THE GAZETTE

April-June 2019



University of Kentucky Gill Heart & Vascular Institute Quarterly News



DIRECTOR'S CORNER



Craig Beavers, PharmD, FAHA, AACC, BCCP, BCPS-AQ Cardiology, CACP

Position(s):

Cardiovascular Clinical Pharmacy Coordinator Acute Care Pharmacy Services Cardiovascular Clinical Pharmacy Services Assistant Adjunct Professor, University of Kentucky College of Pharmacy

Follow Craig on Twitter @beaverspharmd

This months feature is CV Pharmacy, which starts on pg:12



TABLE OF CONTENTS



Clinical Trials

Active Clinical Trials

4

Fellows

Fellow News and accomplishments

6

Affiliates

LCRH and EMRH join Affiliate

8

Current Research Funding

Funding at UK by department

22

Publications

April through June

29

The Gill Heart & Vascular Institute

1000 South Limestone University of Kentucky Lexington KY 40536

859-257-1999

1-800-333-8874

https://ukhealthcare.uky.edu/gill-heart-vascular-institute

CLINICAL TRIAL UPDATES

New Clinical Trial



What is the goal of the PRECISE study?

The goal of the PRECISE study is to determine if using a new Precision Evaluation Strategy—which uses a risk-based testing process and heart computed tomography (CT) scans—can offer a more efficient and cost-effective way to diagnose and evaluate people with stable chest pain than the current standard-of-care.

Who can participate in the PRECISE study?

You may be able to join the PRECISE study if you meet these criteria:

You are 18 years or older

You have sought non-emergency medical assistance for chest pain or shortness of breath.

You are seeking treatment for new symptoms of chest pain or shortness of breath, which may be potentially related to coronary artery disease (CAD).

You have not received any cardiovascular testing for CAD within the past 12 months.

You have not received any cardiovascular testing for CAD within the past 12 months.

Other participation criteria will apply.

Why do we need a better strategy for diagnosing chest pain?

A better strategy is needed because current testing for people with suspected heart disease is not perfect.

Of 100 patients with chest pain:



20 patients will receive incorrect stress testing results when initially evaluated using the current standard-of-care testing. Consequently, this can result in additional tests, time, and costs to confirm a diagnosis.



Most patients with chest pain (90%) do not have significant heart artery blockage.



Most patients with chest pain (95%) do not have a significant blockage in a heart artery, which would require surgery and/or a stent.



Most patients with chest pain (98-99%) will not experience a cardiovascular event, such as heart attack, within the next year. Overall, patients with chest pain have a very low risk of heart attack.

If properly diagnosed, the current treatment methods for patients with chest pain are effective in treating symptoms, and current medications and strategies for reducing heart risk are effective in prolonging life.



Gill Heart & Vascular Institute Clinical Research Organization

Currently Enrolling Clinical Trials

Research Pager: 330-2001

INTELLECT 2-HF - Rebekah

PI: Maya

Guglin, MD, PhD

Optimize Hemodynamic Management of HeartMate LVAD in Patients using CardioMEMS

 Has CardioMEMS + HeartMate LVAD or meets indication for CardioMEMs

QP ExCELs - Chris

PI: Aaron

Hesselson, MD

Extended CRT Evaluation with Quadripolar Left Ventricular Leads

Standard CRT-D indication, implantation OR upgrade from existing ICD/pacemaker

GUIDE-HF-Rebekah

PI: Maya

Guglin, MD, PhD

Hemodynamic Guided Management of Heart Failure using CardioMEMs

- Diagnosis & treatment of HF >90 days
- HFH within 12 months and/or elevated NT-proBNP (or BNP) within 30 days

aMAZE - Chris

PI:

John Gurley, MD

LAA Ligation with the LARIAT as Adjunctive Therapy to PVI for AFIB

Nonvalvular AFIB, suitable for PVI

OPUS – Chris

PI:

David Booth, MD

Post-Marketing Registry Protocol for Opsumit

 Must be within 30 days of starting Opsumit for Pulmonary Hypertension

TDE 301/302 (Southpaw) – Chris

PI:

David Booth, MD

Oral Treprostinil in Subjects with PH in HFpEF

 RHC within 90 days, LVEF > 50%, total lung capacity at least 60% predicted

COMPASSION S3 – Jennifer

PI: Andrew

Leventhal, MD, PhD

Safety and Effectiveness of SAPIEN 3 THV System

Dysfunctional RVOT conduit or previously implanted valve in the pulmonic position

PFO PAS – Jennifer

PI:

John Gurley, MD

AMPLATZER PFO Occluder Post Approval Study

• Non-ischemic stroke and PFO suitable for closure, age < 60

TRANSCEND—Jennifer / Rebekah

PI:

Khaled Ziada, MD

Efficacy of SurVeil Drug-Coated Balloon for Stenotic Lesions of Femoropopliteal Artery

Target limb Rutherford classification 2, 3, or 4

KNOCOUT PE—Travis

PI:

Adrian Messerli, MD

EKoSoNic Registry of the Treatment and Clinical Outcomes of Patients with PF

- PE symptoms <14 days intended for treatment with EKOS
- RV/LV >1.0 from CTA or Echo and troponin elevation

TAFI (DS1040B) - Travis

PI: Susan

Smyth, MD, PhD

Randomized, Double-Blind, Placebo-Controlled Study of DS-1040b added to SOC Anticoagulation Therapy in Subjects with Acute Submassive Pulmonary Embolism

 Hospitalized for acute PE characterized as low-risk, or immediate-risk (submassive) that are planned to be treated with SOC anticoagulation therapy alone

WARRIOR—Denise Sparks

PI: Gretchen Wells,

MD, PhD

Women's Ischemia Trial to Reduce Events in Non-Obstructive CAD

- Signs and symptoms of suspected ischemia prompting referral for cardiac catheterization or coronary angiogram or coronary CT angiogram.
- Non-obstructive CAD defined as <50% diameter reduction of a major epicardial vessel.

HEART FAILURE

AFIB/LAA

PULMONARY HYPERTENSION

OTHER/ PCI / Structural

Contact Us:

Jennifer Isaacs: 323-4738 Rebekah Evans: 323-8663 Chris Webb: 323-1082 Ben Rushing: 323-5259

Travis Sexton: 323-3617

FELLOWS NEWS

CONGRATULATIONS TO OUR GRADUATING FELLOWS!



Cardovascular Disease

Bruce Bradley Yared Hailemariam Michael Jesinger Suartcha Prueksaritanond Joshua Rutland

Advanced Cardiac Imaging

Ahmad Ramy Elashery Patrick Hurley

Interventional Cardiology

Christian Deutsch Bennet George Naoki Misumida

Advanced Heart Failure and Transplant

Marciano "Perry" Lee

FELLOWS NEWS AWARDS



Borys Surawicz Award (Given to a faculty member for excellence in teaching)
-Dr.Vendant Gupta



Teresa Hignite Award (Given to a fellow who exhibits exceptional professionalism and a positive attitude)- **Dr Gregory Sinner**



Michael G. Spain Award (Given to faculty/ staff for extraordinary contributions toward the betterment of the fellowship program) - Terry Oplas

Check out the newly redesigned Cardiovascular Fellows Website for upcoming events:

https://cvfellowship.med.uky.edu/

Vascular can be found at: https://surgery.med.uky.edu/surgery-vascular-fellows

CT Surgery:

https://surgery.med.uky.edu/surgery-cardiothoracicsurgery-fellowship

AFFILIATE & OUTREACH NEWS

Two more hospitals join Gill Affiliate Network!

Lake Cumberland Regional Hospital and Ephraim McDowell Regional Hospital recently joined the Gill Heart & Vascular Institute Affiliate Network, which now has 16 affiliates throughout Kentucky.

The affiliate network was founded in 2014 as a way to give hospitals and medical providers across the commonwealth access to Gill's resources in order to enhance their own cardiovascular programs. Working closely with local physicians and hospitals, the affiliate network helps broaden treatment options by providing access to the latest therapeutic advances.



