



Beyond the Script

NON-PROFIT ORG.
US POSTAGE
PAID
LEXINGTON, KY
PERMIT NO. 51

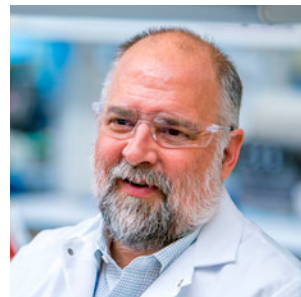
2019

UNIVERSITY OF KENTUCKY COLLEGE OF PHARMACY **ANNUAL REVIEW**

[f @ukcop](#) [t @uk_cop](#) [i @uk_collegeofpharmacy](#) [l bit.ly/giveukcop](#)

UK COLLEGE OF PHARMACY | Lee T. Todd Jr. Building | 789 South Limestone Street | Lexington, KY 40536-0596 | pharmacy.uky.edu
For more information, contact Kristie Colón, Communications Director | kristie.colon@uky.edu | 859-813-0138



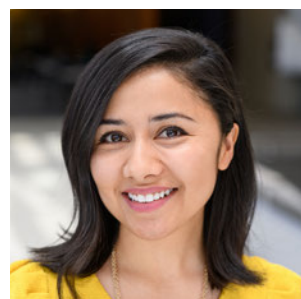


R. KIP GUY
DEAN/CEO
859-257-7896
copdean@uky.edu

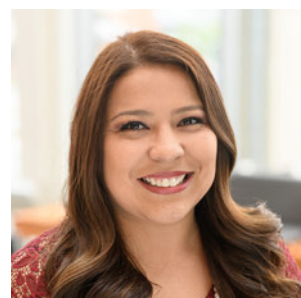
Our Team



CRAIG MARTIN
ASSOCIATE DEAN/COO
859-323-3843
craig.martin@uky.edu



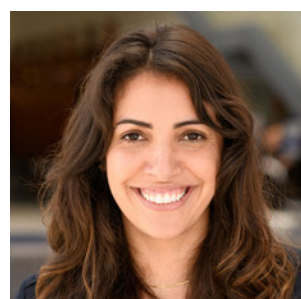
ROSA MEJIA
ALUMNI RELATIONS DIRECTOR
859-363-5577 (okay to text)
rosa.mejia@uky.edu



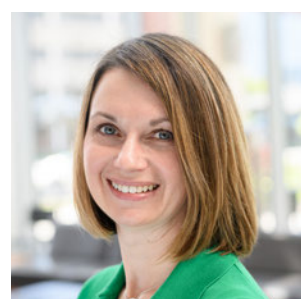
BLANCA OROZCO
EXECUTIVE ASSISTANT
859-257-7896
blanca@uky.edu



KACIE MILLER
ASSISTANT PHILANTHROPY DIRECTOR
859-562-2161
kacie.miller@uky.edu



KRISTIE COLÓN
COMMUNICATIONS DIRECTOR
859-813-0138 (okay to text)
kristie.colon@uky.edu



MARY BETH NEISER
SENIOR PHILANTHROPY DIRECTOR
859-323-6210
marybeth.neiser@uky.edu



Life-Saving Patient Care Starts With a Bold Education

This year we became one of the first pharmacy schools in the nation to coat both our professional and graduate students at our annual White Coat Ceremony. We wanted to visibly demonstrate the importance we place on the practice of pharmacy in all settings from the hospital to the laboratory, and on interprofessional collaboration between those working in the clinic and through research to improve patient outcomes.

In 2020, we will also graduate our first class of PharmD students who have been taught entirely under a new curricular model. Faculty, staff, and students have labored through changes, made revisions and tweaks, and worked tirelessly to make our vision a reality. Roll-out of the new curriculum which among other things included a six-semester community service-learning program, a new course on diagnosis, and a layered laboratory experience that places students from different professional years in a single teaching environment was arduous and challenging.

We will soon celebrate that hard work and recognize the first graduates of this curriculum, which challenged faculty and students alike with modifications in not only what we teach but how we teach. We expect new graduates to be more adept at thinking critically, to be more emotionally intelligent, to understand how to leverage technology within their practice, and to carry on the Kentucky tradition of providing the highest level of care.

