

## **GILL** OUARTERLY PUBLISHED BY UK GILL HEART & VASCULAR INSTITUTE

Spring 2022



# **GILL** QUARTERLY

SPRING 2022

### **TABLE OF CONTENTS**

Clinical Trials | Page 3 Fellows News/Accomplishments | Page 6 Affiliate News | Page 8 Research Features | Page 10 Spring Features | Page 12 Awards| Page 19 Current Research Funding | Page 22 Publications | Page 27



### FEATURED CLINICAL TRIAL

REVERSE-IT: A Phase 3, Multicenter, Open-Label, Single-Arm Study of PB2452 in Ticagrelor-Treated Patients with Uncontrolled Major or Life-Threatening Bleeding or Requir¬ing Urgent Surgery or Invasive Procedure

### PI: John Kotter, MD Sponsor: PhaseBio Pharmaceuticals Inc

*Objective*: To demonstrate reversal of the antiplate¬let effects of ticagrelor with IV infusion of PB2452 and to demonstrate the clinical efficacy of PB2452 by as¬sessment of hemostasis in ticagrelor-treated patients with uncontrolled major or life-threatening bleeding or who are undergoing urgent surgery or invasive pro¬cedure in a an open-label, single-cohort study.months, or an elevation in a certain blood test for HF, called BNP or NT-pro-BNP.

*Trial Background*: Bentracimab (previously PB2452) has been studied in Phase 1 and Phase 2 clinical trials and has demonstrated the potential to bring life-saving therapeutic benefit through immedi¬ate and sustained reversal of the antiplatelet activity of ticagrelor, potentially mitigating concerns regarding bleeding risks associated with the use of antiplatelet drugs. Additionally, in a translational study, ben-tracimab achieved equivalent reversal of branded ticagrelor and multiple ticagrelor generics. The pivotal Phase 3 clinical study is called REVERSE-IT (Rapid and SustainEd ReVERSal of TicagrElor – Intervention Trial).

REVERSE-IT is a multi-center, open-label, prospective single-arm trial designed to study rever¬sal of the antiplatelet effects of ticagrelor with ben¬tracimab in patients who present with uncontrolled major or life-threatening bleeding or who require urgent surgery or invasive procedure. Approximately 200 patients are being targeted to be enrolled from major health centers worldwide. Patients with re-ported use of ticagrelor within the prior 3 days who require urgent reversal due to uncontrolled major or life-threatening bleeding or because they need ticagre¬lor reversal will be eligible for enrollment.

The REVERSE-IT Phase 3 clinical trial had enrolled 60 of the first approximately 100 patients needed to support a Biologics License Appli¬cation (BLA), nearly all of whom to date have required urgent surgery or an invasive procedure. PhaseBio is attempting to accelerate enrollment of patients with uncontrolled major or life-threatening bleeding, in¬cluding by working to increase the number of enroll-ing clinical trial sites in the United States, Canada, and the European Union as it is believed that a broader site footprint will increase the probability of enrolling these patients. The trial is enrolling faster than Phase¬Bio originally projected, and PhaseBio now expects to complete enrollment of the first 100 patients in mid-2021 and is targeting to submit a BLA for ben-tracimab in mid-2022, although those timelines could be impacted by the continued scope and duration of the COVID-19 pandemic.

For additional trial information, please visit: <u>https://clinicaltrials.gov/</u>

For more information Contact: Jennifer Isaacs 859-323-4738, jennifer.isaacs@uky.edu

### CURRENTLY ENROLLING CLINICAL TRIALS

### **OPTIMIZER SMART POST - APPROVAL STUDY**

### PI: Aaron Hesselson, MD

Coordinator: Ben Rushing 859-323-5259

Objective: Post-approval study that evaluates data such as cardiac outcomes, quality of life, mortality, and functionality. Long-term data needed to assess complication rates and potential interactions with other implantable devices in the intended patient population. The post-approval study (PAS) protocol designed to address these concerns in a real-world setting.

### LEADLESS-II - A safety and effectiveness trial for a leadless pacemaker system

#### PI: Aaron Hesselson, MD

Coordinator: Jennifer Isaacs 859-323-4738

Objective: To confirm the safety and effectiveness of the Aveir device from implant through 6-weeks in a subject population indicated for a VVI(R) pacemaker.

REVERSE-IT: A Phase 3, Multicenter, Open-Label, Single-Arm Study of PB2452 in Ticagrelor-Treated Patients with Uncontrolled Major or Life-Threatening Bleeding or Requiring Urgent Surgery or Invasive Procedure

### PI: John Kotter, MD

Coordinator: Jennifer Isaacs, CCRP 859-323-4738

Objective: To demonstrate reversal of the antiplatelet effects of ticagrelor with IV infusion of PB2452 and to demonstrate the clinical efficacy of PB2452 by assessment of hemostasis in ticagrelor-treated patients with uncontrolled major or life-threatening bleeding in an open-label, single-cohort study. The REVEALPLAQUE Study: A pRospEctiVe, multicEnter study to AnaLyze PLAQUE using CCTA

### PI: Steve Leung, MD Coordinator:

Heather Hesselson, Pharm D 859-218-1644

Objective: To evaluate the level of agreement between noninvasive CCTA-based quantification and characterization of coronary atherosclerosis and invasive IVUS.

MK-5475-007: A Phase 2/3, Multicenter, Randomized, Double-blind, Placebo-Controlled, Adaptive Design Study to Evaluate the Efficacy and Safety of MK-5475 in Adults with Pulmonary Arterial Hypertension

### PI: David Booth, MD

Coordinator: Heather Hesselson, Pharm D 859-218-1644

Objective: Two cohorts to evaluate the effect of MK-5475

• versus placebo on the pulmonary vascular resistance (PVR) at Week 12

•versus placebo on 6-minute walk distance (6MWD) at Week 12

### ICECAP: Influence of Cooling duration on Efficacy in Cardiac Arrest Patients PI: Vedant Gupta, MD Coordinator: Ronda Petrey, RN 502-320-5212

Objective: A multicenter, randomized, adaptive allocation clinical trial to identify the optimal duration of induced hypothermia for neuroprotection in comatose survivors of cardiac arrest.

# CLINICAL TRIALS

RIN-PH-304: A Phase 3, Randomized, Placebo-controlled, Double-blind, Adaptive Study to Evaluate the Safety and Efficacy of Inhaled Treprostinil in Patients with Pulmonary Hypertension due to Chronic Obstructive Pulmonary Disease (PH-COPD)

### PI: Shaun Smith, MD

Coordinator: Heather Hesselson, Pharm D 859-218-1644

Objectives: The primary objective of this study is to demonstrate the efficacy of inhaled treprostinil compared to placebo in improving exercise ability as measured by change from baseline in 6MWD following 12 weeks of active treatment in subjects with PH-COPD.

### **Clinical Research Team**

### John Kotter, MD

Medical Director, Gill Heart & Vascular Institute Clinical Research

### Jennifer Isaacs, MS, MS, CCRP

Clinical Research Services Director Cardiovascular, Neurointerventional and Radiology Services Gill Heart & Vascular Institute Clinical Research 859-323-4738 Jennifer.isaacs@uky.edu

#### Stephanie Morris, CCRP

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### **Research Coordinators**

Heather Hesselson, Pharm D 859-218-1644 Heather.hesselson@uky.edu

Ben Rushing, CCRC 859-323-5259 Ben.rushing@uky.edu

Travis Sexton, PhD 859-323-1082 trsext2@uky.edu

### FELLOWS NEWS ABSTRACTS & PUBLICATIONS

### Publications

**Ayoub K, Fry E**, Marji M, Masri A, **Hesselson A**, **Ellison K**. Implantable cardioverter-defibrillators with end stage renal disease: Nationwide inpatient sample database results. *Pacing Clin Electrophysiol*. 2022 Jan;45(1):124-131. doi: 10.1111/ pace.14411.