Lake Cumberland Regional Hospital Somerset, KY

Ephraim McDowell Regional Hospital Danville, KY





GHVI heart failure team was delighted to host Gill Affiliates Owensboro Health and Appalachian Regional Healthcare, on campus to discuss treatment options for patients with AHF, including CardioMEMS, VADs.



And...our mission to educate continues! GHVI was thrilled to join Mended Hearts as Structural Heart Director, Dr. John Gurley, spoke on how the evolution of transcatheter technology "mends" hearts without heart surgery.





Thank you to Drs Ziada and Gupta for facilitating discussion about optimizing care delivery for ACS patients with new Affiliate, Lake Cumberland Regional Hospital. Welcome to the Network LCRH!

AFFILIATE AND OUTREACH **2019 ECHO Conference**





Left: Dr. John Kotter presents on left ventricular volumes, ejection fraction and mass to Gill Affiliates at GHVI's 2019 Echocardiography conference. Right: The heart beats over three trillion times in a lifetime," explains Dr. Mikel Smith in a discussion about valvular stenosis in the TAVR era.





Gill Affiliate cardiac sonographers learn the latest in echocardiography by partnering with the GHVI echo team for hands-on training.





Thank you MDVIP for inviting Gill cardiologist, Dr. Gretchen Wells, to present an update on women's heart health to your patients. We appreciate the opportunity to collaborate and improve the health of our communities!



Gill Affiliate, Lake Cumberland Regional Hospital, spent the day GHVI meeting with cardiac specialists. This is what collaboration looks like; working together to discuss best practices and improve the health of patients.

CARDIOLOGISTS AND PHARMACISTS COLLABORATE TO ENHANCE CARE

Medicine requires a team – this is one of the reasons that providers of both cardiovascular care and clinical pharmacy practice are working closer together at UK Gill Heart & Vascular Institute. UK HealthCare's patients are among the sickest in the nation, and their complex conditions demand the more collaborative and nimble approach to care that the integration of cardiovascular medicine and clinical pharmacy enables. This partnership not only improves transitions in care but also lengthens the time that patients stay healthy and out of the hospital after procedures.

"It's about holistically looking at the whole patient and then utilizing everyone on the team — including pharmacists — t practice at the top of their license and to reach better outcomes for the patients together," said Dr. Craig Beavers. Beavers is the cardiovascular clinical pharmacy coordinator at UK HealthCare, assistant adjunct professor with the UK College of Pharmacy and chair of the American College of Cardiology cardiovascular team.

"Internal data shows that if we see a patient within the first seven days of their discharge ... we can help reduce readmissions within the first 30 or 90 days."

Craig J. Beavers, PharmD

cardiovascular clinical pharmacy coordinator at UK HealthCare

"That means allowing pharmacists to have a broad scope of involvement in various activities," Beavers continued. "That may include having collaborative practice agreements where the pharmacist can make dose adjustments or start and stop meds based on protocol. In this way, pharmacists can bring to bear the knowledge and skills of our professional background and better manage a particular issue that we're specially trained in. At the same time, it allows the physician to deal with more complex issues. All of these things help improve outcomes."

UK HealthCare has the most Board of Pharmacy Specialties (BPS) board-certified cardiology pharmacists of any hospital in Kentucky. The BPS Board Certified Cardiology Pharmacist credential identifies pharmacists who "specialize in the delivery of direct patient care, as members of interprofessional healthcare teams, working to ensure safe and effective use of medications in patients with cardiovascular disease."

At the forefront of advanced care

Additionally, UK is respected as one of the places where the concept of clinical pharmacy services took root. Integration, investment and support for clinical pharmacy has developed throughout UK HealthCare over decades. This is evidenced by UK HealthCare's establishment of a clinic for postacute coronary syndrome that is completely run by pharmacists.

"Internal data shows that if we see a patient within the first seven days of their discharge – if we re-educate them, make sure



they're not having any issues or symptoms, do some physical assessment – we can help reduce readmissions within the first 30 or 90 days," Beavers said. "We're able to maximize and optimize the care of the patient. That's an advanced, innovative practice that doesn't exist in a lot of places."

Helping beyond the hospital

In addition, a highly active student group is committed to community outreach around clinical pharmacy services. UK pharmacy students have founded their own committee of the American Pharmacists
Association-Academy of Student
Pharmacists (AphA-ASP) Operation
Heart initiative. The students put on free local and regional events to screen patients for warning signs of heart disease, such as high blood pressure, high blood glucose and high cholesterol. The UK students are multi-year winners of the AphA-ASP regional Operation Heart award.

UK Gill Heart & Vascular Institute even incorporates clinical pharmacy in its strategic organizational planning, which has influenced operations, such as research and quality initiatives.

"If you have a culture that recognizes the value and is willing to invest, it clearly pays dividends in the long run for the hospital, health system and their patients," Beavers said. "There is an understanding here that it takes a team to optimize outcomes."

BOARD CERTIFIED PHARMACISTS

Four pharmacist who were bestowed as Board Certified Cardiology Pharmacist (BCCP). Craig Beavers
Jackoline Costantino
Will Kuan
Ashley Schenk
Tracy Macaulay

Two pharmacist, who work in the Gill Clinic who were bestowed as Board Certified Ambulatory Care Pharmacists:

Mark Huffmyer

Kayla Kreft

More info on BCCP: https://www.bpsweb.org/bps-specialties/cardiology-pharmacy/

More info on BCACP: https://www.bpsweb.org/bps-specialties/ambulatory-care/



CV TEAM PHARMACIST Committee for ACC

Congratulations! Dr Craig Beavers is the Incoming Chair of CV Team Pharmacists Committee for ACC!

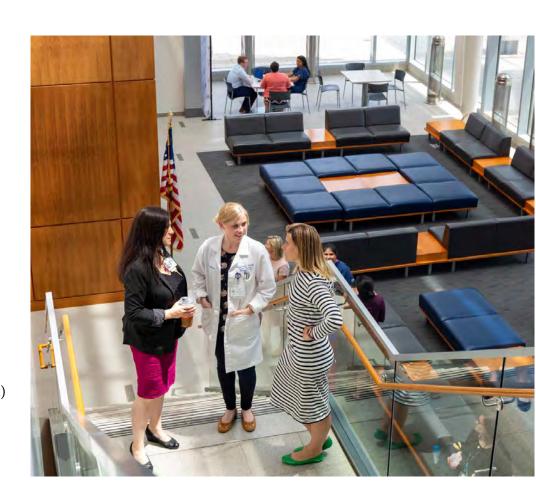
The CV Team Pharmacist Committee focuses on team-based care beyond physicians emphasizing pharmacists, nurses, NPs, and



liaisons to represent the interests of the CV team and patient advocacy. The committee also assists the ACC in meeting the education needs and supports the strategic plans of the ACC. The committee chair is selected by the CV Team Section Leadership Council Co-chairs. Dr Beavers can serve as chair for up to three years. Read more about the ACC Committees here.

The CV Pharmacy Team

Ather, Ayesha
Pandya, Komal
Cook, Terri
Costantino, Jackoline M.
Felix, Margaret
Hesselson, Heather H
Huffmyer, Mark
Smith, Brittany
Dunne, Jessie
Schenk, Ashley
Macaulay, Tracy E.
Kreft, Kayla N.
Kuan, Will
Sieg, Adam
Cordry, Amber (starts in August)



APRIL -THE VERY LATEST IN CARDIOVASCULAR MEDICINE AND SURGERY

OVERVIEW

The purpose of this conference is to provide the latest updates in the medical and surgical management and treatment of cardiovascular disease. The conference will also include discussions on emerging new treatments in

peripheral vascular disease, the use of stem cells as a treatment for cardiovascular disease, the impact of diabetes and addiction on heart disease, and the development of new cardiovascular therapies in clinical trials.

