

# Good News!

Wake Forest School of Medicine Cardiovascular Sciences Center

Third/Fourth Quarter 2018



## Watch Out, AHA...Here Comes Wake Forest!



**Dr. Cheping Cheng, Dr. Heng-Jie Cheng** and their group of research fellows have been very busy this year turning out project after project and it seems all of their hard work is paying off. From the group, 18 total abstracts were accepted for presentation at the 2018 American Heart Association's Scientific Sessions in Chicago, IL. These abstracts consists of 13 poster presentations, 4 oral presentations, and 1 moderated digital poster presentation. The group's research interest spans the Cardiovascular spectrum to encompass topics such as Heart Failure, Diabetes, Genomics, Ageing, Metabolism, Obesity and more, while using mouse, canine, and monkey models. Congratulations to Drs. Cheng and Cheng and their team of researchers (Yixi Liu, Xiaowei Zhang, Zhi Zhang, and Zhe Chen); thank you all for your outstanding representation of Cardiovascular Medicine here at Wake Forest!

## Wake Forest in the News

Our very own **Dr. Jeff Williamson** was recently featured in "USA Today" and "Time Magazine" after presenting strong evidence that lowering blood pressure can reduce the risk of Mild Cognitive Impairment through the SPRINT-MIND study. Dr. Williamson is the co-director of the Alzheimer's Research Center here at WF and helped to lead the SPRINT-MIND study. The study found that patients who were treated to reduce their systolic blood pressure to 120 mm Hg were 19 percent less likely to develop mild cognitive impairment than those whose blood pressure was targeted to 140 mm Hg. In the "USA Today" article, Williams says, "I wasn't sure myself as a scientist, was blood pressure-lowering as good for the brain as it was for the heart? That was a really unanswered question." So far, the results of the study are suggesting this could be the case. To read the full articles in "USA Today" and "Time Magazine," visit <https://www.usatoday.com/story/news/nation/2018/07/25/lower-blood-pressure-reduces-risk-mild-cognitive-impairment-study/832090002/> and <http://time.com/5347592/blood-pressure-lower-risk-dementia/>



Dr. Williamson

### IN THIS ISSUE:

- ▶ Wake Forest Represents at AHA
- ▶ Williamson in the Media
- ▶ Accomplishments
- ▶ Funding and Awards
- ▶ Events
- ▶ Lectures, Presentations, and Conferences
- ▶ Publications
- ▶ Clinical Update
- ▶ Career Development Corner

 **Wake Forest**  
School of Medicine

## Accomplishments



Dr. Wagenknecht

Effective October 1, 2018, **Lynne Wagenknecht, PhD, MPH**, was named the Director of Public Health Sciences after serving as interim director since August of 2017. Dr. Wagenknecht has been with WFSOM since joining the faculty in 1991. Over the years, she has held the titles

of Chair for the Department of Epidemiology and Prevention, Associate Director of Public Health Sciences, and Associate Dean for Interdisciplinary Research. Congratulations to Dr. Wagenknecht on her new appointment!



Dr. Melendez

**Giselle Melendez, MD**, was recently selected as a 2018 Dean's Hero award recipient. Dr. Melendez received this award for her Dean's Research Symposium topic, "Myocardial Fibrosis: A New Frontier for Discovery in Cardiotoxicity Induced by Cancer Treatment," after being chosen by Dr.

Julie Freischlag. In recognition of her excellent work, she will receive a \$20,000 award to be used to help further advance her research.



Dr. Varagic

**Jasmina Varagic, MD, PhD**, was appointed to the Innovative Project Award Study Section for the American Heart Association. The Innovative Project award serves to support innovative, high impact research that could ultimately lead to critical discoveries or advancements that will accelerate the field of CV and stroke research.



Dr. German

During the AHA Scientific Sessions in Chicago, **Charles German, MD**, was highlighted as being a prime example of someone who takes community based interventions to increase physical activity through his work with the Walk with A Doc program.



Dr. Kitzman

Congratulations to both **Dalane Kitzman, MD**, and **Bob Applegate, MD** on achieving the elite honor of being named Top Reviewers for JACC: Heart Failure in 2018.



Dr. Applegate

## Funding and Awards



Dr. Schaich

Cardiovascular Medicine research fellow, **Christopher Schaich, PhD**, received a fundable score for his F32 application titled, "Heart Rate Variability as a Predictor of Cognitive Performance in the Multi-Ethnic Study of Atherosclerosis."



