sciences Center

"Dox Induces Cellular Senescence in Cardiac Fibroblast: A Potential Therapeutic Target for Cardiotoxicity"