### https://pubmed.ncbi.nlm.nih. gov/34806769/

#### Abstract

**Background**: When compared to patients with normal renal function, patients with chronic kidney disease develop higher in-hospital complications post implantable cardioverter-defibrillator (ICD) therapy. However, real world data on in-hospital complications post ICD therapy in patients with end stage renal disease (ESRD) is limited. In this study, we aim to explore the procedure-related complications of ICD therapy in patients with ESRD.

**Methods:** Using the nationwide inpatient sample (NIS) database, we conducted a retrospective analysis on ESRD patients who underwent inpatient ICD placement from 2010 to 2016. Using 1:2 propensity score matching, we compared ESRD patients to those with normal renal function. Outcomes of interest were postoperative hemorrhage and hematoma formation, blood transfusion, pericardial complications, mechanical complications requiring lead revision, vascular injury, in-hospital mortality, and length of stay.

**Results**: Our sample included 40,075 cases with subsequent propensity score matching between ESRD and normal renal function. Comparatively, patients with ESRD had higher odds of postoperative hemorrhage (Odds ratio [OR] = 1.67, 95% confidence interval [CI] 1.4-1.99, p = < .0001), blood transfusion (OR, 3.88; CI 3.29-4.56; p = < .0001), mechanical complications requiring lead revision (OR, 1.24; CI 1.01-1.51; p = .035), vascular injury (OR, 2.02; CI 1.27-3.24; p = .0027), in-hospital mortality (OR, 4.56; CI 3.08-6.76; p = < .0001), and longer hospitalization (11 vs. 7 days, p = < .0001), butwithout significant difference in pericardial complications (OR, 1.9; CI 0.92-1.54; p = < .18).

**Conclusion**: In this large contemporary cohort, patients with ESRD undergoing inpatient ICD therapy are at higher risk of developing postprocedural complications including hemorrhage and hematoma, blood transfusion, mechanical complications requiring lead revision, and in hospital mortality, without increased risk of pericardial complications.



# THE PULSE

The webinar series of the UK Gill Affiliate Network, providing advanced cardiovascular education to providers across Kentucky.

# **JOIN US!**

The Gill Affiliate Network is excited to launch the 2022 The Pulse Webinar Series! This year's offerings cover a variety of topics from medical cardiology to interventional cardiology to vascular surgery. Each webinar is complimentary and CME credit is available for the live and recorded presentations. Mark your calendars and join us for us for this lecture series!

### ATRIAL FIBRILLATION MANAGEMENT: WHEN TO REFER TO EP

January 25, 2022 - 12-1p EST

### SEX DIFFERENCES IN CARDIAC DISEASE AND ARRHYTHMIA

March 23, 2022 - 12-1p EST Co-presented by Dr. Kristin Ellison and Dr. Mary B. Fisher

### STRUCTURAL INTERVENTIONAL CARDIOLOGY: FOCUS ON MITRACLIP

May 18, 2022 - 12-1p EST

### ACUTE CHEST PAIN IN THE 21<sup>ST</sup> CENTURY: HOW EVOLVING TECHNOLOGY SHAPED ACS WORKUP

September 15, 2022 - 12-1p EST

### WHAT'S NEW IN THE MANAGEMENT OF CAROTID ARTERY DISEASE

October 19, 2022 - 12-1p EST\*

\*Date subject to change.

### FOR MORE INFORMATION

Contact Rebecca Craft at 859-285-8083 or Rebecca.Craft@uky.edu.

### FEATURED SPEAKERS:



Aaron Hesselson, MD Medical Director, Electrophysiologic Services Presentation: January 25



Kristin Ellison, MD Medical Director, EP Heart Station Presentation: March 23



Mary B. Fisher, DO Medical Director, Women's Heart Health Program Presentation: March 23



Vedant Gupta, MD Assistant Professor, Cardiovascular Medicine Advanced Cardiovascular Imaging Presentation: September 15



Andrew Leventhal, MD, PhD Medical Director, Adult Congenital Heart Program Presentation: May 18



Samuel Tyagi, MD Assistant Professor, Surgery Vascular and Endovascular Surgery Presentation: October 19\*

### AFFILIATE NEWS GEORGETOWN COMMUNITY HOSPITAL

Georgetown Community Hospital News, Feb. 2022.

The American College of Cardiology (ACC) has recognized Georgetown Community Hospital for its demonstrated expertise and commitment in treating patients with heart failure. **Georgetown Community** Hospital was awarded Heart Failure Accreditation based on a rigorous onsite review of the staff's ability to evaluate, diagnose and treat patients with heart failure through pre-hospital care, early stabilization, acute care, transitional care, clinical quality measures and more.

Heart failure is a chronic and progressive condition where the heart is unable to pump enough blood to meet the body's needs for blood and oxygen. Hospitals that employ an evidence-based, protocol-driven and systematic approach to managing heart failure have been able to reduce time to treatment and are able to identify and predict high-risk patients while also reducing length-ofstay and hospital readmissions. "Georgetown Community Hospital has demonstrated its commitment to providing Scott County and the surrounding area with excellent heart care," said Deepak L. Bhatt, MD, MPH, FACC, chair of the ACC Accreditation Management Board. "ACC Accreditation Services is proud to award Georgetown Community Hospital with Heart Failure Accreditation."

Hospitals receiving Heart Failure Accreditation from the ACC must take part in a multi-faceted clinical process that involves: completing a gap analysis; examining variances of care, developing an action plan; a rigorous onsite review; and monitoring for sustained success. Improved methods and strategies of caring for patients include streamlining processes, implementing guidelines and standards, and adopting best practices in the precise care of heart failure patients. Facilities that achieve accreditation meet or exceed an array of stringent criteria and have organized a team of doctors, nurses, clinicians and other administrative staff that earnestly support the efforts leading to better patient education, improved patient outcomes, and more effective and efficient disease control.

"We are so proud of our staff for the hard work they put in to earn heart failure accreditation," said CEO William Haugh. "The work we do throughout the year leads to better patient outcomes and truly saves lives in our community."

The ACC offers U.S. and international hospitals like Georgetown Community Hospital access to a comprehensive suite of cardiac accreditation services designed to optimize patient outcomes and improve hospital financial performance. These services are focused on all aspects of cardiac care, including heart failure.

We are 1 of 2 hospitals in the state of Kentucky with this accreditation.

"Georgetown Community Hospital has demonstrated its commitment to providing Scott County and the surrounding area with excellent heart care," said Deepak L. Bhatt, MD, MPH, FACC, chair of the ACC Accreditation Management Board. "ACC Accreditation Services is proud to award Georgetown Community Hospital with Heart Failure Accreditation."



### CV Team Members Share Their Insights About Heart Failure Accreditation.

As the professional home for entire cardiology team, ACC is also the ideal partner for <u>Heart Failure Accreditation</u> and for building a strategy that demonstrates the management of Heart Failure patients. Watch a brief video to hear from three members of Georgetown Community Hospital's dedicated Heart Failure team and learn why they value ACC's Heart Failure Accreditaiton program.

"I would strongly encourage any program to pursue Heart Failure Accreditation . . . moving forward I think we would definitely continue with this program because we are able to keep up with newer therapies and make sure our program stays on par with the best hospitals across the nation."

Joseph Thomas, MD, FACC (Pic-

tured above left)

You are invited to watch a <u>brief video</u> to learn why Georgetown Community Hospital's dedicated Heart Failure team partnered with the ACC to enhance their Heart Failure program.



### What's Covered in the Video: Three members of the Georgetown Community Hospital, Georgtown, KY, explain why they value Heart Failure Accreditation.

### Watch Now

Georgetown Community Hospital Video Participants:

Lisa Nicholls, BSN, RN Cardiovascular Accreditation Coordinator

Audra Byers, BSN, RN, CCRN, CCRP, CHFN Director of Cardiovascular Services & Accreditation

Dr. Joseph Joseph Thomas, MD, FACC Heart Failure Medical Director

### RESEARCH NEWS "GOOD" CHOLESTEROL COULD HELP TREAT SEPSIS

Replenishing the body's high-density lipoprotein (HDL) could be an effective treatment for sepsis, according to a new University of Kentucky College of Medicine study published in <u>Science Signaling</u>.