Meeting Agenda

Frontiers and advancements in open surgery and endovascular therapy for peripheral arterial disease

Sam Tyagi/MD /UK

Novel Approaches for Cardiac Presentation Following Ischemic Injury Ahmed Abdel-Latif MD, PhD/ UK

The Latest in Anti-diabetes Medications and Cardiovascular Disease: the Good, the Bad, and the Ugly

Kristen Stakelin, MD/UK

Complications, Conditions and Treatment of Cardiovascular Disease and Substance Abuse Laura Fanucchi, MD/UK

Utilizing Integrative Medicine and Non-Traditional Therapy to improve Cardiovascular Outcomes Connie Jennings/MD/UK

Life, Stress and Cardiovascular Disease Sibu Saha, MD, MBA/UK

The Current Clinical Trial Landscape in Cardiovascular Medicine Khaled Ziada, MD/UK

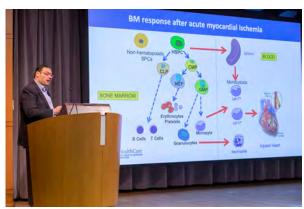
CV MED CONT.













CV MED CONT.











See you Next Year!
The Whayne Symposium:
The Very Latest in Cardiovascular
Medicine and Surgery

Focused Update on Interventional Cardiology

Woodford Reserve Room Kroger Stadium

April 25, 2020

MAY **HEART WALK**























JUNE

CARDIOPSYCHOLOGY



Thanks to Dr. Samuel Sears, cardiopsychology expert, for sharing with GHVI the importance of addressing the psychological implications of a cardiac diagnosis with patients.



"Helping people feel less lonely is a strong predictor of health," Dr. Samuel Sears, cardiopsychology expert, reminding cardiac patients at UK Living with Heart that social support is an active part of coping with #cardiovascular disease.



On Saturday, June 15 we heard from GHVI experts, transplant recipient Billy Foley, and East Carolina University professor Dr. Sam Sears, all exploring mind, body and heart health connections! #UKLivingWithHeart



CURRENT RESEARCH FUNDING

Ahmed Abdel-Latif

Lysophosphatidic Acid Mediates Cardiac Inflammation After Acute Infarction National Heart Lung and Blood Institute 08/01/17-07/31/22

Doug Andres

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

G-protein Signaling Reduces Neurodegeneration and Promotes Recovery of Synaptic Strength following Traumatic Brain Injury

KY Spinal Cord and Head Injury Research Trust 01/15/17-01/14/20

RIT1 as Novel Driver Oncogene in Lung Adenocarcinoma KY Lung Cancer Research Fund 07/01/16-06/30/19

Inhibition of Rin GTPase Signaling Reduces Neurodegeneration and Attenuates Axonal Injury following Traumatic Brain Injury

KY Spinel Cord and Head Injury Research Trust

KY Spinal Cord and Head Injury Research Trust 01/15/15-01/31/20

Donna Arnett

Genomewide Association Study of Lipid Response to Fenofibrate and Dietary Fat National Heart Lung and Blood Institute 12/01/07-02/29/20

Maher Baz

Extracorporeal Photopheresis for the Management of Progressive Bronchiolitis Obliterans Syndrome in Medicare Eligible Recipients of Lung Allografts
Washington University School of Medicine
09/05/18-07/16/19

Ken Campbell

Multiscale Modeling of Inherited Cardiomyopathies and Therapeutic Interventions National Heart Lung and Blood Institute 08/03/17-07/31/22

Computer Modeling of Myosin Binding Protein C and its Effect on Cardiac Contraction Case Western Reserve 04/01/19-03/31/20

Dat a Updated: 4th day of every month at 6 00 Al





Sponsored Project Grants and Contracts, NIH Awards, Q2 2019

Lisa Cassis

Sexual Dimorphism of Aortopathies American Heart Association 04/01/18-03/31/22

Angiotensin- A link between Obesity and Hypertension National Heart Lung and Blood Institute 06/03/03-04/30/20

Center of Research in Obesity and Cardiovascular Disease COBRE Core A: Admin Core National Institute of General Medical Sciences 09/08/08-07/31/19

Supplemental Environmental Project Compliance Assistance Tools and Services KY Department of Environmental Protection 07/01/07-12/31/19

EPSCoR Administrative KY Economic Development Cab 02/01/19-06/30/20

Misook Lee Chung

Effects of Family Sodium Watchers Program on Outcomes in Heart Failure Patient-Family Caregiver Dyads National Institute of Nursing Research 09/26/14-07/31/20

FUNDING CONT.

Alan Daugherty

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

Role of Sex Hormones on Elastin Stability in Formation of Thoracic Aortopathies American Heart Association 04/01/18-03/31/22

Brian Delisle

Tbx3-regulated Alternative RNA Processing in Cardiac Conduction System Development Geisinger Health System 04/15/16-03/31/20

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

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

National Heart Lung and Blood Institute

08/20/18-07/31/22

Mineralocorticoid receptor and abdominal aortic aneurysm National Heart Lung and Blood Institute 11/15/14-10/31/19

Scott Gordon

The Role of High Density Lipoprotein Associated Protease Inhibitor Activity in Protection Against Atherosclerosis. National Heart Lung and Blood Institute 08/20/18-07/31/21

Protease Activity in Atherosclerotic Plaque Formation and Protection by Novel HDL-targeting Protease Inhibitors Medical Foundation 12/01/18-11/30/20

Gregory Graf

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

Brian Jackson

Graduate Research Fellowship Program National Science Foundation 08/01/18-07/31/23

Sangderk Lee

Deciphering the Regulatory Mechanism of Hepatic VLDL Production by Heparin Binding EGF-like Growth Factor (HB-EGF) Signaling.

American Heart Association
07/01/17-06/30/19

Xiangan Li

Mechanism of Adrenal Insufficiency as A Risk Factor for Sepsis National Institute of General Medical Sciences 09/01/17-08/31/21

Synthetic HDL_ a Potential Sepsis Therapy National Institute of General Medical Sciences 11/01/15-11/30/19

Zhenyu Li

Inflammasome Activation Triggers Systemic Coagulation in Sepsis National Heart Lung and Blood Institute 05/15/19-04/30/23

Crosstalk Between Membrane Traffic Proteins and Integrin Activation National Heart Lung and Blood Institute 09/25/14-6/30/19

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 05/01/18-03/31/22

Andrew Morris

Define the Twist-ATX-LPAR1 Signaling Axis in Promoting Obesity-Associated Triple Negative Breast Cancer Army Medical Research and Materiel Command 04/15/16-04/14/20

Debra Moser

Rural Intervention for Caregivers' Heart Health (RICHH) National Institute of Nursing Research 09/26/16-06/30/21

Reducing Health Disparities in Appalachians with Multiple Cardiovascular Disease Risk Factors Patient Centered Outcomes Research Institute 05/01/13-12/31/19

Gia Mudd-Martin

Corazón de la Familia (Heart of the Family) National Institute of Nursing Research 03/02/17-01/31/22

Timothy Mullett

KCTN Data Coordinator KY Lung Cancer Research Fund 09/01/14-06/30/19

FUNDING CONT.

