

THE *Gill* GAZETTE

October - December
2019



University of Kentucky Gill Heart & Vascular Institute Quarterly News

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October through December 32

The Gill Heart & Vascular Institute

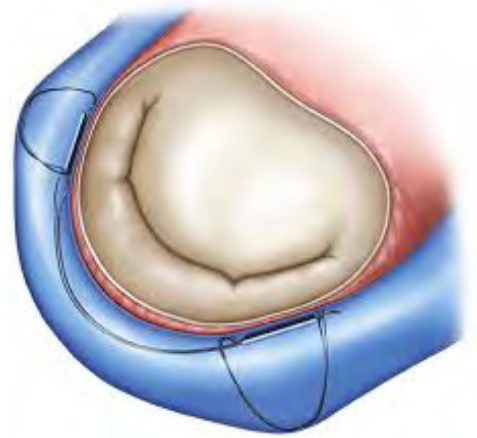
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FEATURED CLINICAL TRIAL



CARILLON Trial - PI Gurley

Assessment of the CARILLON Mitral Contour System® in Treating Functional Mitral Regurgitation Associated with

Heart Failure Coordinator: Rebekah Evans 3-8663

Sponsor: Cardiac Dimensions, Inc.

Purpose

The CARILLON Trial is a prospective, randomized, blinded clinical trial designed to assess the safety and efficacy of the CARILLON Mitral Contour System in treating functional mitral regurgitation associated with heart failure. These symptomatic heart failure patients have been diagnosed with moderately-severe to severe functional mitral regurgitation. Subjects will be randomized between an Intervention Group and a Control Group. Subjects will be randomized in a 1:1 ratio (Intervention : Control). All randomized subjects will be medically managed according to current heart failure guidelines. The Intervention group will be implanted with the CARILLON device, while the Control group will continue to be medically managed. All randomized subjects will be medically managed according to current heart failure guidelines. The Intervention group will be implanted with the CARILLON device, while the Control group will continue to be medically managed. Subjects randomized to the Control or Intervention group will have safety and efficacy assessments performed at baseline, one (1), six (6), twelve (12), eighteen (18), and twenty-four (24) months. Additionally, annual follow-ups assessing safety, heart failure hospitalizations, and key functional measures will continue for a further three (3) years.

Inclusion Criteria

Diagnosis of ischemic or non-ischemic cardiomyopathy

Six Minute Walk distance 200 meters and 450 meters

Guideline directed heart failure medication regimen

Age 18 to 85 years old

Exclusion Criteria

Heart failure hospitalization within the past 30 days

Anticipated need of left ventricular assist device within twelve months

CURRENTLY ENROLLING CLINICAL TRIALS

[The PRECISE Protocol: Prospective Randomized Trial of the Optimal Evaluation of Cardiac Symptoms and Revascularization \(PRECISE\)](#)

PI: Sorrell

Coordinator: Chris Webb 323-1082

Brief Summary:

The study will be a prospective, pragmatic, randomized clinical trial of the comparative effectiveness of diagnostic evaluation strategies for stable CAD, to be performed in outpatient settings, including primary care and cardiology practices.

[Women's Ischemia TRIal to Reduce Events In Non-ObstrUctive CAD \(WARRIOR\)](#)

PI: Wells

Coordinator: Denise Sparks, RN 218-6713

Brief Summary:

The Ischemia-IMT (Ischemia-Intensive Medical Treatment Reduces Events in Women with Non-Obstructive CAD), subtitle: Women's Ischemia Trial to Reduce Events in Non-Obstructive CAD (WARRIOR) trial is a multicenter, prospective, randomized, blinded outcome evaluation (PROBE design) evaluating intensive statin/ACE-I (or ARB)/aspirin treatment (IMT) vs. usual care (UC) in 4,422 symptomatic women patients with symptoms and/or signs of ischemia but no obstructive CAD. The hypothesis is that IMT will reduce major adverse coronary events (MACE) 20% vs. UC. This study is being conducted to determine whether intensive medication treatment to modify risk factors and vascular function in women patients with coronary arteries showing no flow limit obstruction but with cardiac symptoms (i.e., chest pain, shortness of breath) will reduce the patient's likelihood of dying, having a heart attack, stroke/TIA or being hospitalized for cardiac reasons. The results will provide evidence data necessary to inform future guidelines regarding how best to treat this growing population of patients, and ultimately improve the patient's cardiac health and quality of life and reduce health-care costs.

[Sentus QP - Extended CRT Evaluation With Quadripolar Left Ventricular Leads \(QP ExCELs\)](#)

PI: Hesselson

Coordinator: Robert Rushing 323-5259

Brief Summary:

The QP ExCELs study is designed to confirm safety and efficacy of the BIOTRONIK Sentus OTW QP left ventricular leads to satisfy FDA requirements for regulatory approval of the leads in the US. The Sentus OTW QP leads received FDA approval on May 4, 2017. Long-term safety of the BIOTRONIK Sentus OTW QP left ventricular leads will be confirmed during the ongoing post approval phase (US sites only).

[COMPASSION S3 - Evaluation of the SAPIEN 3 Transcatheter Heart Valve in Patients With Pulmonary Valve Dysfunction](#)

PI: Leventhal

Coordinator: Jennifer Isaacs 323-4738

Brief Summary:

The purpose of this study is to evaluate the hypothesis that valve dysfunction of the Edwards Lifesciences SAPIEN 3 Transcatheter Heart Valve (THV) System is within the performance goal of 25% in subjects with a dysfunctional right ventricular outflow tract (RVOT) conduit or previously implanted valve in the pulmonic position with a clinical indication for intervention.