The lab study, led by Xiangan Li, Ph.D. (pictured on the next page), a professor in the <u>Depart-</u> <u>ment of Physiology</u> and the <u>Saha</u> <u>Cardiovascular Research Center</u>, found that a synthetic form of HDL provided protection against sepsis in mice.

Sepsis is a life-threatening condition that occurs when an infection triggers a chain reaction throughout the body. Without timely treatment, it can quickly lead to tissue damage, organ failure and death. The Centers for Disease Control and Prevention reports that nearly 270,000 Americans die as a result of sepsis every year, and one in three patients who die in a hospital has sepsis.

HDL cholesterol is known as "good" cholesterol because it helps remove other forms of cholesterol from the bloodstream. Higher levels of HDL are associated with a lower risk for heart disease and stroke, and according to data used in the study, better outcomes for septic patients.

In collaboration with co-investigators at the University of Michigan Hospital Intensive Care Unit, this study showed that septic patients have decreased HDL cholesterol levels compared to nonseptic patients. Additionally, lower levels of HDL correlated with a poorer prognosis for septic patients.

Together with Li's previous studies of HDL deficient mice, these findings suggest a decrease in HDL abundance is a risk factor for sepsis and that increasing HDL abundance may offer a viable therapeutic strategy against sepsis, according to the study.

"Together, these data suggest that HDL treatment could be an effective treatment for patients with sepsis," said Li. "ETC-642 also presents an opportunity for rapid translation to clinical trials." To test this hypothesis, Li's team treated septic mice with a synthetic HDL treatment called ETC-642 and those receiving it had increased survival rates and better protection against sepsis, including improved kidney function and reduced inflammation.

"Together, these data suggest that HDL treatment could be an effective treatment for patients with sepsis," said Li. "ETC-642 also presents an opportunity for rapid translation to clinical trials."

ETC-642 was previously developed to treat cardiovascular disease and has proven to be effective in increasing patient HDL levels in several clinical trials. While additional studies are needed, ETC-642's established clinical manufacturing and human safety make it an ideal candidate to move forward and test its protective ability in septic patients, Li says.

The research team of the study funded in part by the American Heart Association included UK



College of Pharmacy Professor Chang Guo Zhan, Ph.D., and collaborators at the University of Michigan's <u>College of Pharma-</u> <u>cy</u> and Department of Internal Medicine.

Li recently received a prestigious \$1.9 million R35 grant from the National Institutes of Health to fund his lab's research on immune function and sepsis.

Research reported in this publication was supported the National Institute of General Medical Sciences of the National Institutes of Health under award numbers R01GM113832, R01GM121796, R35GM141478, T32GM007767 and T32GM008353; andthe National Heart, Lung and Blood Institute of the National Institutes of Health under award number T32HL125242.

### **Recent Publications:**

Guo L, Morin EE, Yu M, Mei L, Fawaz MV, Wang Q, Yuan Y, Zhan CG, Standiford TJ, Schwendeman A, Li XA. Replenishing HDL with synthetic HDL has multiple protective effects against sepsis in mice. *Sci Signal*. 2022 Mar 15;15(725):eabl9322. doi: 10.1126/scisignal.abl9322. Epub 2022 Mar 15. PMID: 35290084.

Ito M, Wang Q, Hao D, Sawada H, Huang B, Guo L, Daugherty A, Li XA. Ultrasound Monitoring of Thymus Involution in Septic Mice. *Ultrasound Med Biol*. 2021 Mar;47(3):769-776. doi: 10.1016/j.ultrasmedbio.2020.11.031. Epub 2020 Dec 23. PMID: 33358338; PMCID: PMC8725176. Ito M, Ye X, Wang Q, Guo L, Hao D, Howatt D, Daugherty A, Cai L, Temel R, Li XA. SR-BI (Scavenger Receptor BI), Not LDL (Low-Density Lipoprotein) Receptor, Mediates Adrenal Stress Response-Brief Report. *Arterioscler Thromb Vasc Biol.* 2020 Aug;40(8):1830-1837. doi: 10.1161/ATVBA-HA.120.314506.

Wu C, Lu W, Zhang Y, Zhang G, Shi X, Hisada Y, Grover SP, Zhang X, Li L, Xiang B, Shi J, Li XA, Daugherty A, Smyth SS, Kirchhofer D, Shiroishi T, Shao F, Mackman N, Wei Y, Li Z. Inflammasome Activation Triggers Blood Clotting and Host Death through Pyroptosis. *Immunity*. 2019 Jun 18;50(6):1401-1411.e4. doi: 10.1016/j.immuni.2019.04.003.



### JANUARY GILL AWARD

The Gill Awards, given each year through the generous support of the **Gill Foundation of Texas**, honor individuals who have made significant contributions to the field of cardiovascular medicine, both through research and clinical care. The awards are based on nominations and assessment by a committee of prominent cardiovascular researchers from across the nation.

**Scott J. Cameron, M.D., Ph.D.**, section head of Vascular Medicine at the Cleveland Clinic, was awarded the Gill Heart and Vascular Institute Early Career Gill Award. Given to those early in their careers, typically within the first seven years of their faculty appointment, the awardees are recognized for innovation and creativity that has impacted cardiovascular research and advancements in clinical care. The committee selected Cameron based on him rapidly developing a high-profile research program to determine the role of platelets on vascular diseases.

Cameron will present his body of work at the <u>Annual</u> <u>Gill Heart and Vascular Institute Cardiovas-</u> <u>cular Research Day</u> on Oct. 28, 2022, where he also will receive a plaque and a cash prize of \$10,000. **Kathryn Moore, Ph.D**., the Jean and David Blechman Professor of Cardiology and professor of cell biology at New York University, was awarded the Gill Heart and Vascular Institute Award for Outstanding Contributions to Cardiovascular Research. Moore was honored for her notable and life-long achievements in research and its impact on cardiovascular biology and disease and the standard of cardiovascular clinical care. This has included published many high cited manuscripts of pioneering work that describes the role of immunity and micro RNAs in development of atherosclerotic diseases. In 2021, Moore was elected to the National Academy of Sciences.

Moore will present her body of work at the Cardiovascular Research Day where she will also receive a plaque and a cash prize of \$25,000.

"We are grateful for the support of Linda and Jack Gill to recognize these high accomplished investigators and afford them the opportunity visit our campus to interact with all the members of the University of Kentucky Cardiovascular Research Priority Area," said Alan Daughtery, director of the Saha Cardiovascular Research Center and Gill Foundation Chair in Preventive Cardiology.



# T.F. WHAYNE 2ND VERY LATEST IN CARDIOVASCULAR MEDICINE AND SURGERY: FOCUS ON INTERVENTIONAL CARDIOLOGY

# SATURDAY APRIL 30

7:45 A.M. - 6:00 P.M.

### **JACOBS SCIENCE BUILDING**

680 Rose Street University of Kentucky Lexington, KY

\*Virtual options also available.



### CECENTRAL.COM/LIVE/21400

### FEBRUARY WOMEN'S HEART@MAXWELL

Adapted from SOTH 2021

In 2021, Dr. Mary Beth Fisher assumed the role of Director of the Women's Heart Program at UK Gill Heart & Vascular Institute.

Dr. Fisher has been at UK Health-Care since her residency in internal medicine, followed by her fellowship in cardiovascular diseases. She is certified American Board of Internal medicine (ABIM), ABIM subspecialty Cardiovascular disease, and Nuclear cardiology She provides all aspects of women's cardiovascular care, with special interest in:

#### **Cardio-obstetrics**

Multidisciplinary approach for treatment and prevention of cardiovascular disease in women who are pregnant or considering pregnancy.

#### **SCAD**

Long-term management of spon-taneous coronary artery dissection (SCAD), including treatment and screening of associated disease processes.

#### CV risk assessment

Diagnosis and management, including risk factor modification for heart disease prevention.

### Microvascular angina or microvas-cular coronary dysfunction (MCD)

Angina occurring due to small blood vessel dysfunction in the heart arteries.

### Counseling & hormone replacement

Counseling for family history of early coronary artery disease

and hormone replacement therapy in coronary disease.