Mariana Nikolova-Karakashian

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

Fredrick Onono

Intestinal Phosphatidylcholine Exposure and Breast Cancer Risk National Cancer Institute 07/01/15-06/30/20

Kevin Pearson

Prenatal Tobacco Exposure and Mechanisms of Offspring Obesity National Institute of Environmental Health Sciences 09/30/17-08/31/19

Julie Pendergast

Estrogen Regulation of Daily Metabolic Rhythms National Institute Diabetes & Digestive & Kidney 07/01/16-06/30/19

Jonathan Satin

Monomeric G-Proteins and Cardioprotection from Heart Failure National Heart Lung and Blood Institute 09/01/17- 08/31/20

University of Kentucky Undergraduate Training in Cardiovascular Research American Heart Association Great Rivers Affiliate 02/01/17-01/31/20

Nancy Schoenberg

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

Susan Smyth

Serum Amyloid A as a Novel Inflammatory Mediator of Thrombosis UK-Center for Clinical and Translational Science 03/05/19-03/31/20

Lipid Phosphate Phosphatase 3 as a Novel Atherosclerosis Suppressor National Heart Lung and Blood Institute 04/01/15-03/31/20

NRSA Training Core (Kentucky Center for Clinical and Translational Science) National Center for Advancing Translational Sciences 08/15/16-05/31/20

NRSA T32: Clinical Scholars in Cardiovascular Science National Heart Lung and Blood Institute 06/01/08-05/31/20 FASEB SRC on Lysophospholipid and Related Mediators: From Bench to Clinic National Cancer Institute 07/01/2019-06/30/2020

Venkateswaran Subramanian

Calpains and Abdominal Aortic Aneurysms National Heart Lung and Blood Institute 08/10/17-07/31/21

Rvan Temel

TRAF6 Nanoimmunotherapy to Resolve Plaque Inflammation Mount Sinai 08/15/18-06/30/19

Targeting MicroRNA-33 To Reduce Intracranial Atherosclerosis and Other Neurovascular Hallmarks of Vascular

Cognitive Impairment and Dementia National Institute of Neurological Disorders & Stroke 04/01/19-03/31/21

Therapeutic Targeting of Metabolic microRNAs as a New Treatment Paradigm for NASH Alborg University 01/01/19-06/30/19

Dongfang Wang

SBIR Phase 1: Development of Percutaneous Pulmonary Artery Drainage Device to Unload LV During VA ECMO Support for Severe Cardiogenic Shock W-Z Biotech LLC 09/01/18-02/29/20

SBIR: Development of a TransApical to Aorta Double Lumen Cannula for a Neonate LVAD. W-Z Biotech LLC 04/01/19-07/31/19

SBIR [Phase II]: Development of Percutaneous DLC for Total Cavo-Pulmonary Assistance W-Z Biotech LL 08/15/16-07/31/19

Shuxia Wang

Thrombospondin 1 in obesity associated inflammation and insulin resistance National Institute Diabetes & Digestive & Kidney 08/20/17-05/31/20

Christopher Mark Waters

ASK1 and Ventilator-Induced Lung Injury National Heart Lung and Blood Institute 12/15/16-11/30/20

CXCR4 Signaling in Lung Epithelial Repair National Heart Lung and Blood Institute 07/08/14-03/31/20

Regulation and Function of IL33 During Neonatal RSV Infection Louisiana State University 05/05/18-07/31/19

HEART & VASCULAR RESEARCH GROUP



Vision: To catalyze clinical and translational science.

Mission: To provide a platform to receive critical feedback, identify collaborations, and develop shared research tools for clinical and translational CV science.

Time: Third Friday of each month at 4:00 PM in CTW312.

Format: Brief presentations of no more than 15 minutes each to allow time for discussion. Types of material to be presented: Power Point slides of ongoing work (limit 6-8 slides); specific aims; manuscripts under preparation; research concepts for development; 10-15 minute practice talk for a national audience; etc.

Seminars & Journal Clubs

Cardiovascular Seminar Series

Fridays at 7:30 am in TODD 234

This forum brings to campus prominent external speakers and provides presentations by UK faculty to ensure their research expertise is widely known.

https://cvrc.med.uky.edu/cvrc-current-seminar-schedule

Cardiovascular Journal Club

Tuesdays at 8:00 am in TODD 170

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 in BBSRB B231

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. In addition to papers, the group often talks about upcoming meeting in the field and recent results members have seen at meeting.

https://cvrc.med.uky.edu/cvrc-blood-cell-journal-club-2018

PUBLICATIONS

April-June 2019

Abo-Aly M, Lolay G, Adams C, Ahmed AE, **Abdel-Latif A, Ziada KM**. Comparison of intracoronary versus intravenous adenosine-induced maximal hyperemia for fractional flow reserve measurement: A systematic review and meta-analysis. *Catheter Cardiovasc Interv.* 2019 May 9. doi: 10.1002/ccd.28317.

Adeoye AM, Ovbiagele B, Akinyemi JO, Ogah OS, Akinyemi R, Gebregziabher M, Wahab K, Fakunle AG, Akintunde A, Adebayo O, Aje A, Tiwari HK, **Arnett D**, Agyekum F, Appiah LT, Amusa G, Olunuga TO, Onoja A, Sarfo FS, Akpalu A, Jenkins C, Lackland D, Owolabi L, Komolafe M, Faniyan MM, Arulogun O, Obiako R, Owolabi M. Echocardiographic Abnormalities and Determinants of 1-Month Outcome of Stroke Among West Africans in the SIREN Study. *J Am Heart Assoc.* 2019 Jun 4;8(11):e010814. doi: 10.1161/JAHA.118.010814..

Ahern BM, Levitan BM, Veeranki S, Shah M, Ali N, Sebastian A, Su W, Gong MC, Li J, Stelzer JE, Andres DA, Satin J. Myocardial-restricted ablation of the GTPase RAD results in a pro-adaptive heart response in mice. *J Biol Chem.* 2019 May 30. pii: jbc.RA119.008782. doi: 10.1074/jbc.RA119.008782.

Akpalu A, Gebregziabher M, Ovbiagele B, Sarfo F, Iheonye H, Akinyemi R, Akpa O, Tiwari HK, **Arnett D,** Wahab K, Lackland D, Abiodun A, Ogbole G, Jenkins C, Arulogun O, Akpalu J, Obiako R, Olowoyo P, Fawale M, Komolafe M, Osaigbovo G, Obiabo Y, Chukwuonye I, Owolabi L, Adebayo P, Sunmonu T, Owolabi M. Differential Impact of Risk Factors on Stroke Occurrence Among Men Versus Women in West Africa. *Stroke*. 2019 Apr;50(4):820-827. doi: 10.1161/STROKEAHA.118.022786

AlGhuraibawi W, Stromp T, Holtkamp R, Lam B, Rehwald W, **Leung SW**, Vandsburger M. CEST MRI reveals a correlation between visceral fat mass and reduced myocardial creatine in obese individuals despite preserved ventricular structure and function. *NMR Biomed*. 2019 May 15:e4104. doi: 10.1002/nbm.4104.

AlSiraj Y, Chen X, **Thatcher SE, Temel RE**, Cai L, Blalock E, Katz W, Ali HM, Petriello M, Deng P, **Morris AJ**, Wang X, Lusis AJ, Arnold AP, Reue K, Thompson K, Tso P, **Cassis LA**. XX sex chromosome complement promotes atherosclerosis in mice. *Nat Commun*. 2019 Jun 14;10(1):2631. doi: 10.1038/s41467-019-10462-z.

Banerjee M, Huang Y, Ouseph MM, Joshi S, Pokrovskaya I, Storrie B, Zhang J, **Whiteheart SW**, Wang QJ. Autophagy in Platelets. *Methods Mol Biol*. 2019;1880:511-528. doi: 10.1007/978-1-4939-8873-0_32.

Bender EM, Rizzo MG, **Meyerson SL**, Zwischenberger JB. Surgeon as Programmer: Overcoming Obstacles to the Use of Modern Internet Technology for Cardiothoracic Surgery. *Ann Thorac Surg.* 2019 Jun 14. pii: S0003-4975(19)30842-2. doi: 10.1016/j.athoracsur.2019.04.084.

Cannon RM, Jones CM, Davis EG, Franklin GA, Gupta M, **Shah MB**. Patterns of geographic variability in mortality and eligible deaths between organ procurement organizations. *Am J Transplant*. 2019 Apr 12. doi: 10.1111/ajt.15390.

Chen JZ, Sawada H, Moorleghen JJ, Weiland M, **Daugherty A**, **Sheppard MB**. Aortic Strain Correlates with Elastin Fragmentation in Fibrillin-1 Hypomorphic Mice. *Circ Rep.* 2019 May 10;1(5):199-205. doi: 10.1253/circrep.CR-18-0012.

Choi M, Schuster AM, **Schoenberg NE**. Solutions to the Challenge of Meeting Rural Transportation Needs: Middle-Aged and Older Adults' Perspectives. *J Gerontol Soc Work*. 2019 May-Jun;62(4):415-431. doi: 10.1080/01634372.2019.1575133.