[OPsumit USers Registry \(OPUS\)](#)

PI: Booth

Coordinator: Chris Webb 323-1082

Brief Summary:

Prospective observational drug registry developed to characterize the safety profile (including primarily potential serious hepatic risks) and to describe clinical characteristics and outcomes of patients newly treated with Opsumit in the post-marketing setting.

[AMPLATZER PFO Occluder Post Approval Study \(PFO PAS\)](#)

PI: Gurley

Coordinator: Jennifer Isaacs 323-4738

Brief Summary:

The purpose of this single arm, multi-center study is to confirm the safety and effectiveness of the AMPLATZER™ PFO Occluder in the post Approval Setting

[BIO LIBRA - AnaLysIs of Both Sex and Device Specific FactorS on Outcomes in PATients with Non-Ischemic Cardiomyopathy](#)

PI: Aaron Hesselson, MD

Coordinator: Ben Rushing 323-5259

Brief Summary:

This study is designed to evaluate the combined risk of all-cause mortality and treated ventricular tachycardia (VT) or ventricular fibrillation (VF) events by subject sex and by implanted device type. All-cause mortality, VT or VF alone, risk of cardiac death, and sudden cardiac death will be analyzed for the total cohort, as well as by subject sex and by the implanted device type.

[An International Pulmonary Embolism Registry Using EKOS \(KNOCOUT PE\)](#)

PI: Messerli

Coordinator: Travis Sexton 323-3617

Brief Summary:

This registry is designed to understand acoustic pulse thrombolysis (APT) treatment regimens used as standard of care globally for pulmonary embolism. The registry will include individuals who have already received the APT treatment and those that will undergo APT treatment.

For more information on any of these studies please contact:

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FELLOWS NEWS

KY-ACC19



Current and Former UK Gill Heart & Vascular Institute Fellows at the Kentucky Chapter of the American College of Cardiology Meeting in Lexington, KY

FELLOWS NEWS PUBLICATIONS

Hillerson D, Wool T, Ogunbayo GO, Sorrell VS, Leung SW. Incidental Coronary Artery Calcium on Computed Tomography as an Adjunct to the CHADS2-VASc Stroke Risk Score in Patients with Atrial Fibrillation. AJR Am J Roentgenol. Accepted for publication 2019 Dec 17.

Huerta CT, Orr NT, Tyagi SC, **Badia DJ**, Richie CD, Endean ED. Direct retrograde bypass is preferable to antegrade bypass for open mesenteric revascularization. Ann Vasc Surg. 2020 Jan 10. pii: S0890-5096(20)30039-X. doi: 10.1016/j.avsg.2020.01.019.

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 affect medical assessment and management. Heart Rhythm. 2019 Oct;16(10):1570-1574. doi: 10.1016/j.hrthm.2019.04.033.

Wayne TF Jr, **Sousa MJ**, Abdel-Latif A. Use and Value of Fractional Flow Reserve in Coronary Arteriography. Angiology. 2020 Jan;71(1):5-9. doi: 10.1177/0003319719848559.

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-cardiothoracic-surgery-fellowship>

AFFILIATE & OUTREACH NEWS



Gill partnered with our Gill Affiliates for the webinar Acute Chest Pain in the 21st Century presented by Dr Vedant Gupta. We are excited to collaborate & improve cardiac care in Kentucky.



Thank you to Kings Daughters Health System for giving Gill's narrative medicine specialist, Dr Robert Slocum, the opportunity to present to your heart failure support group. The work you do is so important and we were thrilled to join you for the evening.



We had a wonderful time in Owensboro! Turn out for both of Dr. Zwischenberger's talks on ECMO was great and insightful conversation followed both of his presentations.

AFFILIATE ANNUAL MEETING



Meeting Summary:

The 5th annual UK Gill Heart and Vascular Institute Affiliate Network meeting was held on the beautiful grounds of Fasig-Tipton. This year's meeting featured local, state and national presentations focused on cardiovascular clinical care, administration and management. Speakers from The Advisory Board and ACC/MedAxiom presented the event's keynote topics. Affiliate Network Medical Director Dr. Rick McClure served as the event's master of ceremonies, while UK's own Dr. Mark Newman, Dr. Susan Smyth and Dr. Vince Sorrell served as conference presenters. Attendees included administrators, staff, nurses, physicians and APPs from 16 Gill Affiliate hospitals from across KY. With over 90 in attendance, participants had the opportunity to meet, greet and network with representatives from several of Gill's subspecialty programs including heart failure/VAD/transplant, electrophysiology, structural heart, pulmonary hypertension, and adult congenital heart disease.

CARDIOVASCULAR ICU EDUCATION COUNCIL

“I manage CVICU, but the people here do the work, are creative in coming up with solutions to the problems we face and they are engaged in improving their work areas”.

Demond Jackson, BSN, RN
Patient Care Manager Cardiovascular ICU

Every six months we hire 15-20 newly graduated nurses says Heather Thompson, RN, CCRN and Chair of the RN Education Council. Our group develops and implements their orientation and preceptor training. After orientation, the new nurses go through “boot camp” which includes a review of basic nursing skills and a run through of stations and hands-on skills.

For the first four months after orientation, Tyler Apple, RN, CCRN, CSS, leads the nursing education. New nurses have monthly meetings from didactics on protocols to device or drip training, or new testing procedures. These trainings also lead to team building and support for the nursing staff. Tyler feels the trainings help the nurses feel more at home in their unit. The CV unit thrives on teamwork. Nurses are encouraged to build relationships with new and experienced nurses. The more people that are involved with a new employee, the more that employee will feel supported in their job. The new nurses should feel comfortable going to the Education Council for any job related questions.