Ms. Stirling

**Elizabeth Stirling**, a Cancer Biology graduate student from Dr. David Soto-Pantoja's lab, has been awarded a Wake Forest Alumni Student Travel Award for the American Society for Matrix Biology Conference in Las Vegas, Nevada in October where she presented "Targeting Thrombospondin -1/Cd47 Signaling Axis Regulates Hypoxia & Metabolism in The Tumor Microenvironment to Enhance Anti-Tumor Immune Responses".

**Giselle Melendez, MD**, recently received the exciting news that her K-Award application titled, "Cellular Senescence: A Novel Mechanism of Doxorubicin-induced Cardiotoxicity" received a fundable score.



Ms. Ryalat

**Fatima Ryalat**, a graduate student mentored by Dr. Debra Diz, was awarded a Wake Forest Alumni Student Travel Award for the Council on AHA Hypertension Meeting in Chicago, IL in September where she presented her poster "Sex Differences in the Effects of Chronic Muscadine Grape Extract Treatment on Cardiac Function Parameters and Aortic Pulse Wave Velocity (PWV) in Hypertensive Transgenic (mRen2) 27 Rats".





**Andrew Michael South, MD**, was awarded first place at the on-site poster competition at the AHA Council for Hypertension in Chicago, IL for his poster titled, "Children with Food Insecurity at Risk for High Blood Pressure." This has subsequently garnered media attention from the U.S. News & World Report as well as several other news stations. To read the full report from U.S. News and World Report, visit <https://health.usnews.com/health-care/articles/2018-09-06/kids-without-access-to-good-food-face-high-blood-pressure-risk>.

Dr. South



**Mark Chappell, PhD**, received a 3-year AHA Transformative Grant Award titled, "Endocannabinoid-Angiotensin Systems in Diabetic Hypertension."

Dr. Chappell



Congratulations to **John Parks, PhD**, on the pending renewal of his R01 titled, "Hepatocyte Abca1, Cholesterol Trafficking, and Lipid Management."

Dr. Parks

## Events

The annual American Heart Association Winston-Salem Heart and Stroke Walk was held on Sunday, October 14 at Bailey Park. So far, the total for the entire walk has reached \$489,150! The Heart and Vascular Service Line raised a whopping \$15,925 with the help of many creative and exciting fundraisers, which included 13 different Walk Teams! The CVSC sends a huge "Thank You" to all of those who helped make these generous donations possible!



## Cardiovascular Sciences Center Guest Speakers

Save the dates for these upcoming guest speakers at Cardiovascular Medicine Research Grand Rounds! Grand rounds are held every Friday, 7:30-8:30 am in the Medical School Board Room

- January 18, 2019: **Dr. Judy Hung** - Massachusetts General
- February 22, 2019: **Dr. Thomas Di Salvo** - Medical University of South Carolina
- March 1, 2019: **Dr. Bill Stevenson** - Vanderbilt University
- March 29, 2019: **Dr. Stavros Drakos** - University of Utah
- April 12, 2019: **Dr. James Fang** - University of Utah
- May 17, 2019: **Dr. Ralph Sacco** - University of Miami

Wednesday, November 7<sup>th</sup> was the **Surgical Sciences 26<sup>th</sup> Annual Residents' and Fellows' Research Day**. The keynote speaker, Dr. Todd Rasmussen presented a lecture titled, "From Combat Zone to Civilian Market: Lessons from a Military Program in Endovascular Device Innovation for Torso Bleeding and Shock." Several members of the CVSC (or their mentees) were award recipients.

### Basic Science

#### FELLOW SILVER

Manuel U. Ramirez, PhD

Katherine L. Cook, PhD – Mentor

Hypertension and Vascular Research

#### STUDENT GOLD

Omeed Rahimi, BS

Patricia E. Gallagher, PhD and E. Ann Tallant, PhD – Mentors

Hypertension and Vascular Research

#### STUDENT SILVER

Elizabeth R. Stirling, MS

David Soto-Pantoja, PhD – Mentor

Hypertension and Vascular Research

### Clinical Science

#### STUDENT GOLD

Mike C. Lin, BS

James E. Jordan, PhD – Mentor

Cardiothoracic Surgery

#### STUDENT SILVER

Tracey Pu, BS

Adrian Lucian Lata, MD – Mentor

Cardiothoracic Surgery

#### FELLOW SILVER

Ioannis Kontopidis, MD

Leonard J. Wudel, MD – Mentor

Cardiothoracic Surgery

## Invited Lectures, Presentations, and Conferences



**Liliya Yamaleyeva, MD, MS** has been invited to give a talk titled, “Hemodynamic Effects of Apelin in Preeclampsia” at the ASPET sponsored symposium during the 2019 Experimental Biology Meeting in Orlando, FL.