Chopra AM, Díez-Villanueva P, Córdoba-Soriano JG, Lee JKT, Al-Ahmad M, **Ferraris VA**, Mehta M, Kowalski ML. Meta-Analysis of Acetylsalicylic Acid Desensitization in Patients With Acute Coronary Syndrome. *Am J Cardiol*. 2019 Jul 1;124(1):14-19. doi: 10.1016/j.amjcard.2019.03.047.

Chopra AM, **Ferraris VA**. Stopping Versus Continuing Aspirin Before Coronary Artery Surgery for Desensitized Cardiac Patients. *Ann Thorac Surg.* 2019 May;107(5):1587. doi: 10.1016/j.athoracsur.2018.10.037.

Chow KM, **Whiteheart SW**, Smiley JR, Sharma S, Boaz K, Coleman MJ, Maynard A, Hersh LB, Vander Kooi CW. Immunization of Alpacas (Lama pacos) with Protein Antigens and Production of Antigen-specific Single Domain Antibodies. *J Vis Exp.* 2019 Jan 26;(143). doi: 10.3791/58471.

- **Daugherty A.** Recipients of the 2019 Early Career Investigator Awards. *Arterioscler Thromb Vasc Biol.* 2019 May;39(5):835. doi: 10.1161/ATVBAHA.119.312479.
- Dungan CM, Murach KA, Frick KK, Jones SR, Crow SE, Englund DA, Vechetti IJ Jr, Figueiredo VC, **Levitan BM**, **Satin J**, McCarthy JJ, Peterson CA. Elevated myonuclear density during skeletal muscle hypertrophy in response to training is reversed during detraining. *Am J Physiol Cell Physiol*. 2019 May 1;316(5):C649-C654. doi: 10.1152/ajpcell.00050.2019.
- Eaton M, Scully R, Schuller M, Yang A, Smink D, Williams RG, Bohnen JD, **George BC**, Fryer JP, **Meyerson SL.** Value and Barriers to Use of the SIMPL Tool for Resident Feedback. *J Surg Educ.* 2019 May Jun;76(3):620-627. doi: 10.1016/j.jsurg.2019.01.012.
- Edgar RJ, van Hensbergen VP, Ruda A, Turner AG, Deng P, Le Breton Y, El-Sayed NM, Belew AT, McIver KS, McEwan AG, Morris AJ, Lambeau G, Walker MJ, Rush JS, Korotkov KV, Widmalm G, van Sorge NM, Korotkova N. Discovery of glycerol phosphate modification on streptococcal rhamnose polysaccharides. *Nat Chem Biol.* 2019 May;15(5):463-471. doi: 10.1038/s41589-019-0251-4.
- Elbadawi A, Barssoum K, Abuzaid AS, Rezq A, Biniwale N, Alotaki E, Mohamed AH, Vuyyala S, **Ogunbayo GO**, Saad M. Meta-analysis of randomized trials on percutaneous patent foramen ovale closure for prevention of migraine. *Acta Cardiol.* 2019 Apr;74(2):124-129. doi: 10.1080/00015385.2018.1475027.
- Elbadawi A, Elgendy IY, Mahmoud AH, **Ogunbayo GO**, Saad M, Megaly M, Alotaki E, Mentias A, Barakat AF, London B. Outcomes of Surgical Ablation in Patients With Atrial Fibrillation Undergoing Cardiac Surgeries. *Ann Thorac Surg.* 2019 May;107(5):1395-1400. doi: 10.1016/j.athoracsur.2018.10.040.
- Elbadawi A, Elgendy IY, Naqvi SY, Mohamed AH, **Ogunbayo GO**, Omer MA, Mentias A, Saad M, Abbott JD, Jneid H, Bhatt DL. Temporal Trends and Outcomes of Hospitalizations With Prinzmetal Angina: Perspectives From a National Database. *Am J Med.* 2019 Apr 29. pii: S0002-9343(19)30342-0. doi: 10.1016/j.amjmed.2019.04.005.
- Elbadawi A, Mentias A, Elgendy IY, Mohamed AH, Syed MH, **Ogunbayo GO**, Olorunfemi O, Gosev I, Prasad S, Cameron SJ. National trends and outcomes for extra-corporeal membrane oxygenation use in high-risk pulmonary embolism. *Vasc Med.* 2019 Jun;24(3):230-233. doi: 10.1177/1358863X18824650.
- Expert Panel on Thoracic Imaging:, de Groot PM, Chung JH, Ackman JB, Berry MF, Carter BW, Colletti PM, Hobbs SB, McComb BL, Movsas B, Tong BC, Walker CM, Yom SS, Kanne JP. ACR Appropriateness Criteria® Noninvasive Clinical Staging of Primary Lung Cancer. *J Am Coll Radiol.* 2019 May;16(5S):S184-S195. doi: 10.1016/j.jacr.2019.02.008.
- Faggioni M, Baber U, Sartori S, Chandrasekhar J, Cohen DJ, Henry TD, Claessen BE, Dangas GD, Gibson CM, Krucoff MW, Vogel B, **Moliterno DJ**, Sorrentino S, Colombo A, Chieffo A, Kini A, Farhan S, Ariti C, Witzenbichler B, Weisz G, Steg PG, Pocock S, Mehran R. Influence of Baseline Anemia on Dual Antiplatelet Therapy Cessation and Risk of Adverse Events After Percutaneous Coronary Intervention. *Circ Cardiovasc Interv.* 2019 Apr;12(4):e007133. doi: 10.1161/CIRCINTERVENTIONS.118.007133.
- Fernandez JD, Kendjorsky K, Narla A, Villasante-Tezanos AG, **Tannock LR**. Assessment of Gender-Affirming Hormone Therapy Requirements. *LGBT Health*. 2019 Apr;6(3):101-106. doi: 10.1089/lgbt.2018.0116.
- **Ferraris VA**. A "simple" way for enhanced exosomes to alter gene expression: Simple but wrong-complex but right. *J Thorac Cardiovasc Surg*. 2019 Apr 17. pii: S0022-5223(19)30729-9. doi: 10.1016/j.jtcvs.2019.03.053.
- **Ferraris VA**. Bundled Payments for Surgical Care-More Questions Than Answers. *Semin Thorac Cardiovasc Surg.* 2019 Spring;31(1):38-39. doi: 10.1053/j.semtcvs.2018.09.023.
- **Ferraris VA**. The Complexities of Measuring Health-Related Quality of Life After Complicated Cardiac Operations. What Happens When You Go Home? *Semin Thorac Cardiovasc Surg.* 2019 May 22. pii: S1043-0679(19)30145-5. doi: 10.1053/j.semtcvs.2019.05.018.
- **Ferraris VA**, Pezzella AT. Commentary: Worldwide disparities in cardiac surgical care: Thinking globally not locally to solve problems of limited resources and access to specialized care. *J Thorac Cardiovasc Surg.* 2019 May 16. pii: S0022-5223(19)31000-1. doi: 10.1016/j.jtcvs.2019.04.070.

PUBLICATIONS CONT.

Ferraris VA, Shander A. Commentary: Is transfusion as simple as Goldilocks makes it? "For every complex problem there is an answer that is clear, simple, and wrong". *J Thorac Cardiovasc Surg.* 2019 May 17. pii: S0022-5223(19)31017-7. doi: 10.1016/j.jtcvs.2019.02.140.

Firestone RL, Parker PL, **Pandya KA**, Wilson MD, Duby JJ. Moderate-Intensity Insulin Therapy Is Associated With Reduced Length of Stay in Critically Ill Patients With Diabetic Ketoacidosis and Hyperosmolar Hyperglycemic State. *Crit Care Med.* 2019 May;47(5):700-705. doi: 10.1097/CCM.000000000003709.

George B, **Misumida N**, **Ziada KM**. Revascularization Strategies for Non-ST-Elevation Myocardial Infarction. *Curr Cardiol Rep.* 2019 Apr 10;21(5):39. doi: 10.1007/s11886-019-1125-9.