For the first year at UKHC Erica Papes, RN, CCRN, makes sure that the nurses receive continuing education. Fellowship classes are taught to the nurses six months after orientation. These trainings consist of going through some of the orientation

information at a deeper level now that the nurses have a better idea of how the unit runs. They learn such things as how to manage cardiac drips, and didactics on CV devices. After these types of trainings, the nurses’ report, “they appreciate learning more and feel more prepared to care for the patients”. This training helps to support the CV nurses in their first year.

After the nurses have been there for one year, Sarah Smith, RN, BSN, CCRN, leads the clinical educational training. This training ensures that the nurses continue their education, stay up-to-date on best practices, and consistently provide exceptional care to their patients. By continuing education as a unit they are better equipped to recognize and respond to patient care issues, improved

quality of care, and often improve patient outcomes.

They also take on 5-7 nursing students, full-time, each summer to learn hands-on clinical experiences through the Student Nurse Academic Practicum (SNAP). They also coordinate with several colleges’ Synthesis programs. Synthesis is an integrated senior practicum during which the CVICU takes on 8-12 students from surrounding colleges for 5-7 weeks full-time to expose the students to some of the demands of a CVICU RN. Sarah is the liaison for these students and also coordinates/teaches their preceptors. She has written several presentations and put together extensive binders to make sure the students and their preceptors have all the resources





Front Row (L to R): Erica Papes RN, BSN, CCRN; Hillary Nolan RN, BSN, CCRN; GraceAnne Sharp RN, BSN, CCRN; Tyler Apple RN, BSN, CCRN, CSC
Back Row (L to R) Sarah Smith RN, BSN, CCRN; Charles Elliott RN, BSN, CCRN, CSC; Heather Thompson RN, BSN, CCRN

they need to have a great experience. Additional training for the CV nurses includes re-education twice a year on CV protocols, specific CV device training, and Simulation (SIM) Lab learning.

Hilary Nolan, RN, CCRN is the training coordinator for the simulation lab. CV nurses have to keep up with their educational competencies and go through simulation lab training two times a year. It can take two to six months to develop the content for these trainings, which are broken down into three simulations. The first simulation is catered towards new nurses. The second is a “worst-case scenario” simulation of what could happen and catered towards nurses with at least two years of experience. The third is to teach nurses how to

assist the surgeons with initiating extracorporeal membrane oxygenation (ECMO).

Charles Elliott, RN, CCRN, CSC, is part of the CV ECMO transport team, helps train others for the team, is an MCS and ECMO SuperUser, and works with Hilary and GraceAnne in the SIM Lab. Thanks to all of their hard work, the trainings are 100% better than they were 4 years ago and they aim to keep improving the trainings. GraceAnne Sharp RN, CCRN, is the newest person on the education team. As the youngest member, she will continue running the simulations and leading other aspects started by the Council when older chairs move on. She also is an excellent resource for new and young staff members who are

looking to become stronger CV nurses. One of the major improvements to SIM Lab the three have initiated is a debriefing session after their initial simulation. During this time they are able to talk through mistakes made or opportunities missed. After the debriefing the simulation is run again. The team has received 100% positive feedback with this new process from new nurses and seasoned nurses.

Overall, the main goal of the CVICU Education Council is to provide their colleagues with the resources to give exceptional nursing care to every patient, every time.

“There is a pride that comes with working in a high acuity unit. The nurses here are exceptional and elite they go above and beyond to care for their patients”

PROGRESSIVE TELEMETRY UNIT PAVILLION H

Lauren Stroud, MBA, MSN, RN, NE-BC, manages the Progressive Telemetry Units in Pavilion H for the cardiovascular service line. The units' focus is on thoracic surgery and cardiac catheterization lab patients. In particular, transcatheter aortic valve replacement (TAVR) and Watchman cases where the nurses in the units receive specialized training to care for the patient and their devices. This specialized training has allowed TAVR patients to go directly to the progressive care unit post procedure versus spending 24 hours in the intensive care unit.

Recently two nurses received Daisy awards: Marco Gomez and Megan

"This group is very engaged, in fact they have received superior scores on their Employee Engagement Surveys for the past 3 years."

Lauren Stroud, MBA, MSN, RN, NE-BC
Patient Care Manager,

DeHart. In addition, the unit was nominated for a Daisy Award. They have also received the Office of Patient Experience Award. The Patient Experience Award banner is given at the end of each quarter to departments or clinics that score in the top 25 percent or 5 percent in patient satisfaction. UK HealthCare is benchmarked against other academic medical centers across the nation.

Lauren says this group is committed to delivering top-notch care and is very engaged, in fact they have received superior scores on their Employee Engagement Surveys for the past 3 years. They have also remained free from a CAUTI for the past 6 years.



6 North, from left to right: Monica Adair, Megan DeHart, Kristyn Warren, Kimberly Blanton, Marco Gomez, Lauren Stroud, Colleen Swartz, Lacey Buckler.



6 West, from left to right: Sema Cornette, Kimberly Blanton, Lacey Buckler, Karen Rogers, Maggie Brunner, Derek Crabtree, Monica Adair, Lauren Stroud, Megan DeHart.

CENTRAL MONITORING STATION

“This is the most engaged group I have worked with, and I have been a nurse for a long time”.

Tami Neal, MSN, RN-BC, NE-BC
Patient Care Manager

The Central Monitoring Station is led by Tami Neal, MSN, RN-BC, NE-CE, is a unique team of 14 nurse coordinators and 70 technicians that assist in patient management. Nurses monitor the telemetry orders for hard and soft telemetry. This is a component unique to UKHC. It assists in keeping the CV patient where they need to be. For example, if a pregnant woman has a heart condition she can be kept in the labor and delivery unit and the mother and baby can monitored by this team.

