

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 and Ann Tallant are the directors of the program, which has provided summer research training for approximately 300 undergraduate students from groups underrepresented in the biomedical sciences over the past twenty-five years. Of our former EICS participants, who have completed their undergraduate degrees, approximately 31% obtained their professional degrees or are in professional schools and 31% obtained graduate degrees or are in graduate school. Four EICS participants are currently working toward their PhD at Wake Forest University.

**Supported by:**

- Graduate School of the Arts & Sciences  
Wake Forest University
- Hypertension & Vascular Research  
Wake Forest School of Medicine
- National Heart, Lung & Blood Institute (NHLBI)  
Wake Forest School of Medicine  
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Training in Academic Research (MARC U\*STAR)  
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(Mamudu Yakubu, PhD, Director)



**2018 EXCELLENCE IN  
CARDIOVASCULAR SCIENCES (EICS)  
SUMMER RESEARCH  
POSTER PROGRAM**

**Friday, July 27<sup>th</sup>, 2018  
9:30 am – 12:00 pm**

**Biotech Place  
575 N. Patterson Avenue  
Winston-Salem, NC 27101  
Atrium and  
Conference Room 155 A & B**

## PARTICIPANTS

### **Adam JP. Burke (Winston-Salem State University)**

Mentor: Giselle C. Melendez, MD; Co-Mentor: Jianli Bi, MD, PhD  
Internal Medicine-Cardiology, Cardiovascular Sciences Center

*"Beneficial Effects of Purified Eicosapentaenoic Acid on Myocardial Fibrosis and Diastolic Cardiac Function In Spontaneously Hypertensive Rats"*

### **Nataleigh N. Austin (Winston-Salem State University)**

Mentors: E. Ann Tallant, PhD, Patricia E. Gallagher, PhD, Marianne Collard, BS  
Surgery/Hypertension, Cardiovascular Sciences Center

*"Muscadine Grape Extract Reduces Liver Metastases in a 4T1 Syngeneic Mouse Model"*

### **Chloe M. Carpenter (Cornell University)**

Mentor: Nicole H. Levi, PhD; Co-Mentor: Afnan Altamimi, MD  
Plastic & Reconstructive Surgery

*"The Effect of Human Plasma on the Growth of Staphylococcus Aureus Biofilms"*

### **Lauren D. Clines (Liberty University)**

Mentor: Jasmina Varagic, MD, PhD; Co-Mentors: Jessica VonCannon, Kendra Wright  
Surgery/Hypertension, Cardiovascular Sciences Center

*"Chymase/Angiotensin-(1-12) Axis in Early Diabetic Cardiac Dysfunction"*

### **Alexus B. Echols (Spelman College)**

Mentor: TanYa M. Gwathmey-Williams, PhD; Co-Mentors: Andrew M. South, MD,  
Mark C. Chappell, PhD, Lisa Washburn, MD  
Surgery/Hypertension, Cardiovascular Sciences Center

*"The Renin Angiotensin System and Pre-term Birth in Fetal Programming of Young Adults: Alterations in Blood Pressure and Urinary Angiotensinogen"*

### **Nia S. Garrett (Villanova University)**

Mentor: Rong Chen, PhD; Co-Mentors: Deborah Luessen, MS, James Miller,  
Haiguo Sun, PhD, Brian McCool, PhD  
Physiology and Pharmacology, Cardiovascular Sciences Center

*"Disruption of G-protein Membrane Compartmentalization by Chronic and Intermittent Ethanol Treatment"*

### **Rabina Mainali (Salem College)**

Mentor: Hariom Yadav, PhD; Co-Mentors: Shaohua Wang, PhD, Ravinder Nagpal, PhD  
Internal Medicine-Molecular Medicine

*"Development of Yogurt Containing Human-Origin Probiotics"*

### **Daija L. McKenzie (Winston-Salem State University)**

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

*"Racial/Ethnic and Gender Differences in Pediatric Hypertension"*

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

## PARTICIPANTS

### **Jennifer L. Paxton (Winston-Salem State University)**

Mentor: Jennifer H. Jordan, PhD, MS  
Internal Medicine-Cardiology, Biomedical Engineering

*"Myocardial Perfusion Deficits in Cancer Survivors"*

### **Avery J. Salmon (Mars Hill University)**

Mentor: David R. Soto-Pantoja, PhD; Co-Mentor: Yismelin R. Mosquea  
Surgery/Hypertension, Comprehensive Cancer Center,  
Cardiovascular Sciences Center

*"Deficiency of CD47 Regulates Mitochondrial Function to Prevent Chemotherapy Related Cardiac Toxicity"*

### **Mykasia S. Simpkins (Winston-Salem State University)**

Mentors: Timothy K. Williams, MD, James E. Jordan, PhD; Co-Mentor: Dwight Deal  
Internal Medicine-Cardiothoracic Surgery, Cardiovascular Sciences Center

*"Distal Aortic Flow Correlates with Distal Aortic Pressure in a Partial Resuscitative Balloon Occlusion of the Aorta Model"*

### **Sheldon D. Smith (Winston-Salem State University)**

Mentor: Bethany Kerr, PhD; Co-Mentor: Koran Harris  
Cancer Biology

*"Combination Dose Response of LnCap-C4-2 CD117+Cells"*

### **Brandon E. Travis (Winston-Salem State University)**

Mentor: Gagan Deep, PhD; Co-Mentors: Olen Black, Sangeeta Singh, PhD,  
Leslimar Rios, PhD  
Cancer Biology

*"Modulatory Effects of Exosomes Secreted by Hypoxic African American Prostate Cancer Cells on NF-kB Targeting Monocyte/Macrophage"*

### **Joshua M. Waller (Winston-Salem State University)**

Mentor: Timothy M. Hughes, PhD; Co-Mentor: Eric Fischer, MA  
Gerontology and Geriatric Medicine

*"Mid-Life Vascular Risk Factors for Dementia Differ Between Racial/Ethnic Groups and Relate to Cognitive Performance Later in Life"*

### **Joseph E. White (Berry College)**

Mentor: Leah C. Solberg Woods, PhD; Co-Mentors: Osborne Seshie and Aaron Deal  
Internal Medicine-Molecular Medicine

*"Grid2 Expression as a Mediator of Adiposity in Rodent Models"*

### **Jee Young Yoo (CUNY)**

Mentor: Katherine L. Cook, PhD; Co-Mentor: Kenysha Clear  
Surgery/Hypertension, Comprehensive Cancer Center,  
Cardiovascular Sciences Center

*"Targeted UPR Modulates DOX-Induced Cardiotoxicity"*