Gleason TG, Argenziano M, Bavaria JE, Kane LC, Coselli JS, Engelman RM, Tanaka KA, Awad A, **Sekela ME**, **Zwischenberger JB**. Hemoadsorption to Reduce Plasma Free Hemoglobin during Cardiac Surgery: Results of REFRESH I Pilot Study. *Semin Thorac Cardiovasc Surg*. 2019 May 11. pii: S1043-0679(19)30062-0. doi: 10.1053/j.semtcvs.2019.05.006.

Goldberg D, Karp S, **Shah MB**, Dubay D, Lynch R. Importance of incorporating standardized, verifiable, objective metrics of OPO performance into discussions about organ allocation. *Am J Transplant*. 2019 Jun 14. doi: 10.1111/ajt.15492.

Gordon SM, Neufeld EB, Yang Z, Pryor M, Freeman LA, Fan X, Kullo IJ, Biesecker LG, Remaley AT. DENND5B Regulates Intestinal Triglyceride Absorption and Body Mass. *Sci Rep.* 2019 Mar 5;9(1):3597. doi: 10.1038/s41598-019-40296-0.

Gottipati A, Chelvarajan L, Peng H, Kong R, Cahall CF, Li C, Tripathi H, Al-Darraji A, Ye S, Elsawalhy E, **Abdel-Latif A,** Berron BJ. Gelatin Based Polymer Cell Coating Improves Bone Marrow-Derived Cell Retention in the Heart after Myocardial Infarction. *Stem Cell Rev.* 2019 Jun;15(3):404-414. doi: 10.1007/s12015-018-9870-5.

Gourgari E, Ma J, Playford MP, Mehta NN, Goldman R, Remaley AT, **Gordon SM.** Proteomic alterations of HDL in youth with type 1 diabetes and their associations with glycemic control: a case-control study. *Cardiovasc Diabetol*. 2019 Mar 28;18(1):43. doi: 10.1186/s12933-019-0846-9.

Gwag T, Meng Z, Sui Y, Helsley RN, Park SH, **Wang S**, Greenberg RN, **Zhou C**. Non-nucleoside reverse transcriptase inhibitor efavirenz activates PXR to induce hypercholesterolemia and hepatic steatosis. *J Hepatol.* 2019 May;70(5):930-940. doi: 10.1016/j.jhep.2018.12.038.

Haedtke CA, **Moser DK**, Pressler SJ, **Chung ML**, Wingate S, Goodlin SJ. Influence of depression and gender on symptom burden among patients with advanced heart failure: Insight from the pain assessment, incidence and nature in heart failure study. *Heart Lung*. 2019 May - Jun;48(3):201-207. doi: 10.1016/j.hrtlng.2019.02.002.

Hardesty JE, Wahlang B, Falkner KC, Shi H, Jin J, Zhou Y, Wilkey DW, Merchant ML, Watson CT, Feng W, **Morris AJ,** Hennig B, Prough RA, Cave MC. Proteomic Analysis Reveals Novel Mechanisms by Which Polychlorinated Biphenyls Compromise the Liver Promoting Diet-Induced Steatohepatitis. *J Proteome Res.* 2019 Apr 5;18(4):1582-1594. doi: 10.1021/acs.jproteome.8b00886.

Heo S, McSweeney J, Tsai PF, Ounpraseuth S, **Moser DK**, Kim J. The Associations of Diagnoses of Fatigue and Depression With Use of Medical Services in Patients With Heart Failure. *J Cardiovasc Nurs*. 2019 Jul/Aug;34(4):289-296. doi: 10.1097/JCN.000000000000574.

Honigberg MC, Elkayam U, Rajagopalan N, Modi K, Briller JE, Drazner MH, **Wells GL**, McNamara DM, Givertz MM; IPAC Investigators. Electrocardiographic findings in peripartum cardiomyopathy. *Clin Cardiol*. 2019 May;42(5):524-529. doi: 10.1002/clc.23171.

Johnson NF, Gold BT, Ross D, Bailey AL, Clasey JL, **Gupta V**, **Leung SW**, Powell DK. Non-fasting High-Density Lipoprotein Is Associated With White Matter Microstructure in Healthy Older Adults. *Front Aging Neurosci.* 2019 May 7;11:100. doi: 10.3389/fnagi.2019.00100.

Joyce LC, Baber U, Claessen BE, Sartori S, Chandrasekhar J, Cohen DJ, Henry TD, Ariti C, Dangas G, Faggioni M, Aoi S, Gibson CM, Aquino M, Krucoff MW, Vogel B, **Moliterno DJ**, Sorrentino S, Colombo A, Chieffo A, Kini A, Guedeney P, Witzenbichler B, Weisz G, Steg PG, Pocock S, Mehran R. Dual-Antiplatelet Therapy Cessation and Cardiovascular Risk in Relation to Age: Analysis From the PARIS Registry. *JACC Cardiovasc Interv.* 2019 May 27;12(10):983-992. doi: 10.1016/j.jcin.2019.02.033.

Kathuria-Prakash N, **Moser DK**, Alshurafa N, Watson K, Eastwood JA. Young African American women's participation in an m-Health study in cardiovascular risk reduction: Feasibility, benefits, and barriers. *Eur J Cardiovasc Nurs*. 2019 May 15:1474515119850009. doi: 10.1177/1474515119850009.

Lakie M, **Campbell KS**. Muscle thixotropy-where are we now? *J Appl Physiol* (1985). 2019 Jun 1;126(6):1790-1799. doi: 10.1152/japplphysiol.00788.2018.

Larian N, Ensor M, **Thatcher SE**, English V, **Morris AJ**, Stromberg A, **Cassis LA**. Pseudomonas aeruginosaderived pyocyanin reduces adipocyte differentiation, body weight, and fat mass as mechanisms contributing to septic cachexia. *Food Chem Toxicol*. 2019 Aug;130:219-230. doi: 10.1016/j.fct.2019.05.012.

Lee KS, Feltner FJ, **Bailey AL**, **Lennie TA**, **Chung ML**, Smalls BL, Schuman DL, **Moser DK**. The relationship between psychological states and health perception in individuals at risk for cardiovascular disease. *Psychol Res Behav Manag.* 019 May 7;12:317-324. doi: 10.2147/PRBM.S198280.

Lee JW, Stone ML, Porrett PM, Thomas SK, Komar CA, Li JH, Delman D, Graham K, Gladney WL, Hua X, Black TA, Chien AL, Majmundar KS, Thompson JC, Yee SS, O'Hara MH, Aggarwal C, Xin D, Shaked A, Gao M, Liu D, Borad MJ, Ramanathan RK, Carpenter EL, Ji A, **de Beer MC**, **de Beer FC**, **Webb NR**, Beatty GL. Hepatocytes direct the formation of a pro-metastatic niche in the liver. *Nature*. 2019 Mar;567(7747):249-252. doi: 10.1038/s41586-019-1004-y

Lehnert AL, Hart A, Brouse SD, **Charnigo RJ**, Branam S, **Guglin ME**. Left ventricular assist device-related infections: does the time of onset matter? J Artif Organs. 2019 Jun;22(2):98-103. doi: 10.1007/s10047-018-1078-6.

Li X, Wood JP. Studies into prekallikrein activation pave the way for new avenues of antithrombotic research. *J Thromb Haemost*. 2019 May;17(5):717-719. doi: 10.1111/jth.14435.

Lu W, Park SH, Meng Z, Wang F, **Zhou C**. Deficiency of Adipocyte IKKβ Affects Atherosclerotic Plaque Vulnerability in Obese LDLR Deficient Mice. *J Am Heart Assoc*. 2019 Jun 18;8(12):e012009. doi: 10.1161/JAHA.119.012009.

Miller JL, **Chung ML**, **Etaee F**, Hammash M, Thylén I, **Biddle MJ**, Elayi SC, **Czarapata MM**, McEvedy S, Cameron J, Haedtke CA, Ski CF, Thompson DR, **Moser DK**. Missed opportunities! End of life decision making and discussions in implantable cardioverter defibrillator recipients. *Heart Lung*. 2019 May 7. pii: S0147-9563(18)30600-9. doi: 10.1016/j.hrtlng.2019.04.006.