The cardiopulmonary technicians monitor the rest of the hospital units. This is a large collaboration between the technicians and staff on the floor.

It is like having a second set of eyes on the patients. The floor staff are very reliant on this team. For example, they can see on the monitor if a patient is taking off their leads to get out of bed or walk around they can let the floor staff know what is going on. No other hospital in Lexington has this compete of a nursing model.

The nurses on this team are certified nurses, most with a BN and a background in ICU or progressive care. These nurses are all coordinators not just staff. They have leadership and strong clinical skills.

These nurses must be able to answer patient questions. In addition they run the nursing journal club, and are represented in University Committees such as the governance committee and education committee. Tami Neal, the manager of this team believes “this is the most engaged group I have worked with, and I have been a nurse for a long time”.

of the hospital units. This is a large collaboration between the technicians and staff on the floor.



From left to right: Amber Dennis, Rosa Hicks, Jordan Sumpter, Verna Fennelly, Gina Jones, Tami Neal, Ollie Miller, Whitley Smith



From left to right: Megan Walden, Sam Dyess, Sue Bizzarro, Dee Mickey, Ghada Al Taey, Karen Cochran

OCTOBER

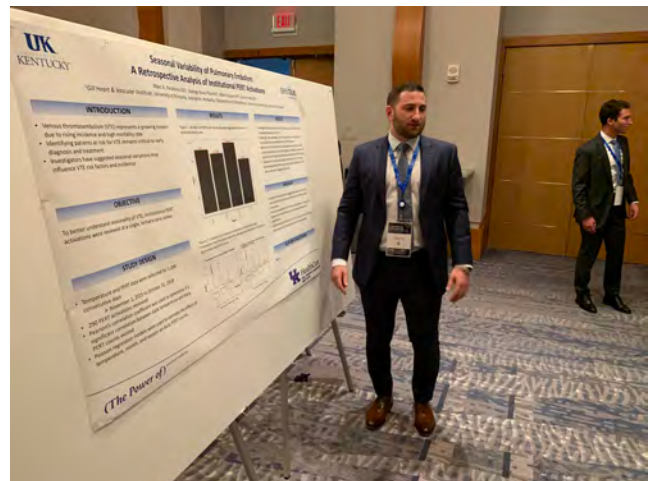
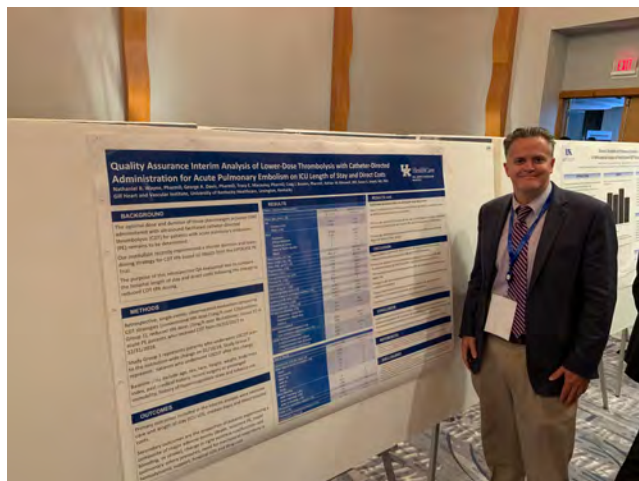
PERT CONSORTIUM MEETING

The University of Kentucky had a large presence at the 5th PERT Consortium Meeting and PE Scientific Symposium Oct 3-5, 2019 in Boston, MA.

- **George Davis, PharmD, BCPS** – Serving as Member of the PERT Consortium Board of Directors at the Annual Business Meeting of The PERT Consortium on 10/3 (<https://pertconsortium.org/events/annual-business-meeting-pert-consortium/>)

Three presentations from UK Faculty at the 5th Annual Pulmonary Embolism symposium on 10/4-10/5 (<https://pertconsortium.org/events/5th-annual-pulmonary-embolism-symposium-register-now/>)

- **George Davis, PharmD, BCPS** – Presentation titled “Management of bleeding secondary to the use of thrombolytic agents for PE”
- **John Gurley, MD** – Two presentations for BREAKOUT SESSION Hemodynamic Support and Surgical Options titled “Bridging patients with ECMO - when should we use this?” and Workshop Session 1 Select Topics titled “What treatment options do we have for patients with a right atrial and/or left ventricle thrombus?”
- **Sam Tyagi, MD** – “Advancing the Standard of Care for Patients: Key Knowledge Gaps in the Treatment of PE & DVT”





Three poster presentations from UK HealthCare trainees (fellow, medical student and PGY2 Cardiology Pharmacy Resident):

- **Marc Paranzino, MD** (UK Cardiology Fellow) presenting poster titled: “Seasonal Variability of Pulmonary Embolism: A Retrospective Analysis of Institutional PERT Activations”
 Authors: Marc A. Paranzino, DO, George Davis, PharmD, Adam Dugan, MS, Susan Smyth, MD.
- **Rahul Annabathula** (UK Medical Student working with Drs. Smyth and Gupta) presenting poster titled: “Assessing the Effect of a Pulmonary Embolism Response Team (PERT) on Hospital and ICU Length of Stay (LOS)”
 Authors: Rahul Annabathula, BS; Vedant A. Gupta, MD; Jon Colquitt, BS; Adam Dugan, MS; Vikas Bhalla, MD; George A. Davis, PharmD; and Susan S. Smyth, MD, PhD.
- **Nathaniel Wayne, PharmD** (former UK PGY2 Cardiology Pharmacy Resident) titled: “Quality Assurance Interim Analysis of Lower-Dose Thrombolysis with Catheter-Directed Administration for Acute Pulmonary Embolism on ICU Length of Stay and Direct Costs”
 Authors: Nathaniel B. Wayne, PharmD, BCPS; George A. Davis, PharmD, BCPS; Tracy E. Macaulay, PharmD, AACC, BCCP, BCPS (AQ-Cardiology); Craig J. Beavers, PharmD, FAHA, AACC, BCCP, BCPS (AQ-Cardiology), CACP; Adrian W. Messerli, MD, FACC; Susan S. Smyth, MD, PhD, FAHA, FACC.