"Our goal with the Women's Heart Health Program goal with WHH program is to help women in our community understand their risk, promote disease prevention, and to enhance detection and treatment of heart disease," says Dr. Fisher. "One of the areas we're really trying to focus on is adverse pregnancy outcomes in women. Given that mortality for women in Kentucky is rather high in this regard, we are committed to having a very robust cardio-obstet-rics program to help manage them as effectively as possible to reduce that risk."

### HDP OFFERS UNIQUE WINDOW FOR PREVENTION

Hypertensive disorders of pregnancy (HDP) offer an opportunity for robust cardiovascular prevention. HDP is one of the most common compli-cations in pregnancy, occurring in approximately 10 percent of preg-nancies. Women with a history of high blood pressure during pregnan-cy are more likely to develop subse-quent adverse heart function. There is a five-fold risk for chronic hyper-tension 1-5 years post pregnancy and two-fold risk for CV disease for those with HDP.

At Gill, patients identified as having adverse pregnancies are monitored based on the recent AHA Scientific Statement.

They receive an individual assessment, including blood pressure monitoring and screening and assessment of cardiovascular risk factors. Counseling and education on future risks are discussed.

#### MATERNAL CARDIOVASCULAR MORTALITY KEY FACTORS: Race, Age Hypertension Obesity

AFRICAN AMERICAN WOMEN 3.4x greater chance of dying vs. wh women

### WOMEN AGED 40+

30x increased risk of dying vs. women under 20

#### WOMEN WITH CHRONIC HDP 8x increase heart failure risk 13x ingroase MI visk

increase MI risk

### OVERWEIGHT OR OBESE WOME

account for 60% of maternal deaths

Patients are also treated for hypertension, sodium and/ or stress reduction and any other related factors.

"I choose to serve women specifically with heart disease, because I believe that women need to support other women. And, as a provider, the way that I can serve that to my commu-nity is by promoting education and awareness," said Dr. Fisher. "Of-ten, it takes having someone that's similar to you across the table that you can relate with and open up to, because unfortunately, there's just not one treatment approach to heart disease. It's a whole perspective of the body, and we need to tackle both the emotional and the physiological stressors."



# 8th Annual HEALTHY HEARTS FOR WOMEN SYMPOSIUM

### Was held on Friday, Feb. 4, 2022

Tochi Okwuosa, DO,

Associate Professor, Rush

University Medical Center

Cardio-oncology Services

Department of Internal

Medicine; Director,

Chicago, Ill.

FACC

### Speakers included:



Rhian Touyz, MD, PhD, FRCP, FRSE Executive Director and Chief Scientific Officer, Research Institute of the McGill University Health Center; Canada



-maternal mortality is rising in the united states

-Cardiovascular disease or cardiomyopathy accounts for 1 in 4 US maternal deaths

-advancing maternal age and preexisting comorbid conditions have contributed to the increased rates of maternal mortality

-Racial and ethnic disparities in pregnancy-related mortality are significant, peaking among black non-Hispanic women

### HEALTHY HEARTS FOR WOMEN

When Analia Loria, PhD, and Frédérique Yiannikouris, PhD, from UK's Department of Pharmacology and Nutritional Sciences launched the Healthy Hearts for Women Symposium in 2015, their efforts to push for more research and funding in the field of women's heart health were really just getting underway.

In eight years, the symposium has featured presentations from dozens of highly esteemed scientists across the country and beyond, and active attendance from a growing number of highly engaged participants each year.

Once again, given COVID-19 concerns, the 2021 symposium was held virtually but attendance and interaction remained strong. In addition to three of our own esteemed colleagues from the University of



Erin Michos, MD, MHS

Associate Professor of Medicine, Johns Hopkins School of Medicine; Director of Women's Cardiovascular Health; Baltimore, Md.



FACC

Assistant Professor,

and Cardio-oncology,

University of Kentucky

Advanced Cardiac Imagery

HA, Sanda Despa, PhD

Professor, Department of Pharmacology and Nutritional Sciences, University of Kentucky

Kentucky, other presenters joined us from the Research Institute of the McGill University Health Centre in Montreal, Quebec; Johns Hopkins, Baltimore; and Rush University Medical Center in Chicago.

"When you consider that close to 5,000 women across Kentucky die every year from heart disease alone," Loria says, "it's clear that finding better, more adapted treatments is critical and that doing so requires a closer look at sex as a biological variable in better understanding the cause and finding better and more adapted treatments."

The symposium is sponsored by the Department of Pharmacology and Nutritional Sciences in the UK College of Medicine, the Gill Heart & Vascular Institute and Saha Cardiovascular Research Center, as a demonstration of UK's commitment to address this health disparity.



### MARCH CARDIAC REHAB

Cardiac rehabilitation is a comprehensive program that provides medical evaluation, supervised exercise, risk factor modification, medication optimization and education to people who have suffered a cardiac event, such as a heart attack or major heart surgery.

Studies have concluded that cardiac rehabilitation increases a patient's chance of survival by 20 percent to 25 percent increased chance of survival to participants and lowers their risk of a subsequent cardiac event.

During each session, the patient is monitored by the staff to ensure safety as well as progress. The courteous, professional staff includes the cardiovascular program director; exercise physiologist; cardiac nurse; and a rehabilitation assistant. Dietary consultations also are available for each patient.

There are three stages of cardiac rehabilitation:

**Phase I** is completed while the patient is still in the hospital.

**Phase II** generally begins one to three weeks following the patient's discharge from the hospital. The sessions can last for 12 to 18 weeks, with the patient attending two or three sessions per week. These sessions are monitored by a physician and are tailored to fit the individual's needs.

**Phase III** is a maintenance program that does not involve physician supervision. This typically continues after completion of Phase II. These cardiac events qualify for cardiac rehabilitation:

- A percutaneous coronary intervention (PCI), also known as angioplasty.
- Myocardial infarction (heart attack).
- Stable angina.
- Bypass surgery.
- Heart valve surgery.
- Heart transplant.
- Peripheral artery disease.

Some insurance plans may also cover Phase II cardiac rehabilitation for individuals diagnosed with heart failure.

If a person has had any of these, his or her physician may prescribe cardiac rehabilitation. Our OH! (Optimal Health) program gives individuals the tools they need to stay healthy and fit in a safe, non-threatening environment. Participants attend the program three days a week and work with our professional staff, which includes a cardiologist, a registered nurse, an exercise physiologist, a therapy technician and a dietitian.

The Optimal Health program includes:

- A detailed health assessment prior to starting the program
- Professionally prescribed and supervised exercise
- Lifestyle education
- A dietary consultation
- Weight management
- Accountability resources

A physician order is required to participate. Our staff can assist in facilitating this with your doctor.

Since 2017, referral rates and completion have increased for this program. Participation in cardiac rehabilitation involves exercise training, emotional support and education about lifestyle changes to reduce heart disease risk; such as meeting with our dietician for eating a hearthealthy diet and keeping a healthy weight or meeting with our tobacco treatment specialist for tobacco cessation. The goals of cardiac rehabilitation include establishing an individualized plan to help patients regain strength, prevent conditions from worsening, reducing risk of future heart problems, and improving health and quality of life.

Successful completion of the program is based on decreases in blood pressure, self-reported levels of depression, tobacco cessation and increases in six-minute walking distance. See table below for completion rates.

Cardiac Rehab Team Members Jacob Stone, MSEP, CSCS, CCRP, Program Supervisor Jamie Fannin, MS, EP-C Nancy Kessler, RN Katelyn King, MSEP, CCRP Shorus M. Minella, RD, LD -Dietitian Craig Staub, BS, EP-C Janna Villanueva, CST

### KCRA

The cardiac rehab team is involved in the Kentucky Cardiopulmonary Rehabilitation Association (KCRA). The purpose of the KCRA is to provide education and networking opportunities to professionals working in cardiac and pulmonary rehabilitation. KCRA is the state affiliate of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR).

Jacob Stone has been a part of KCRA for over eight years. He served as treasurer for 4years, President for 2 years and is now Immediate Past President. Katelyn King has been involved with KRCA activities for five years. She currently serves as Treasurer and Interim Secretary.