Innovative education, hard work, and collaborative practice and research are essential in transforming patient-centered care.

This year we take another step forward.

R. Kip Guy, Dean & Professor

TRAINING LEADERS

UKCOP students continue to boldly lead in the clinic, the lab, and their communities.



Students Win First Place in Healthcare Quality Innovation Challenge

PEPTalkS is a pharmacy management system plug-in designed to close the communication gap between patient, prescriber, and pharmacist.

University of Kentucky College of Pharmacy students Noor Naffakh, Kailyn Conner and John Brown took home first place in the Healthcare Quality Innovation Challenge at the annual Pharmacy Quality Alliance's (PQA) Meeting in Baltimore in May.

The team-based student competition was created to foster student engagement in using technology to create healthcare solutions for patients. Teams are asked to develop a business proposal for a current healthcare quality issue that can be addressed using technology.

This year a number of teams participated in the initial round of the competition in January. Later, three finalists competed in front of a panel of judges and attendees at the PQA Annual Meeting on Friday, May 17, 2019. The teams were judged on the effectiveness of their presentations, as well as their ability to answer questions posed by the judges. The audience was also asked to select their favorite proposal, which factored into a portion of each team's score.

The judging panel and the audience chose the UK College of Pharmacy students as the first-place winner for their presentation, "Patient Engagement with



Kailyn Conner, John Brown and Noor Naffakh at PQA

Prescription Talk System (PEPTalkS): A Technology-Driven Solution to Mitigate Risk of Primary Medication Nonadherence." PEPTalkS is a pharmacy management system plug-in designed to close the communication gap between patient, prescriber, and pharmacist when a patient fails to pick up a new medication.

We challenge our students to look for creative real-world solutions to current problems in healthcare. So, it is no surprise that Noor, Kailyn, and John were able to put together the winning plan.

Pharmacy College Admission Test An Update

This year we eliminated the Pharmacy College Admission Test (PCAT) as a requirement for admission to the Doctor of Pharmacy program. We utilize a holistic admissions process and determined that the PCAT does not provide any additional useful information for selecting students likely to succeed at UKCOP beyond that already available from prior academic performance. We want to find ways to make professional school an option for all students and removing the financial barrier of the PCAT and associated prep courses seemed like an obvious solution.

WHEN COMPARED WITH TUITION, A \$225 TEST SEEMS INCONSEQUENTIAL. SO WHY DOES THIS MATTER?

While a student can apply for loans/financial aid to cover the cost of tuition, it does not apply to tests required to enter professional school. There are no financial waivers for the PCAT. The cost of the PCAT also does not include any practice tests or costly prep courses that students often elect to complete to prepare for the examination.

CAN THE COLLEGE JUST LOWER TUITION?

Unfortunately, no. Tuition is dictated by decisions arising from UK's Board of Trustees and the lawmakers of Kentucky. While the College's administration continues to advocate for affordable tuition, the final numbers are dictated at least in part by policy makers at the state level.

WHY DIDN'T THE COLLEGE MAKE THIS CHANGE SOONER?

We made the decision as quickly as possible, based on available and credible information and upon recommendation of the PharmD admissions committee. We are one of 70 colleges of pharmacy that have implemented this change. We try to move quickly when it comes to decisions with financial impact, but we want to ensure we also have the necessary data to back up any procedural changes.

WILL THIS MAKE IT EASIER FOR MORE PEOPLE TO BECOME PHARMACISTS?

No. We are simply allowing UKCOP to be a choice for some students who may not have considered our program due to the barrier of the PCAT. We are not increasing class size nor compromising the academic rigor of our program. In fact, the College is in the

middle of a comprehensive curricular overhaul meant to increase competitiveness and preparedness of all graduates.

ARE STUDENTS REALLY NOT APPLYING TO SCHOOLS BECAUSE THE PCAT IS A BARRIER?