Miller L, Birks E, **Guglin M**, Lamba H, Frazier OH. Use of Ventricular Assist Devices and Heart Transplantation for Advanced Heart Failure. *Circ Res.* 2019 May 24;124(11):1658-1678. doi: 10.1161/CIRCRESAHA.119.313574.

Misumida N, Ogunbayo GO, Catanzaro J, Etaee F, Kim SM, Abdel-Latif A, Ziada KM, Elayi CS. Contemporary practice pattern of permanent pacing for conduction disorders in inferior ST-elevation myocardial infarction. *Clin Cardiol.* 2019 Jun 7. doi: 10.1002/clc.23210.

Misumida N, Pagath M, **Ogunbayo GO**, Wilson RE, Kim SM, **Abdel-Latif A**, Elayi CS. Characteristics of and current practice patterns of pacing for high-degree atrioventricular block after transcatheter aortic valve implantation in comparison to surgical aortic valve replacement. *Catheter Cardiovasc Interv.* 2019 Jun 1;93(7):E385-E390. doi: 10.1002/ccd.27915.

Mooney M, McKee G, McDermott E, O'Donnell S, Ryan P, **Moser D**, O'Brien F. Patients' knowledge and opinions of ICDs during life, illness and at the time of death. *Br J Nurs*. 2019 Apr 11;28(7):446-451. doi: 10.12968/bjon.2019.28.7.446.

Morris AJ. Phospholipases D- making sense of redundancy and duplication. *Biosci Rep.* 2019 Jun 12. pii: BSR20181883. doi: 10.1042/BSR20181883.

PUBLICATIONS CONT.

Mullis AH, Ayoub K, Shah J, Butt M, Suffredini J, Czarapata M, Delisle B, Ogunbayo GO, Darrat Y, Elayi CS. Fluctuations in premature ventricular contraction burden can impact medical assessment and management. *Heart Rhythm.* 2019 Apr 18. pii: S1547-5271(19)30362-5. doi: 10.1016/j.hrthm.2019.04.033.

Musa T, Darrat Y, Etaee F, **Butt M**, **Czarapata M**, **McMullen C**, **Mattingly L**, Daoud A, Coy K, **Ogunbayo G**, Delisle B, Elayi CS. Gender differences in management of patients undergoing catheter ablation of atrioventricular nodal reentry tachycardia. *Pacing Clin Electrophysiol*. 2019 May 30. doi: 10.1111/pace.13735.

O'Donnell S, Monahan P, McKee G, McMahon G, Curtin E, Farrell S, **Moser D**. Towards prompt electrocardiogram acquisition in triage: Preliminary testing of a symptom-based clinical prediction rule for the Android tablet. *Eur J Cardiovasc Nurs*. 2019 Apr;18(4):289-298. doi: 10.1177/1474515118821023.

Ogunbayo GO, **Messerli AW**, Ha LD, **Elbadawi A**, **Olorunfemi O**, Darrat Y, **Guglin M**, Okwechime R, Akanya D, Abdel-Latif A, Smyth SS, Elayi CS. Trends in the Incidence and In-Hospital Outcomes of Patients With Atrial Fibrillation Complicated by Non-ST-Segment Elevation Myocardial Infarction. *Angiology*. 2019 Apr;70(4):317-324. doi: 10.1177/0003319718801087.

Ogunbayo GO, Misumida N, Goodwin E, Pecha R, **Elbadawi A**, Elayi CS, **Abdel-Latif A, Gurley J, Messerli AW**, **Ziada K**. Characteristics, Outcomes, and Predictors of Significant Pericardial Complications in Patients who Underwent Transcatheter Aortic Valve Implantation. *Am J Cardiol*. 2019 Apr 23. pii: S0002-9149(19)30475-8. doi: 10.1016/j.amjcard.2019.04.036.

Ogunbayo GO, Pecha R, **Misumida N**, Goodwin E, **Ayoub K**, **Hillerson D**, Elbadawi A, **Abdel-Latif A**, Elayi CS, **Messerli AW**, **Smyth SS**. Outcomes of fibrinolytic therapy for patients with metastatic cancer and acute pulmonary embolism. *Pulm Pharmacol Ther*. 2019 Jun;56:104-107. doi: 10.1016/j.pupt.2019.04.001.

Ogunbayo GO, Shrout TA, Misumida N, Abdel-Latif A, Smyth SS, Messerli AW, Ziada KM. Trends, Management Patterns, and Predictors of Leaving Against Medical Advice among Patients with Documented Noncompliance Admitted for Acute Myocardial Infarction. *J Gen Intern Med.* 2019 Apr;34(4):486-488. doi: 10.1007/s11606-018-4671-8.

Pandeya A, Li L, **Li Z,** Wei Y. Gasdermin D (GSDMD) as a new target for the treatment of infection. *Medchemcomm.* 2019 Apr 4;10(5):660-667. doi: 10.1039/c9md00059c.

Phung TN, Sinclair SE, Makena PS, Molthen RC, **Waters CM**. Dynamic airway constriction in rats: heterogeneity and response to deep inspiration. *Am J Physiol Lung Cell Mol Physiol*. 2019 Apr 24. doi: 10.1152/ajplung.00050.2019.

Prueksaritanond S, **Abdel-Latif A**. ST-Segment Elevation Myocardial Infarction Patients in the Coronary Care Unit: Is it Time to Break Old Habits? *JACC Cardiovasc Interv.* 2019 Apr 22;12(8):718-720. doi: 10.1016/j.jcin.2019.02.028.

Shridas P, **Tannock LR**. Role of serum amyloid A in atherosclerosis. Curr Opin Lipidol. 2019 May 22. doi: 10.1097/MOL.000000000000616.

Shoemaker R, AlSiraj Y, Chen J, **Cassis LA**. Pancreatic AT1aR Deficiency Decreases Insulin Secretion in Obese C57BL/6 Mice. *Am J Hypertens*. 2019 May 9;32(6):597-604. doi: 10.1093/ajh/hpz042.

Shrout T, Sexton T, Vsevolozhskaya O, Guglin M, Shafii A, **Smyth S**. Early signatures of bleeding and mortality in patients on left ventricular assist device support: novel methods for personalized risk-stratification. *Biomarkers*. 2019 May 6:1-9. doi: 10.1080/1354750X.2019.1609089.

Sibbing D, Aradi D, Alexopoulos D, Ten Berg J, Bhatt DL, Bonello L, Collet JP, Cuisset T, Franchi F, Gross L, Gurbel P, Jeong YH, Mehran R, **Moliterno DJ**, Neumann FJ, Pereira NL, Price MJ, Sabatine MS, So DYF, Stone GW, Storey RF, Tantry U, Trenk D, Valgimigli M, Waksman R, Angiolillo DJ. Updated Expert Consensus Statement on Platelet Function and Genetic Testing for Guiding P2Y12 Receptor Inhibitor Treatment in Percutaneous Coronary Intervention. *JACC Cardiovasc Interv.* 2019 Jun 10. pii: S1936-8798(19)30831-3. doi: 10.1016/j.jcin.2019.03.034.

Sieg A, **Pandya K**, Winstead R, Evans R. Overview of Pharmacological Considerations in Extracorporeal Membrane Oxygenation. *Crit Care Nurse*. 2019 Apr;39(2):29-43. doi: 10.4037/ccn2019236.