As part of the executive committee, Jacob and Katelyn help plan



the regional KCRA meeting each year. This year's meeting drew 125 attendees from Kentucky, Indiana, and Ohio. Previous years have included attendees from Tennessee, Missouri and West Virginia. Jacob and Katelyn have watched meeting attendance and participation increase in KCRA since they have started.

The 2022 conference speakers included national speakers such as: Barb Fagan, MS MAACVPR, Past President AACVPR and Executive Director & Chief Change Officer Chanl Health and Rajan R. Joshi, MD, FCCP, the Pulmonary Rehab Medical Director at the University of Kentucky. See the KCRA website for more information: https://www.kcranet.com/.

To contact Cardiac Rehab: Patient appointments: Request an appointment online: <u>https://</u> <u>ukhealthcare.uky.edu/appoint-</u> <u>ment</u> or call 859-323-0295.

Referrals: Health care providers, please visit our referral page: <u>https://ukhealthcare.uky.edu/</u> <u>referral</u> to refer your patient to this service.

Referral Rates	UK 2017	UK 2019	UK 2020	UK 2021
Referals	78%	84%	88%	84%
Referrals that enroll	41%	40%	59.5%	57.5%
Completion rate	31%	40%	38%	33.5





Hosted by Gill Heart & Vascular Institute, this series of seminars with experts across the nation includes late-breaking research, critical review of guidelines and other relevant cardiovascular topics. Combined with expert commentary by select faculty, these presentations will deliver knowledge and strategies that can improve patient outcomes through changes in practice. CMEs available.

### LOCATION: CTW 312 & ZOOM\*

### **TIME:** NOON – 12:50 P.M.

### **DAY:** THE FOURTH THURSDAY OF EACH MONTH

\*Please RSVP to <u>cmcmu2@uky.edu</u> if attending in person.

Thursday 1/27/2022	Annual Research Meeting: A View to the Future.		
*Please note different location will take place in CTW312	<b>Speakers</b> : Section Chiefs University of Kentucky		
Thursday 2/24/2022	<b>Precision Medicine in Pulmonary Arterial</b> <b>Hypertension</b> <b>Speaker</b> : Anna Hemnes, MD		
	Vanderbilt University Medical Center		
Thursday 3/24/2022	<b>Point of Care Ultrasound in Clinical Practice Today</b> <b>Speaker</b> : James Kirkpatrick, MD University of Washington		
Thursday 4/28/2022	ABCs of AF		
Rescheduled 10/27/2022	<b>Speaker:</b> Hakan Oral, MD University of Michigan, Frankel Cardiovascular Center		
Thursday 5/26/2022	<b>Percutaneous Mitral Valve Repair in 2022</b> <b>Speaker</b> : Mohamad Adnan (Mohamad) Alkhouli, M.D. Mayo Clinic, Rochester, MN		



### AWARDS **STAR PROGRAM**

At UK HealthCare, exceptional service begins and ends with all team members. That's what the STAR program is all about. Whether it's day-to-day accomplishments or above-and-beyond results, we recognize, honor and celebrate the individuals and teams who are at the core of our success. The following received STARS in January- March 2022:

### GOLD

Amit Arbune (IM- Cardiology) - Nominated by Brianna Grimm (Pre-Med Student) Vedant Gupta (IM-Cardiology) - Nominated by Rick McClure Steve Leung (IM- Cardiology) - Nominated by Rick McClure

### SILVER

Kimberly Cornelius (CVICU) - Nominated by Kimberly Blanton. Sherry Griggs (CVICU) - Nominated by Demond Jackson. Ethan Johnson(CVICU) - Nominated by Demond Jackson. Laura Jump (6N CC) - Nominated by Colleen Hurst. Tomise McCannhas (Chandler CV Administration) - Nonimated by Demond Jackson. Grace Anne Sharp (CVICU) - Nominated by Demond Jackson. Carissa Smith (CVICU) - Nominated by Timothy Hanshaw. Kyle Smith (Chandler CV Administration) - Nominated by Demond Jackson.

### BRONZE

Amr Ali (CVICU) - Nominated by Sherry Griggs. Saramarie Anderson (CVICU) - Nominated by Demond Jackson. Julie Brooks (CVICU) - Nominated by Demond Jackson. Bethany Corea (CVICU) - Nominated by Trey Riegling. Jeanna Cox (CVICU) - Nominated by Demond Jackson. Alexandra Epley(CVICU) - Nominated by Demond Jackson. Connor Faugno (CVICU) - Nominated by Demond Jackson. Brian Fishel (CVICU) - Nominated by Sherry Griggs. Jake Hawkins (CVICU) - Nominated by Demond Jackson. Chase Gibson (CVICU) - Nominated by Sherry Griggs. Tsitsi Gwanyanya (CVICU) - Nominated by Sherry Griggs. Ethan Johnson (CVICU) - Nominated by Demond Jackson. Courtney Lanter (CVICU) - Nominated by Demond Jackson. Camille Laval (CVICU) - Nominated by Demond Jackson. Elaine Major(CVICU) - Nominated by Demond Jackson. Cody Mardis (6 N CC) - Nominated by Derek Crabtree. Brooke Noplis (ECHO)- nominated by Kate Moore Emily Salisbury(CVICU) - Nominated by Demond Jackson. Priyanka Shah (CVICU) - Nominated by Sherry Griggs. Carissa Smith (CVICU) - Nominated by Julie Brooks. Carissa Smith (CVICU) - Nominated by Demond Jackson. Arina Solis (CVICU) - Nominated by Demond Jackson. Ryan Thomas (CVICU) - Nominated by Demond Jackson. Amy Teague (CVICU) - Nominated by Kaci Elder. Amy Teague (CVICU) - Nominated by Sherry Griggs. Amy Teague (CVICU) - Nominated by Demond Jackson. Katherine Webb (CVICU) - Nominated by Sherry Griggs. Jennifer Young (CVICU) - Nominated by Demond Jackson.

To nominate someone for a STAR award, login to starprogram.mc.uky.edu from any internet browser.



### AWARDS CONT. GILL RECOGNITION AWARDS

The Gill Recognition Program seeks nominations of staff, faculty, trainee, or an entire area to recognize outstanding work based on one or more of the criteria below.

- Going the extra mile to help
- colleagues or patients
- Inspiring others
- Preventing a serious adverse event
- Embracing a spirit of constant improvement
- Creating a valuable learning opportunity or environment
- Developing an innovative approach or solution

• Outstanding commitment to a scholarly pursuit

Nominations should include the individual name or area and a brief description of the outstanding work.

The Gill Recognition Award will be awarded monthly. You may open the nomination form on your web browser by clicking the link below: Gill Recognition Program.

If the link above does not work, try copying the link below r: https://redcap.uky.edu/redcap/ surveys/?s=JFK4EPMJ83

See past winners here: https:// internalmedicine.med.uky.edu/ cvrc-gill-award

Congratulations to Gill Patient Services Coordinator **Ashley West (**Left photo, Right**)** for receiving the January 2022 Gill Recognition Award! Dana Moore (Left photo Above Left), a clinical nurse at Gill, nominated Ashley. Dana's nomination of Ashley reads: "There is not a day that goes by that we do not have to call on Ashley to work her magic. Ashley always answers the phone with a cheerful voice, she always is willing to help us trouble shoot our problem but most important and the thing I love the most is she ALWAYS puts the patient first. Ashley helps us get our patients scheduled for follow-ups in a quick and timely manner, Ashley always makes sure we have everything correct. Ashley even one day directed me on how to complete a clinic chart for a patient we were seeing in the Cath Lab (AGAIN KEEPING and PUTTING the patient as the focus). We are so lucky to have Ashley looking out and caring for our patients."



Congratulations to Gill Medical Assistant **Megan Petit** (Middle photo Right) for receiving the February 2022 Gill Recognition Award! Dee Abrams (Middle photo Left), an Advanced Practice Provider in Gill Heart & Vascular Institute, nominated Megan.