Dr. Yamaleyeva



**Tom Register, PhD**, had a poster presented at the 2018 Radiation Research Society Meeting in Chicago, IL, titled, “Monocyte Polarization in Acute and Delayed Responses to Total Body Irradiation in Male Rhesus Monkeys.”

Dr. Register



**Hossam Shaltout, PhD**, gave an oral presentation at the AHA Council on Hypertension Meeting in September titled, “Impaired Autonomic Function in Young 135 Adults Born Preterm with Very Low Birth Weight is Associated with Elevated Serum Uric Acid Levels.”

Dr. Shaltout



**Debra Diz, PhD**, was the keynote speaker at the WFSOM Medical Student Research Day, held on October 10. The title of her talk was, “Insights into Orthostatic Intolerance in Children: A Multidisciplinary Team Effort.”

Dr. Diz

The American Heart Association (AHA) annual Council on Hypertension/AHA Council on Kidney and Cardiovascular Disease joint Scientific Sessions was held September 6-9 in Chicago, IL. This is a three-day scientific program for clinical and basic researchers focusing on recent advances in hypertension research. The following posters were presented at the meeting:

**Hossam A Shaltout.** *Vitamin D Supplementation Improves Cardiovascular Response to Head Up Tilt in Adolescents Suffering from Syncope.*

**Andrew Michael South, Deepak Palakshappa, Callie Brown.** *Food Insecurity is Associated with Hypertension in Children and Adolescents Independent of Obesity.*

**Andrew Michael South, Patricia A. Nixon, Mark C. Chappell, Debra I. Diz, Elizabeth T. Jensen, Hossam A. Shaltout, Lisa K. Washburn.** *Preterm Birth is Associated with Increased Blood Pressure and Increased Urinary Angiotensinogen in Young Adults.*

**Snezana Petrovic, Ellen Tommasi, Xuming Sun, Debra I Diz.** *Effects of Proton Receptor Gpr4 Deficiency on Angiotensin Receptors in Kidney and Hindbrain.*

**Mark Chappell.** *The Angiotensin-(1-7) Agonist AVE0991 Attenuates Angiotensinogen Release from Human Proximal Epithelial Cells.*

**Chris Schaich, Diego Malaver, Hossam A. Shaltout, Adina Zeki Al Hazzouri, David M. Herrington, Timothy M. Hughes.** *Heart Rate Variability is Associated with Future Global Cognitive Performance: the Multi-Ethnic Study of Atherosclerosis.*

**Callie Brown, Andrew Michael South, Deepak Palakshappa.** *Obesity Modifies the Association between Food Insecurity and Hypertension in Children and Adolescents.*

**Fatima Ryalat, Nildris Cruz-Diaz, Jasmina Varagic, Patricia Gallagher, Ann Tallant, Debra Diz, Liliya Yamaleyeva.** *Sex Differences in the Effects of Chronic Muscadine Grape Extract Treatment on Cardiac Function Parameters and Aortic Pulse Wave Velocity (PWV) in Hypertensive Transgenic (mRen2)27 Rats.*

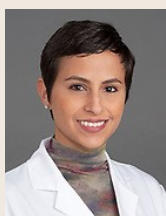
## CV COE Faculty and Fellow Publications July through November

During the last five months, Wake Forest School of Medicine CV COE faculty published **114 manuscripts** in peer-reviewed journals including *Journal of the American Heart Association*, *Circulation*, *JACC*, and *Atherosclerosis*. Below are a few articles from the list. All of the publications can be found at <https://www.ncbi.nlm.nih.gov/sites/myncbi/IJSeQsdreOokM/collections/57098868/public/>



Dr. Yeboah

**Joseph Yeboah, MBChB**, and colleagues recently published a manuscript in *Atherosclerosis* titled, "The Prognostic Value of Interleukin 6 in Multiple Chronic Diseases and All-Cause Death: The Multi-Ethnic Study of Atherosclerosis (MESA).



Dr. Rangel

**Octavia Rangel, MD**, and colleagues published an article in the *Journal of Cardiac Failure* titled, "Estimation of Incident Heart Failure Risk among US Hispanics/Latinos Using a Validated Echocardiographic Risk-Stratification Index: the Echocardiographic Study of Latinos."