- Sinha P, **Oates ME**. Parathyroid Scintigraphy: How Does It Fit In? *Radiology*. 2019 May;291(2):477-478. doi: 10.1148/radiol.2019190304.
- **Sinner GJ**, **George B**, **Messerli AW**. Transradial Approach to Coronary Angiography and Percutaneous Intervention in Patients With Dextrocardia. *J Invasive Cardiol*. 2019 May;31(5):E83-E88.
- Smith JL, **Lennie TA**, **Chung ML**, **Mudd-Martin G**. Dietary Sodium Intake is Predicted by Antihypertensive Medication Regimen in Patients With Heart Failure. *J Cardiovasc Nurs*. 2019 Jul/Aug;34(4):313-318. doi: 10.1097/JCN.000000000000570.
- Thomson P, Howie K, Mohan ARM, **Chung ML**. Evaluating Perceptions of Self-efficacy and Quality of Life in Patients Having Coronary Artery Bypass Grafting and Their Family Caregivers. *J Cardiovasc Nurs*. 2019 May/Jun;34(3):250-257. doi: 10.1097/JCN.0000000000000553.
- **Tyagi SC**, Calligaro KD, Fukuhara S, Greenberg J, Pineda DM, Zheng H, Dougherty MJ, Troutman DA. Patient satisfaction and chronic illness are predictors of postendovascular aneurysm repair surveillance compliance. *J Vasc Surg.* 2019 Apr;69(4):1066-1071. doi: 10.1016/j.jvs.2018.06.206.
- Wang Y, Ma M, Wang JA, Daugherty A, **Lu HS**. Targeting proprotein convertase subtilisin/kexin type 9 in mice and monkeys. *Curr Opin Lipidol*. 2019 Apr;30(2):154-155. doi: 10.1097/MOL.0000000000000583.
- Wang Y, Xu Y, Wu C, Xia H, Wang Y, Nan J, Chen J, Yu H, Zhu W, Shi P, **Daugherty A**, **Lu HS**, Wang J. One amino acid change of Angiotensin II diminishes its effects on abdominal aortic aneurysm. *Biosci Rep.* 2019 May 3;39(5). pii: BSR20182055. doi: 10.1042/BSR20182055.
- Whayne TF Jr, Shelton JE, Deutsch CR, Messerli A. Imaging Characteristics and Significance of Coronary Artery Mismatch Lesions. *Angiology*. 2019 May 28:3319719852843. doi: 10.1177/0003319719852843.
- **Whayne TF Jr, Sousa MJ, Abdel-Latif A**. Use and Value of Fractional Flow Reserve in Coronary Arteriography. *Angiology*. 2019 May 13:3319719848559. doi: 10.1177/0003319719848559.
- Wilsey HA, Pandya K, **Beavers C**, Xiaoshu L, **Ather A**. Comparison of Venous Thromboembolism Prophylactic Measures Post Coronary Artery Bypass Graft Surgery. *Am J Cardiovasc Drugs*. 2019 Jun 15. doi: 10.1007/s40256-019-00354-4.
- Winstead RJ, Waldman G, Autry EB, Evans RA, Schadler A, Kays L, **Baz M**, Anstead MI, Shafii A, Goetz ME. Outcomes of Lung Transplantation for Cystic Fibrosis in the Setting of Extensively Drug-Resistant Organisms. *Prog Transplant*. 2019 Jun 3:1526924819853830. doi: 10.1177/1526924819853830.
- Wu C, **Daugherty A, Lu HS.** Updates on Approaches for Studying Atherosclerosis. *Arterioscler Thromb Vasc Biol.* 2019 Apr;39(4):e108-e117. doi: 10.1161/ATVBAHA.119.312001. sis.
- 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 Apr 28. pii: S1074-7613(19)30183-9. doi: 10.1016/j.immuni.2019.04.003.
- **Xenos ES, Davis GA**, He Q, Green A, **Smyth SS**. The implementation of a pulmonary embolism response team in the management of intermediate- or high-risk pulmonary embolism. *J Vasc Surg Venous Lymphat Disord*. 2019 Jul;7(4):493-500. doi: 10.1016/j.jvsv.2018.11.014.
- Yanagida R, Seethamraju H, **Davenport DL**, **Tribble TA**, **Zwischenberger JB**, Hoopes CW. Bridging to lung transplantation with double-lumen venovenous extracorporeal membrane oxygenation. *Int J Artif Organs*. 2019 May 31:391398819851516. doi: 10.1177/0391398819851516.
- Yang L, Kraemer M, Fang XF, Angel PM, Drake RR, **Morris AJ**, **Smyth SS**. LPA receptor 4 deficiency attenuates experimental atherosclerosis. *J Lipid Res*. 2019 May;60(5):972-980. doi: 10.1194/jlr.M091066.
- Yanagida R, Seethamraju H, **Davenport DL**, **Tribble TA**, **Zwischenberger JB**, Hoopes CW. Bridging to lung transplantation with double-lumen venovenous extracorporeal membrane oxygenation. *Int J Artif Organs*. 2019 May 31:391398819851516. doi: 10.1177/0391398819851516.

PUBLICATIONS CONT.

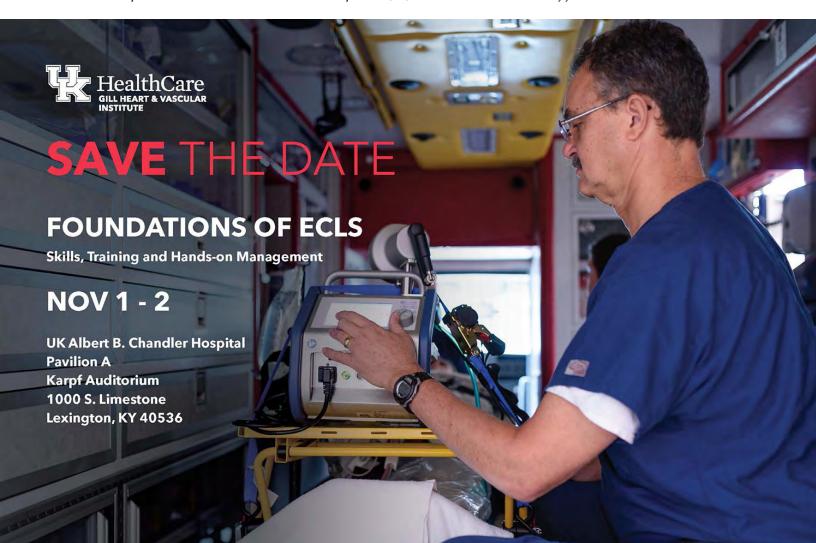
Zhang Y, **Gordon SM**, Xi H, Choi S, Paz MA, Sun R, Yang W, Saredy J, Khan M, Remaley AT, Wang JF, Yang X, Wang H. HDL subclass proteomic analysis and functional implication of protein dynamic change during HDL maturation. *Redox Biol.* 2019 May 17;24:101222. doi: 10.1016/j.redox.2019.101222.

Zhao G, Zhong Y, Su W, Liu S, Song X, Hou T, Mu X, **Gong MC**, **Guo Z**. Transcriptional Suppression of CPI-17 Gene Expression in Vascular Smooth Muscle Cells by Tumor Necrosis Factor, Krüppel-Like Factor 4, and Sp1 Is Associated with Lipopolysaccharide-Induced Vascular Hypocontractility, Hypotension, and Mortality. *Mol Cell Biol.* 2019 May 14;39(11). pii: e00070-19. doi: 10.1128/MCB.00070-19.

Zhou C, **Wang D**, Condemi F, Zhao G, Topaz S, **Ballard-Croft C**, **Zwischenberger JB**. AvalonElite Double Lumen Cannula for Total Cavopulmonary Assist in Failing Fontan Sheep Model with Valved Extracardiac Conduit. *ASAIO J.* 2019 May/Jun;65(4):361-366. doi: 10.1097/MAT.0000000000000817.

Zhu Z, Chen J, Wang G, Elsherbini A, Zhong L, Jiang X, Qin H, Tripathi P, Zhi W, Spassieva SD, **Morris AJ**, Bieberich E. Ceramide regulates interaction of Hsd17b4 with Pex5 and function of peroxisomes. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2019 Jun 5. pii: S1388-1981(19)30091-5. doi: 10.1016/j.bbalip.2019.05.017.

Ziada KM, **Misumida N**. In Vivo Identification of Healed Plaques in Culprit Lesions: Is What We're Seeing Really There? *J Am Coll Cardiol*. 2019 May 14;73(18):2264-2266. doi: 10.1016/j.jacc.2019.03.023.





Registration & Information: Amy Iwahara | 859.323.8653 | arth242@uky.edu