Dee's nomination of Megan reads: "Megan exemplifies the role of CST within our department. She manages several clinics simultaneously, always gives her providers impeccable support and forms bonds with patients that improves the quality of care we provide. She is the first to offer to assist anyone and the last person to give up. In my opinion, she is what UK Providers should strive to emulate."

Congratulations to Assistant Professor of Physiology **Dr. Stumpf** (Right photo Left) for receiving the March 2022 Gill Recognition Award! Brian Delisle (Right photo Right), Professor of Physiology, nominated Beth. Brian's nomination of Beth reads: "Dr. Stumpf is always going the extra mile to help colleagues and advance her research. Like many of us, she works beyond the traditional 5-day workweek and typically comes in weekends to make sure experiments are running smoothly. She co-mentors several trainees and is always listening and encouraging others in the Departments of Internal Medicine and Physiology.

Dr. Stumpf continually challenges herself by leading research projects in multiple disciplines. She works in the area of circadian rhythms, cardiovascular physiology and muscle physiology. She has published 5 articles in each of these disciplines this past summer (2021) alone. Dr. Stumpf is always working to generate new knowledge with her research-whether it is investigating molecular mechanisms for cardiac excitability or the role that enzymes in muscle have on muscle strength/weakness. Two of her original research papers, published this past month, in Journal of Applied Physiology were recognized by the editorial boards APSselect- which recognizes the top articles published in all ten American Physiological Journals! This is an outstanding accomplishment. As a research Assistant Professor, Dr. Stumpf does not always get the recognition she deserves. Her work has continually been the basis for extramurally funded research projects from the National Institutes of Health; she is happy to train and work with trainees to learn new techniques; and she is always the first to volunteer to try something new. She is an amazing colleague deserving of recognition for her collegiality, effort, scholarship, and innovative research."



a: University of Kentucky, Office of Sponsored Projects Administration (OSPA) Database

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**Doug Andres** 

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sity of Kantucky, Office of the Vice Preside

RIT1-Mediated Protection Following Traumatic Brain Injury National Institute of Neurological Disorders & Stroke 02/15/2018-01/31/23

An Innovative Therapeutic Approach to Treat Cardiomyopathy Army Medical Research and Materiel Command 07/01/20-06/30/23

Biophysical Mechanisms of Hyperoxia-Induced Lung injury National Heart Lung and Blood Institute 04/15/20-03/31/24

#### **Ken Campbell**

Multiscale Modeling of Inherited Cardiomyopathies and Therapeutic Interventions National Heart Lung and Blood Institute 08/03/17-07/31/22 Length-Dependent Activation in Human Myocardium National Heart Lung and Blood Institute 09/15/20- 07/31/24

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All Other Academic Elscal Vears

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1.28

Dual Filament Control of Myocardial Power and Hemodynamics University of Missouri 08/25/20- 07/31/24

Computer Modeling of Myosin Binding Protein C and its Effect on Cardiac Contraction Case Western Reserve 04/01/19-03/31/23

Thick-Filament Regulation In Human Heart Failure Washington State University 07/01/19-06/30/22

CRCNS: Multi-Scale Models of Proprioceptive Encoding for Sensorimotor Control Emory University 09/16/16-05/31/2022 Accessed: 4/12/2022 12 17 35 PM Data Updated: 4th day of every month at 6:00 AM

Awards for members of Gill Heart & Vascular Institute total over \$33 Mil per year!

Pharmaceutical Sciences \$8,732,306

### Lisa Cassis

Kentucky Injury Prevention and Research Center (KIPRC) \$8,770,192

Center of Research in Obesity and Cardiovascular Disease COBRE Core A: Admin Core National Institute of General Medical Sciences 09/08/08-07/31/23

Supplemental Environmental Project Compliance Assistance Tools and Services KY Department of Environmental Protection 07/01/07-12/31/23

EPSCoR Administrative KY Economic Development Cab 02/01/19-06/30/22

Sex Differences in Angiotensin-Induced Vascular Diseases National Heart Lung and Blood Institute 03/21/12-05/31/22

# RESEARCH FUNDING CONTINUED

#### **Alan Daugherty**

University of Kentucky- Baylor College of Medicine Aortopathy Research Center American Heart Association 04/01/18-03/31/22

JMJD3 Regulates Abdominal Aortic Aneurysm Expansion University of Michigan 04/01/21- 03/31/25

Determinants of Aorta Heterogeneity National Heart Lung and Blood Institute 06/01/21-05/31/28

Macrophage Migration Inhibitory Factor and Urinary Pain Lexington Biomedical Research Institute 07/01/19-06/30/23

Internal Medicine is currently the highest funded division in the College of Medicine..

#### **Brian Delisle**

Transcriptional Regulation of KCNH2 National Heart Lung and Blood Institute 03/08/19-02/28/23

Circadian Clock Regulation of Myocardial Ion Channel Expression and Function University of Florida 09/01/20- 05/31/22 Toward Early Diagnosis of Long QT Syndrome Using Machine Learning and Molecular Dynamics Simulation of KCNH2 Loyola University 01/01/21- 12/31/22

#### **Florin Despa**

The Amylin Dyshomeostasis Hypothesis of Vascular Contributions to Cognitive Impairment and Dementia (VCID) National Institute of Neurological Disorders & Stroke 04/01/20-03/31/25

Role of Systemic Amylin Dyshomeostasis in Alzheimer's Disease National Institute on Aging 09/15/16- 05/31/22

#### Sanda Despa

Role of Myocyte Na+ Dysregulation in Diabetic Heart Disease National Heart Lung and Blood Institute 08/01/17- 07/31/22

Cardiovascular Consequences of Gestational Diabetes; Role of Amylin American Heart Association 07/01/19-06/30/22

Mechanisms of Cardiac Remodeling Triggered by Gestational Diabetes National Heart Lung and Blood Institute 05/01/20-04/30/24

#### **Ming Gong**

Targeting Timing of Food Intake as a Novel Strategy against Disruption of Blood Pressure Circadian Rhythm in Diabetes National Heart Lung and Blood Institute 01/15/19-10/31/22

A Novel Mechanism by which Smooth Muscle BMAL1 Regulates IL-6 and Sexual Dimorphism of Abdominal Aortic Aneurysm National Heart Lung and Blood Institute 08/20/18-07/31/22

#### Scott Gordon

The Role of High Density Lipoprotein Associated Protease Inhibitor Activity in Protection Against Atherosclerosis. National Heart Lung and Blood Institute 08/20/18-07/31/22

High Density Lipoprotein Targeting Protease Inhibitors for Preservation of Lung Function Alpha One Foundation Incorporated 07/01/21-06/30/23

Identifying Pharmacokinetic Markers to Predict Altered Lipoprotein Kinetics in the Vascepa to Accelerate Lipoprotein Uptake and Elimination (VALUE) Study Amarin Pharma Incorporated 07/30/21-07/30/22

# RESEARCH FUNDING

### **Gregory Graf**

Contributions of hepatic and intestinal pathways to cholesterol excretion National Institute Diabetes & Digestive & Kidney 09/13/17-07/31/22

### Xiangan Li

Relative Adrenal Insufficiency is a Risk Factor and an Endotype for Sepsis National Institute of General Medical Sciences 05/01/21- 04/30/26

Mechanism of Adrenal Insufficiency as A Risk Factor for Sepsis National Institute of General Medical Sciences 09/01/17-08/31/22

Synthetic HDL a Potential Sepsis Therapy National Institute of General Medical Sciences 11/01/15-05/31/22

### Analia Loria

Effect of Early Life Stress on Obesity-Induced Hypertension in Mice National Heart Lung and Blood Institute 12/01/17-11/30/22

### Hong Lu

Atherosclerosis Mechanisms: Angiotensin II Production and Action National Heart Lung and Blood Institute 05/01/18-03/31/23

### Debra Moser

Rural Intervention for Caregivers' Heart Health (RICHH) National Institute of Nursing Research 09/26/16-06/30/22

Online Cognitive Behavioral Therapy for Depressive Symptoms in Rural Coronary Heart Disease Patients Patient Centered Outcomes Research Institute 10/01/2020 to 09/30/24