OCTOBER GOLF CLASSIC

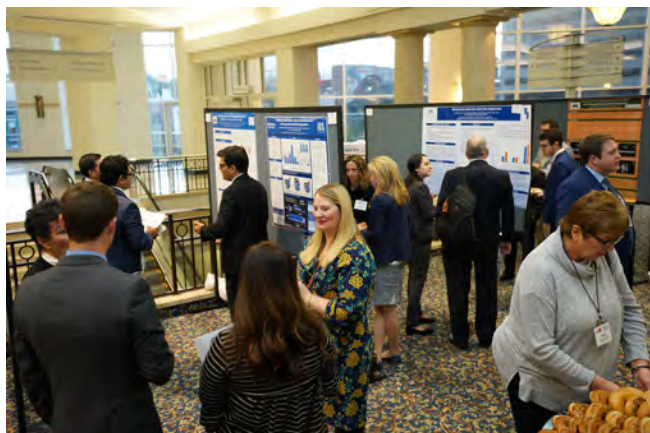
We had 100 golfers, 25 volunteers and some gorgeous weather for a great day of philanthropic golf. Through sponsorships and the silent auction we raised almost \$70k for the Gill Heart and Vascular Institute. This was the 16th annual event and we've raised over two million dollars that has been used to fund endowed professors, enhancements to the cardiology fellowship program, and to fund investigator initiated research projects.

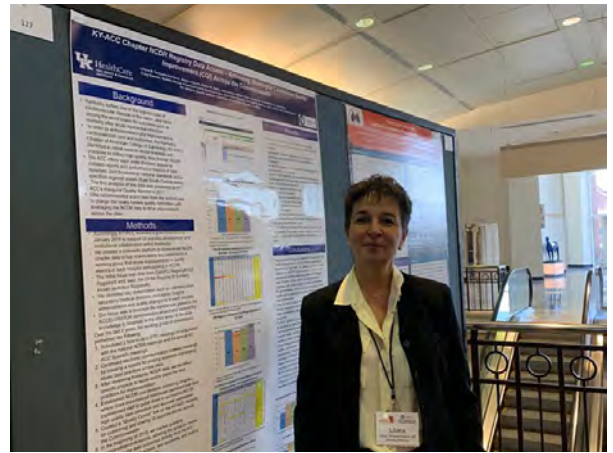




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OCTOBER KY ACC19





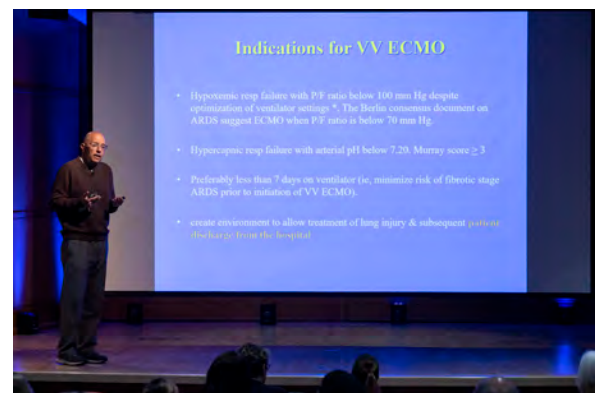
For more pictures and the agenda of the 15th annual KY-ACC meeting please see the ACC website: <http://kentuckyacc.org/events/past-events/15th-annual-meeting>

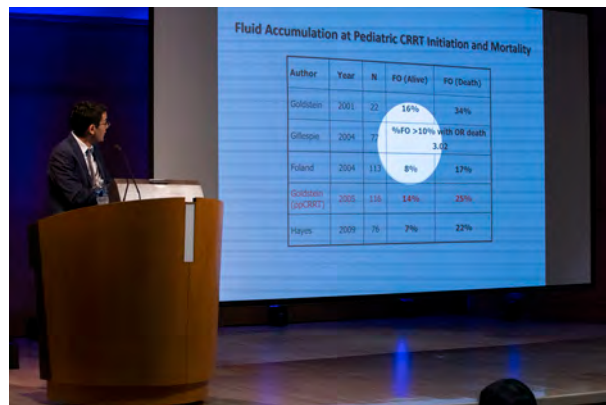
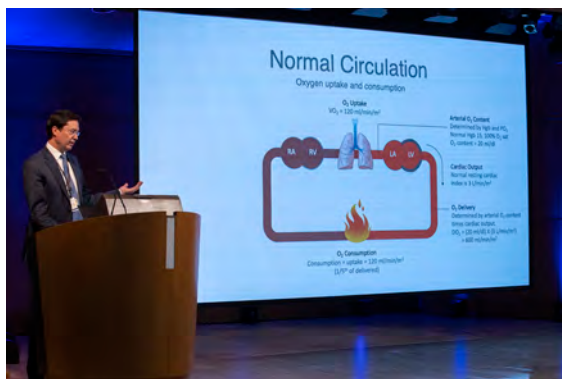
NOVEMBER ECLS CONFERENCE

The University of Kentucky Extracorporeal Life Support (ECLS) course was a two-day course on November 1 and 2 which was designed for healthcare professionals interested in learning cannulation techniques and providing care for adult ECLS patients. It has was designed to follow ELSO Guidelines for Training and Continuing Education for Adult ECLS Specialists.