Dr. Register

**Thomas Register, PhD**, and colleagues published a paper in the *Journal of the American Heart Association* titled, "Estradiol Treatment Initiated Early After Ovariectomy Regulates Myocardial Gene Expression and Inhibits Diastolic Dysfunction in Female Cynomolgus Monkeys: Potential Roles for Calcium Homeostasis and Extracellular Matrix Remodeling."



Dr. Soliman

**Elsayed Soliman, MD**, and colleagues published an paper in *JAMA* titled, "Racial Differences in Atrial Fibrillation-Related Cardiovascular Disease and Mortality: The Atherosclerosis Risk in Communities (ARIC) Study."

## Heart and Vascular Service Line Patient Care By the Numbers\*



### Cardiac Cath Lab

Caths.....3,253  
PCIs.....1,386  
New Patient Consults...5,435  
New Therapies\*\* .....544

\*\*MitraClip, Watchman, TAVR

### CT Surgery Procedures

Inpatient.....886  
Outpatient.....8

### Vascular Surgery Procedures

Inpatient.....1,040  
Outpatient.....467

### Cardiac Ultrasound

TTE.....24,686  
TEE.....994  
Stress.....4,419

### Advance Heart Failure and Transplant

Referrals.....  
Transplants.....11  
LVADs.....17  
Readmission Rate.....17.4%

(National average is 22%)



\*Data shown are reflective of FY 2018



## 2018 EICS Summer Research Program

The 2018 Excellence in Cardiovascular Sciences (EICS) summer research program was a great success this summer, resulting from the outstanding mentoring by our Wake Forest School of Medicine faculty, many of whom are members of the Cardiovascular Sciences Center. The students in this program, undergraduates from schools all over the United States, arrived the first of June and spent two months in the laboratories of faculty, participating in both basic science and clinical research projects. Ten of the scholars are attending and/or presenting their summer research at the 2018 Annual Biomedical Research Conference for Minority Students (ABRCMS) meeting this month in Indianapolis, attesting to the high quality of their summer research projects. The EICS program is supported by a grant from the NHLBI. The EICS scholars, the undergraduate institutes where they are currently students and their WFSM mentors included:



Rabina Mainali	Salem College	Dr. Hariom Yadav (Molecular Medicine)
Joseph White	Berry College	Dr. Leah Solberg-Woods (Molecular Medicine)
Daija McKenzie	WSSU	Dr. Andrew South (Pediatric Nephrology)
Chloe Carpenter	Cornell University	Dr. Nicole Levi (Plastic & Reconstructive Surgery)
Sheldon Smith	WSSU	Dr. Bethany Kerr (Cancer Biology)
Nataleigh Austin	WSSU	Drs. Ann Tallant and Patricia Gallagher (Surgery/Hypertension)
Mykasia Simpkins	WSSU	Drs. Jim Jordan/Tim Williams (Surgery/Cardiothoracic and Vascular)
Alexus Echols	Spelman College	Dr. TanYa Gwathmey-Williams (Surgery/Hypertension)
Jennifer Paxton	WSSU	Dr. Jennifer Jordan (Internal Medicine/Cardiology)
Adam Burke	WSSU	Dr. Giselle Melendez (Internal Medicine/Cardiology)
Avery Salmon	Mars Hill University	Dr. David Soto-Pantoja (Surgery/Hypertension)
Jee Young Yoo	CUNY	Dr. Katherine Cook (Surgery/Hypertension)
Nia Garrett	Villanova University	Dr. Rong Chen (Physiology & Pharmacology)
Brandon Travis	WSSU	Dr. Gagan Deep (Cancer Biology)
Joshua Waller	WSSU	Dr. Tim Hughes (Gerontology & Geriatric Medicine)
Lauren Clines	Liberty University	Dr. Jasmina Varagic (Surgery/Hypertension)

---

## Academic Journeys Seminar Series

The Academic Journey meetings are held monthly, featuring a faculty member at Wake Forest School of Medicine or a visiting clinician/scientist from the Cardiovascular Sciences Center Seminar series. These meetings are designed for graduate and medical students/postdoctoral fellow and residents/junior faculty members to spend time with distinguished physicians and scientists from our institution or other academic institutions and learn about their journeys to becoming successful clinicians/research scientists/educators. Our first meeting of the 2018-2019 year will be with Dr. Scott Levick from the University of Sydney, on Thursday November 15<sup>th</sup> at 4:00. Our January speaker will be Dr. Judy Hung, from Massachusetts General/Harvard University, on January 17<sup>th</sup> at 4:00. These informal meetings will be held in the Cardiology Conference Room on the 1<sup>st</sup> floor of Watlington Hall, with light refreshments. We will continue to update you on the Academic Journeys in 2019.