### Gia Mudd-Martin

Corazón de la Familia (Heart of the Family) National Institute of Nursing Research 03/02/17-01/31/23

Heart of the Family: A Cardiovascular Disease and Type 2 Diabetes Risk Reduction Intervention in High-Risk Rural Families National Institute of Nursing Research 09/07/20- 06/30/25

### **Timothy Mullett**

Using Biomarkers and Imaging in Fungal Regions to Improve Lung Cancer Diagnosis Vanderbilt University 04/01/19-03/31/22

Effectiveness and Implementation of a Health System Intervention to Improve Quality of Cancer Care for Rural, Underserved Patients University of Iowa 04/01/21-03/31/22 Kentucky Lung Cancer Survivorship Program Bristol Myers Squibb Foundation Incorporated 09/01/14- 07/01/22

### Mariana Nikolova-Karakashian

Ceramide and Acute Phase Proteins Elevation During Aging National Institute on Aging 08/01/02-05/31/23

### Jonathan Satin

An Innovative Therapeutic Approach to Treat Cardiomyopathy Army Medical Research and Materiel Command 07/01/20- 6/30/23

### Nancy Schoenberg

Community to Clinic Navigation to Improve Diabetes Outcomes National Institute Diabetes & Digestive & Kidney 08/01/17-07/31/22

Implementing an Evidence-Based mHealth Diet and Activity Intervention: Make Better Choices 2 for Rural Appalachians National Heart Lung and Blood Institute 08/01/20- 04/30/25

### Venkateswaran Subramanian

Calpains and Abdominal Aortic Aneurysms National Heart Lung and Blood Institute 08/10/17-07/31/22

### RESEARCH FUNDING CONTINUED

Role of miR-146a in Abdominal Aortic Aneurysm National Heart Lung and Blood Institute 01/01/22- 12/31/25

### Ryan Temel

TRAF6 Nanoimmunotherapy to Resolve Plaque Inflammation Mount Sinai 08/15/18-06/30/22

Targeting MicroRNA-33 To Reduce Intracranial Atherosclerosis and Other Neurovascular Hallmarks of Vascular Cognitive Impairment and Dementia National Institute of Neurological Disorders & Stroke 04/01/19-03/31/22

Therapeutic Targeting of Metabolic microRNAs as a New Treatment Paradigm for NASH Aalborg University 01/01/19-12/31/24

#### **Dongfang Wang**

SBIR Development of a Minimally Invasive Single Cannulation, Compact Single Port Pulsatile Ventricular Assist Device (sppVAD) for Total LV Support W-Z Biotech LLC 10/01/21-09/30/22

Development of a Paracorporeal Pump-Integrated Artificial Lung for Transport of Warfighters with Acute Respiratory Distress Syndrome (ARDS) Army Medical Research and Materiel Command 08/15/19 -08/14/22 SBIR: Development of a TransApical to Aorta Double Lumen Cannula for a Neonate LVAD W-Z Biotech LLC 04/01/19-07/31/22

### **Christopher Mark Waters**

Biophysical Mechanisms of Hyperoxia-Induced Lung injury National Heart Lung and Blood Institute 04/15/20- 03/31/24

#### Jonathan Wenk

Force Validated Heart Valve Surgical Planning Tool University of Arkansas 09/01/19- 08/31/22

#### **Sidney Whiteheart**

Platelet Exocytosis and Endocytosis in Thrombosis and Immunity National Heart Lung and Blood Institute 04/01/20-03/31/28

Covid 19: Researching COVID To Enhance Recovery: IDeA States COnsortium for clinical REsearch (ISCORE) Network West Virginia University 10/01/22-05/23/22

Structure/Function Determinants of Puncture Wound Thrombus Formation University of Arkansas Medical Sciences 09/01/21-05/30/25

Regulatory Mechanisms of Glycoprotein Sialylation Case Western Reserve 01/01/21-11/30/22

#### Jeremy Wood

Coordination of the TFPI/Protein S and APC/Protein S Anticoagulant Systems Pfizer Inc 06/22/21-05/31/23

### SEMINARS AND JOURNAL CLUBS

\* Check website for details.

### **Cardiovascular Seminar Series**

Fridays at 8:00 am This forum brings to campus prominent external speakers and provides presentations by UK faculty to ensure their research expertise is widely known. <u>https://cvrc.med.uky.edu/cvrc-current-seminar-schedule</u>

### **Cardiovascular Journal Club**

Tuesdays at 8:00 am Presenters in this forum discuss specific citations including basis for this publication's selection, strengths and weaknesses, from the perspective as if he/she were the original reviewer. For more information contact: Greg Graf, Ph.D. or Ryan Temel, Ph.D. https://cvrc.med.uky.edu/cvrc-current-journal-club-schedule

### **Blood Cell Journal Club**

4th Friday of each month at 4:00 pm The journal club was started a number of years ago in an effort to provide a focal point for the hemostasis community at UK. The focus is usually on platelets but they also discuss papers on Coagulation and Immune responses. https://cvrc.med.uky.edu/cvrc-blood-cell-journal-club-2018

### Cardiovascular Seminar Series for Today's Clinician-Scientists

TODD 170

Noon- 12:50 PM and Zoom

Speakers will discuss late-breaking research, critical review of the guidelines, and other relevant cardiovascular topics. These presentations are expected to deliver knowledge and strategies that directly result in changes in practice that can improve patient outcomes. CMEs available.

Thursday 5/26/2022 Percutaneous Mitral Valve Repair in 2022 Speaker: Mohamad Adnan (Mohamad) Alkhouli, M.D. Mayo Clinic, Rochester, MN

Please RSVP to cmcmu2@uky.edu if attending in-person for lunch.

### PUBLICATIONS JANUARY- MARCH

Abe T, Olanipekun T, Igwe J, Ndausung U, Amah C, Chang A, Effoe V,et al. (**Ogunbayo G**). Incidence and predictors of sudden cardiac arrest in the immediate post-percutaneous coronary intervention period for ST-elevation myocardial infarction: a single-center study. *Coron Artery Dis.* 2022 Jan 31. doi: 10.1097/ MCA.000000000001119.

Abouleisa RRE, Salama ABM, Ou Q, Tang XL, Solanki M, Guo Y, Nong Y, et al. (**Ahern BM, Satin J**). Transient Cell Cycle Induction in Cardiomyocytes to Treat Subacute Ischemic Heart Failure. *Circulation*. 2022 Jan 21. doi: 10.1161/CIRCULATIONA-HA.121.057641.

Adams MR, Pijut KD, Uttal-Veroff KC, **Davis GA.** Acute Portal and Superior Mesenteric Vein Thrombosis with Topical Testosterone Therapy: An Adverse Drug Event Case Report. *J Pharm Pract*. 2022 Jan 7:8971900211073286. doi: 10.1177/08971900211073286.

Ahmed AI, Han Y, Al Rifai M, **Alnabelsi T**, Nabi F, Chang SM, Cocker M, et al. Prognostic Value of Computed Tomography-Derived Fractional Flow Reserve Comparison With Myocardial Perfusion Imaging. *JACC Cardiovasc Imaging*. 2022 Feb;15(2):284-295. doi: 10.1016/j. jcmg.2021.09.007.

Ahmed T, Alhazmi L, Latif AA, **Arbune A**, **Sekela M**, **Leventhal A**. Percutaneous intervention of Cabrol graft-left main anastomosis. *Cardiovasc Revasc Med*. 2022 Mar 8: S1553-8389(22)00114-2. doi: 10.1016/j.carrev.2022.03.003.

Ahmed T, Grigorian AY, **Messerli AW.** Management of Acute Coronary Syndrome in Patients with Liver Cirrhosis. *Am J Cardiovasc Drugs.* 2022 Jan;22(1):55-67. doi: 10.1007/s40256-021-00478-6.

Al-Abdouh A, Mhanna M, Barbarawi M, Abusnina W, **Gupta VA**. A Meta-Analysis of the Sodium-Glucose Cotransporter 2 Inhibitors in Patients With Heart Failure and Preserved Ejection Fraction. *Am J Cardiol*. 2022 Feb 1;164:138-141. doi: 10.1016/j.amjcard.2021.10.017.