Day 1 of the course offered 6.5 hours of didactic learning on various ECLS topics, including: physiology of ECLS, cannulation strategies, patient selection, and patient management. Day 1 also featured hands-on workshops focused on either cannulation and initiation or nursing care. Day 2 offered 5.25 hours of elective-didactic and simulation-based learning. Attendees could choose one of the elective topics focused on ECLS Transport, Nursing Care, Program Planning, and MD focused. Participants will then rotated through four stations of simulation-based learning: 1) ECLS Basics; 2) Emergency Management; 3) Daily Management; 4) Complication Prevention. Exposure to multiple ECLS systems will be available.

We had a great turnout and received very positive reviews form conference attendees from OH, W VA, IN, TN and KY.







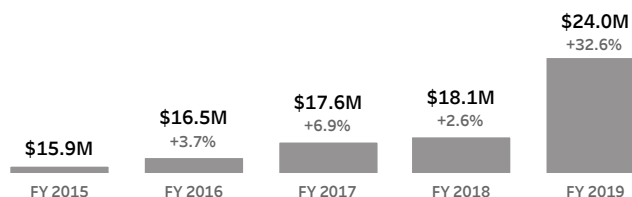


Academic Fiscal Year
FY 2019

College or Unit
College of Medicine

Department
Internal Medicine
CVRC
Surgery

FY 2015 - 2019 TOTAL AWARDS (\$), 5-YEAR TREND FY CHANGE (%)



\$23,988,619

AWARDS (\$)

+63.9M

192

AWARDS

87

PRINCIPAL INVESTIGATORS

108

SPONSORS

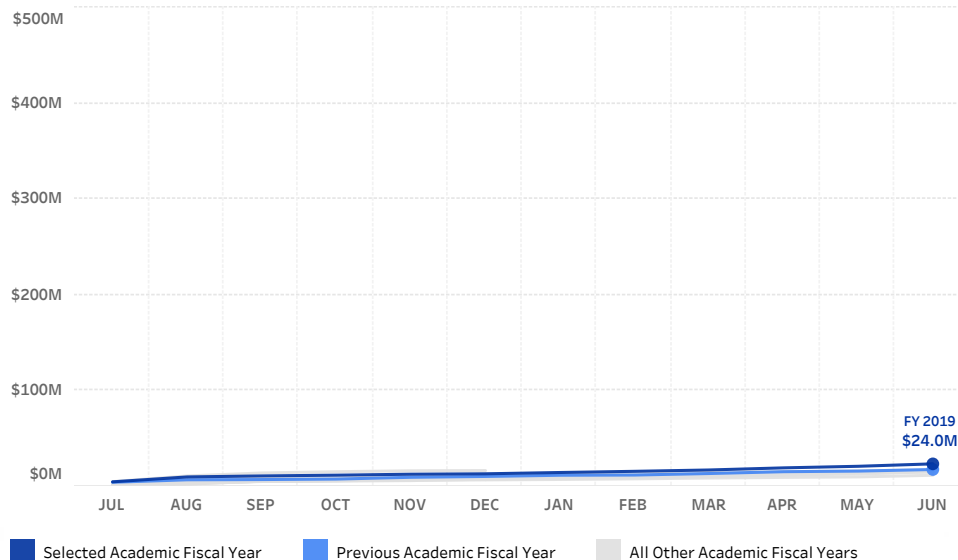
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FY 2017 - 2019 COMPOUND ANNUAL GROWTH RATE OF FUNDING SOURCES

	FY 2017	FY 2018	FY 2019	
Federal Government	\$11,951,415	\$9,540,468	\$13,450,457	6.1%
State Government	\$1,764,127	\$2,629,836	\$4,470,779	59.2%
Industry	\$2,480,453	\$2,820,931	\$2,596,136	2.3%
Nonprofit	\$822,350	\$2,154,543	\$2,243,787	65.2%
Other	\$605,492	\$940,574	\$1,227,460	42.4%
Total	\$17,623,837	\$18,086,352	\$23,988,619	16.7%

FY 2019 CUMULATIVE AWARDS (\$) RECEIVED BY MONTH



FY 2019 HIGHEST FUNDED DEPARTMENTS

Behavioral Science	\$27,095,711
Sanders-Brown Center on Aging (SBCoA)	\$23,385,390
Markey Cancer Network	\$22,897,339
Center on Drug and Alcohol Research (CDAR)	\$17,733,789
Physiology	\$14,169,706
Internal Medicine	\$13,221,399
Molecular and Cellular Biochemistry	\$9,580,497
Pharmacology and Nutritional Sciences	\$9,378,381
Toxicology and Cancer Biology	\$9,353,310
Obstetrics and Gynecology	\$9,237,183
Saha Cardiovascular Research Center (SCRC)	\$7,458,541
Center for Research on Environmental Disease	\$4,344,064

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 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
09/05/18-06/17/20

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

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
09/16/16-05/31/20

Lisa Cassis

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

Alan Daugherty

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

Adventitial-Medial Interactions in Thoracic Aortic Diseases

American Heart Association
06/01/16- 05/31/20

Macrophage Migration Inhibitory Factor and Urinary Pain

Lexington Biomedical Research Institute
07/01/19-06/30/23

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

FUNDING CONT

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

08/20/18-07/31/21

Protease Activity in Atherosclerotic Plaque Formation and Protection by Novel HDL-targeting Protease Inhibitors

Medical Foundation

12/01/18-11/30/20

High Density Lipoprotein Targeting Protease Inhibitors for Preservation of Lung Function

Alpha One Foundation Incorporated

07/01/19-06/30/20

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

Jing Li

Project MISSION: Developing a multicomponent, Multilevel Implementation Strategy for Syncope OptImalCare thrOugh eNgagement

National Heart Lung and Blood Institute

08/15/18-07/31/20

Xiangang 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

11/01/15-11/30/20

Zhenyu Li

Inflammasome Activation Triggers Systemic Coagulation in Sepsis

National Heart Lung and Blood Institute

05/15/19-04/30/23

A Novel Mechanism of Immunosuppression in Sepsis: Depletion of Monocytes and Macrophages

National Institute of General Medical Sciences

09/20/19-06/30/23

Heart-Platelet Crosstalk: JNK, AFib, and Thrombogenesis

Rush University Medical Center

05/15/19-02/28/23

Analía Loria

Effect of Early Life Stress on Obesity-Induced Hypertension in Mice

National Heart Lung and Blood Institute

12/01/17-11/30/22

Fat Nerve Recording in Mice

American Physiological Society

10/01/19-09/30/20

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

Anniston Community Health Survey: Follow-up Study and Dioxin Analyses

National Cancer Institute

05/01/19-04/30/21

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

Using Biomarkers and Imaging in Fungal Regions to Improve Lung Cancer Diagnosis

Vanderbilt University

04/01/19-03/31/20

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

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

Ryan Temel

TRAF6 Nanoimmunotherapy to Resolve Plaque Inflammation
Mount Sinai
08/15/18-06/30/20

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

Aalborg University
01/01/19-12/31/24

Dongfang Wang

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 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
04/01/19-07/31/20

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
05/05/18-07/31/20

Nancy Webb

Serum Amyloid A, Inflammasome Activation, and Abdominal Aortic Aneurysms
National Heart Lung and Blood Institute
01/01/17-12/31/20

NRSA T32: Pharmacology and Nutritional Sciences: Multidisciplinary Approaches for Metabolic Disease

National Institute Diabetes & Digestive & Kidney
08/15/00-07/31/20

Sidney Whiteheart

Platelet Endocytosis in Innate Immunity
National Heart Lung and Blood Institute
07/01/17-03/31/21

Molecular Mechanisms of Platelet Exocytosis

National Heart Lung and Blood Institute
07/01/96-03/31/20

Jeremy Wood

Protein S Anticoagulant Activity: Biochemical Mechanisms and Structural Studies
National Heart Lung and Blood Institute
09/15/15-03/31/20

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

October- December 2019

Abo-Aly M, **Misumida N**, Backer N, ElKholey K, **Kim SM**, **Ogunbayo GO**, **Abdel-Latif A**, **Ziada KM**. Percutaneous Coronary Intervention With Drug-Eluting Stent Versus Optimal Medical Therapy for Chronic Total Occlusion: Systematic Review and Meta-Analysis. *Angiology*. 2019 Nov;70(10):908-915. doi: 10.1177/0003319719858823.

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PUBLICATIONS CONT.

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Heddwen L. Brooks

8:15 a.m. Breakfast

Introductory remarks by Lisa Cassis, PhD

Vice President for Research
Professor, Department of Pharmacology and Nutritional Sciences
University of Kentucky



Mark K. Santillan

Heddwen L. Brooks, PhD

Professor of Medicine and Biomedical Engineering
College of Medicine
University of Arizona Health Sciences

Mark K. Santillan, MD, PhD, FACOG, FAHA

Assistant Professor of Obstetrics and Gynecology - Maternal Fetal Medicine
Clinical Research Director, Maternal Fetal Tissue Bank Co-Director
University of IOWA Health Care



Mary Cushman

Coffee break

Mary Cushman, MD

Medical Director, Thrombosis and Hemostasis Program Hematologist
Professor of Medicine and Pathology
University of Vermont

12:30 p.m. Lunch and short presentations

Sponsored by:
Department of Pharmacology and Nutritional Sciences-COM
The Gill Heart & Vascular Institute
Saha Cardiovascular Research Center

Organized by:
Dr. Analia Loria and
Dr. Frederique Yiannikouris



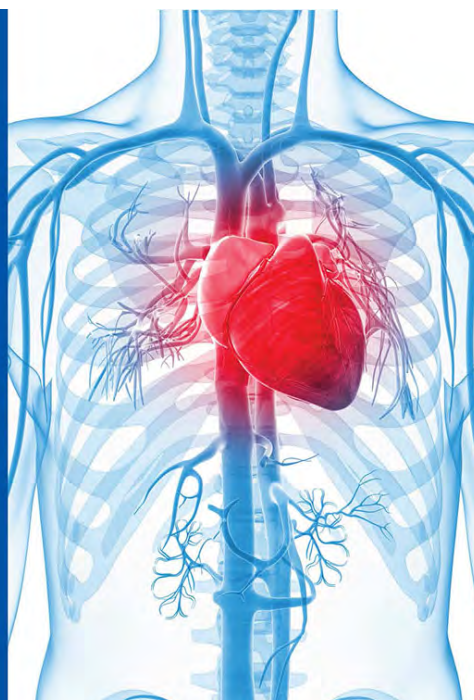
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SAVE THE DATE

THE VERY LATEST IN CARDIOVASCULAR MEDICINE AND SURGERY: FOCUS ON INTERVENTIONAL CARDIOLOGY

APRIL 25, 2020
7:45 A.M. – 6 P.M.