Alhurani AS, Hamdan-Mansour AM, Ahmad MM, McKee G, O'Donnell S, O'Brien F, Mooney M, Saleh ZT, **Moser DK**. The Association of Persistent Symptoms of Depression and Anxiety with Recurrent Acute Coronary Syndrome Events: A Prospective Observational Study. *Healthcare* (Basel). 2022 Feb 17;10(2):383. doi: 10.3390/healthcare10020383.

**Alnabelsi T**, Ahmed AI, Han Y, Al Rifai M, Nabi F, Cainzos-Achirica M, Al-Mallah MH. Added Prognostic Value of Plaque Burden to Computed Tomography Angiography and Myocardial Perfusion Imaging in Patients with Diabetes. *Am J Med.* 2022 Jan 23:S0002-9343(22)00037-7. doi: 10.1016/j.amjmed.2021.12.010.

Antiochos P, Ge Y, Heydari B, Steel K, Bingham S, Abdullah SM, Mikolich JR, et al. (**Leung SW**). Prognostic Value of Stress Cardiac Magnetic Resonance in Patients with known Coronary Artery Disease. *JACC Cardiovasc Imaging*. 2022 Jan;15(1):60-71. doi: 10.1016/j. jcmg.2021.06.025.

**Aru RG**, Horsley NB, **Endean ED**. Contemporary Use of the Femoropopliteal Vein in Vascular Reconstructions. *Ann Vasc Surg*. 2022 Feb;79:145-152. doi: 10.1016/j. avsg.2021.07.019.

**Ayoub K, Fry E**, Marji M, Masri A, **Hesselson A, Ellison K**. Implantable cardioverter-defibrillators with end stage renal disease: Nationwide inpatient sample database results. *Pacing Clin Electrophysiol*. 2022 Jan;45(1):124-131. doi: 10.1111/ pace.14411.

Armstrong ND, Srinivasasainagendra V, Patki A, Tanner RM, Hidalgo BA, Tiwari HK, Limdi NA, et al. (**Arnett DK**). Genetic Contributors of Incident Stroke in 10,700 African Americans With Hypertension: A Meta-Analysis From the Genetics of Hypertension Associated Treatments and Reasons for Geographic and Racial Differences in Stroke Studies. *Front Genet*. 2021 Dec 21;12:781451. doi: 10.3389/fgene.2021.781451.

**Backer CL.** CT imaging for pulmonary artery sling with tracheal stenosis and hypoplastic right lung. *Eur J Cardiothorac Surg.* 2022 Feb 24:ezac127. doi: 10.1093/ejcts/ ezac127.

**Backer CL**. Commentary: Anomalous aortic origin of the coronary artery: New operation, new post-

operative findings. *J Thorac Cardiovasc Surg*. 2022 Feb 5:S0022-5223(22)00126-X. doi: 10.1016/j. jtcvs.2022.02.002.

**Backer CL**. Commentary: Regionalization refines surgical dogma regarding trisomy 21 and atrioventricular septal defect. *J Thorac Cardiovasc Surg*. 2022 Apr;163(4):1445. doi: 10.1016/j.jtcvs.2021.08.066.

**Backer CL.** Hemi-clamshell approach NOT minimally invasive! *Ann Thorac Surg.* 2022 Feb 26:S0003-4975(22)00288-0. doi: 10.1016/j. athoracsur.2022.02.025.

**Backer CL**. Reply: Regionalization: One genotype, multiple phenotypes. *J Thorac Cardiovasc Surg*. 2022 Jan;163(1):e65. doi: 10.1016/j. jtcvs.2021.03.119.

**Beavers CJ**, Rodgers JE, Bagnola AJ, Beckie TM, Campia U, Di Palo KE, Okwuosa TM, et al.; American Heart Association Clinical Pharmacology Committee and Cardio-Oncology Committee of the Council on Clinical Cardiology and Council on Genomic and Precision Medicine; and the Council on Peripheral Vascular Disease. Cardio-Oncology Drug Interactions: A Scientific Statement From the American Heart Association. *Circulation*. 2022 Mar 7:CIR0000000000000056. doi: 10.1161/CIR.000000000000056.

**Bhopalwala H**, **Dewaswala N**, Kolagatla S, Wisnieski L, Piercy J, **Bhopalwala A**, Moka N. Predictors of Mortality for Patients with COVID-19 in the Rural Appalachian Region. Int J Gen Med. 2022 Feb 27;15:2207-2214. doi: 10.2147/ IJGM.S355083.

**Bhopalwala H**, Mishra V, Do TV, Gudipati M, Ganti SS. COVID-19 Infection and Late Manifestation of Pulmonary Aspergillosis. *J Investig Med High Impact Case Rep.* 2022 Jan-Dec;10:23247096211063332. doi: 10.1177/23247096211063332.

Bissell BD, Gabbard T, Sheridan EA, Baz MA, **Davis GA**, **Ather A**. Evaluation of Bivalirudin as the Primary Anticoagulant in Patients Receiving Extracorporeal Membrane Oxygenation for SARS-CoV-2-Associated Acute Respiratory Failure. *Ann Pharmacother*. 2022 Apr;56(4):387-392. doi: 10.1177/10600280211036151.

Brady V, Whisenant M, Ly VK, Zhu G, **Aguilar**, **D**, Wu H. Characterization of Symptoms and Symptom Clusters for Type 2 Diabetes Using a Large Nationwide Electronic Health Record. *Diabetes Spectr* 2022; Jan; https://doi.org/10.2337/ds21-0064.

Brajcich BC, Palis BE, McCabe R, Nogueira L, Boffa DJ, Lum SS, Harris JB, et al. (**Mullett TW**). Twenty-Five Years of Cancer Follow-Up; Is the Data Worth the Effort? *Ann Surg Oncol.* 2022 Feb;29(2):828-836. doi: 10.1245/s10434-021-10668-w.

Brown SA, **Beavers C**, Martinez HR, Marshall CH, Olaye IM, Guha A, Cho D, et al. Bridging the gap to advance the care of individuals with cancer: collaboration and partnership in the Cardiology Oncology Innovation Network (COIN). *Cardiooncology*. 2022 Feb 9;8(1):2. doi: 10.1186/s40959-022-00129-y.

Brown SA, Becker HA, García AA, Velasquez MM, Tanaka H, Winter MA, Perkison WB, et al. (**Aguilar D**). The effects of gender and country of origin on acculturation, psychological factors, lifestyle factors, and diabetes-related physiological outcomes among Mexican Americans: The Starr County diabetes prevention initiative. *Chronic Illn.* 2022 Mar 24:17423953221089315. doi: 10.1177/17423953221089315.

Chu MWA, Ruel M, Graeve A, Gerdisch MW, Damiano RJ Jr, Smith RL 2nd, Keeling WB, et al. (**Sekela ME**); PROACT Mitral Investigators. Low-Dose Versus Standard Warfarin After Mechanical Mitral Valve Replacement: A Randomized Controlled Trial. *Ann Thorac Surg*. 2022 Jan 28:S0003-4975(22)00138-2. doi: 10.1016/j. athoracsur.2022.01.015.

Dangas G, Baber U, Sharma S, Giustino G, Sartori S, Nicolas J, Goel R, et al. (**Moliterno DJ**). Safety and efficacy of ticagrelor monotherapy according to drug-eluting stent type: the TWILIGHT-STENT study. *EuroIntervention*. 2022 Mar 18;17(16):1330-1339. doi: 10.4244/ EIJ-D-21-00721.

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#### UPCOMING 2022 EVENTS

April 30: Latet in Cardiovascular Medicine and Sur May 6-12: Nurses Week-May 14: AHA Heart Walk May 20- Fellows Graduation May 28: CV Seminar Series Sept 10: KY ACC- Louisville Sept 29: CV Seminar Series-Oct 27: CV Seminar Series-Oct 28: CVRC Research Day-Nov 5-7: AHA Scientific Sessions 2022, Nov 9: Gill Affiliate meeting-

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