PAVILION A
KARPF AUDITORIUM
UK ALBERT B. CHANDLER HOSPITAL
LEXINGTON, KY



THE VERY LATEST IN CARDIOVASCULAR MEDICINE AND SURGERY: FOCUS ON INTERVENTIONAL CARDIOLOGY

SATURDAY, APRIL 25, 2020
7:45 A.M. TO 6 P.M.

Karpf Auditorium
UK Albert B. Chandler Hospital
Lexington, KY

The overarching theme is innovation in cardiovascular disease. Topics include:

- Updates and interpretation of recent pivotal interventional cardiology clinical trials.
- Current guidelines on platelet inhibitors and anticoagulation, including inclusive new therapies.
- Management of complex percutaneous peripheral arterial interventions.
- Practical application of FFR, iFR and CFR in clinical practice.
- Emerging technologies in structural heart cardiology.
- Analysis of complex cardiovascular case presentations.

This course will feature lectures, presentations and discussion of complex cases. It will also include debates between interventionalists and surgeons during which audience participation is encouraged. This symposium is designed to meet the educational needs of cardiologists, primary care and family physicians, as well as nurses, nurse practitioners, physician assistants, residents and fellows interested in learning about advanced approaches to cardiovascular disease medicine and surgical management.

BASE REGISTRATION: \$50

*Please refer to fee options listed on the registration website.

**This fee includes all presentations, breakfast and lunch.

Visit cecentral.com/live/17324 for complete symposium and registration information.

<https://www.cecentral.com/live/17324>

ACCREDITATION

Medicine

This activity has been approved for AMA PRA Category 1 Credit™



Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Pharmacy

The University of Kentucky College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.



Nursing

The University of Kentucky, College of Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation (ANCC).

Physician Assistant

AAPA credit pending approval.

ACCOMMODATIONS

For your convenience, a limited number of sleeping rooms are blocked at the Courtyard Lexington South/Hamburg Place at a reduced rate of \$149/night + tax. To make reservations and obtain conference pricing, contact the hotel directly at 859-263-9090 and reference the "UK Gill Heart Room Block." Reservations can also be made by visiting the CE Central link above. The reservation deadline is March 31, 2020. After that date, reservations will be accepted on a space/rate available basis.

CONTACT

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YEAR IN REVIEW

The last decade has seen tremendous changes in the landscape of cardiovascular services at the University of Kentucky. 2019 was an impressive year, as we work to improve Kentucky and the nation's heart health. Every day, we strive to provide high quality, comprehensive care; cutting edge innovation and discovery research; leadership in education, and value to those we serve. The quality and innovation we embrace every day allows us to provide the best treatments available – some adopted, some home grown – and has garnered a number of external accolades. This year, we had the distinction of...

- Being named high performing for Heart Bypass Surgery, Aortic Surgery, and Heart Failure by US News and World Report;
- Performing our 400th Heart Transplant and 400th TAVR;
- Providing over 500 hours of education to clinicians and scientists through events such as the 4th annual Gordon Hyde Lectureship, the annual Wayne Symposium on the Latest in Cardiovascular Medicine and Surgery, the 5th annual Healthy Hearts for Women symposium, the Flowers and Horan Lectureship, the Echocardiography Scanning and Review course, Foundations of ECLS course, Hands on TAVR course, and more;
- Training the largest cohort of fellows in cardiology, cardiac surgery and vascular surgery;
- Announcing our 16th Affiliate site, extending the reach of the Gill Network across the Commonwealth and beyond.

Our greatest asset is the faculty and staff whose accomplishments are nationally recognized and have propelled us to be the region's top academic institution. Collectively this year, we published over 200 articles and received more than six million dollars in extramural funding for our research. A few others honors...

- The legacy and contributions of Drs. Nancy Flowers and Leo Horan were recognized with the dedication of the Heart Station in their names;
- Dr. Khaled Ziada was elected to the Board of Governors for the American College of Cardiology;
- Dr. Vince Sorrell was elected to the Association of University Cardiologists,
- Dr. Susan Smyth was an inaugural recipient of the national Senior Clinician Scientist Award from the Department of Veteran's Affairs,
- Dr. John Kotter received the Abraham Flexner Excellence in Medical Education Award,
- Justin Campbell became a Fellow in the American College of Medical Practice Executives.

Additionally, we boast among our ranks...

- 66 Critical Care Nursing Certifications (CCRN*),
- 7 Cardiac Surgery Subspecialty Certifications (CSC *),
- 5 Nursing Executive Certifications (NE-BC),
- 4 Board Certified Cardiology Pharmacists,
- 2 Board Certified Ambulatory Care Pharmacists,
- 2 Cardiac Medicine Subspecialty Certifications (CMC *),
- 2 Platinum Level Clinical Ladder Nurses,
- 1 Certified Clinical Transplant Nurse,
- 1 Registered Technologist in Radiography and Vascular Interventions Certification,
- 1 Certified Cardiac Rehabilitation Professional (CCRP),
- 1 Advanced Cardiac Sonographer (ACS) Certification,
- 1 Nursing Executive Advanced Certification (NEA-BC),



These are some of the facts and figures from 2019. More importantly, there are faces – the faces of people whose lives were made better because, working with you, we were able to provide the best medicine has to offer.

As we bring the 2010s to a close and look forward to 2020, your passion and dedication will allow us to make good on our commitment to reducing the burden of heart disease.

**With thanks for all that you do you and best wishes
for a Happy and Healthy 2020!**



UPCOMING EVENTS

Healthy Hearts for Women-
February 7

ACC 20 -March 28-30, Chicago

Latest in Cardiovascular Medicine-
April 25, 2020

Nurses Week- May 6-12