Yes. Standardized testing in the United States has a long history of racial and economic bias, and since the PCAT has not been shown to demonstrate success in pharmacy school, it has become an unnecessary data point to our admissions process. Interestingly, most colleges and universities, including UK, are now exploring utility of the Graduate Record Examination (GRE) as a requirement for graduate school. UKCOP eliminated the GRE requirement in November 2019.

OUR STUDENTS

545

PROFESSIONAL STUDENTS

400

KENTUCKY RESIDENTS

58

DUAL DEGREE STUDENTS

81

GRADUATE STUDENTS

26

POSTDOCTORAL STUDENTS

CLASS OF
2020

136 STUDENTS
31 FIRST GENERATION

CLASS OF
2021

139 STUDENTS
57 FIRST GENERATION

CLASS OF
2022

134 STUDENTS
21 FIRST GENERATION

CLASS OF
2023

139 STUDENTS
17 FIRST GENERATION

UNDERREPRESENTED MINORITY BACKGROUND

9%

PHARMD PROGRAM

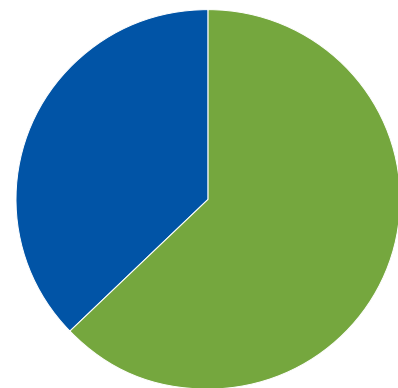
12%

GRADUATE PROGRAM

UK RECOGNIZED AS **"TOP COLLEGE FOR DIVERSITY"** AND **"DIVERSITY CHAMPION"** BY INSIGHT INTO DIVERSITY

25%

OF THE CLASS OF 2019 STUDIED ABROAD DURING PHARMACY SCHOOL



63%

FEMALE STUDENTS

37%

MALE STUDENTS

#6

UK COLLEGE OF PHARMACY IS RANKED **#6 IN THE NATION**

2018-2019 OUTCOMES

UNIVERSITY OF KENTUCKY COLLEGE OF PHARMACY LICENSURE EXAM PASS RATES ARE **CONSISTENTLY HIGHER THAN THE NATIONAL AVERAGE.**

NORTH AMERICAN PHARMACIST LICENSURE EXAMINATION (NAPLEX) PASS RATE

	2015	2016	2017	2018	2019
UK PASS RATE	95	95	99	97	96
NATIONAL PASS RATE	93	85	90	92	91

MULTISTATE PHARMACY JURISPRUDENCE EXAMINATION (MJPE) PASS RATE

	2015	2016	2017	2018	2019
UK PASS RATE	100	96	97	98	97
NATIONAL PASS RATE	93	84	83	85	84

9

UKCOP ALUMNI

CURRENTLY SERVE AS DEANS OF OTHER COLLEGES OF PHARMACY

1st

FIRST COLLEGE OF PHARMACY TO REQUIRE FOCUSED COURSE ON **DIFFERENTIAL DIAGNOSIS** AS PART OF PHARMD PROGRAM



OUR FACULTY & STAFF

129

FACULTY MEMBERS

63 FULL-TIME 1 PART-TIME 65 ADJUNCT

540

VOLUNTARY FACULTY (PRECEPTORS)

141

STAFF MEMBERS

140 FULL-TIME 1 PART-TIME

The Power of the Kentucky Connection

BY CAROLINE LEGGETT

When Mary H. H. Ensom (Class of 1978) first chose to call University of Kentucky (UK) her home in 1973, she was an engineering major at her father's encouragement. Ensom's father, Pete Huang, set an inspiring example for his three children as a distinguished civil engineering professor at UK. Nonetheless, her father's passion for engineering wasn't enough to prevent Ensom from realizing that her interests and talent were leading her in a different direction.

When Ensom applied to the UK College of Pharmacy, she vividly recalls her struggle to articulate her motivations to become a pharmacist in an essay. "I ended up listing such lofty goals," she admits. "I wrote things like, helping mankind by making a significant difference in the well-being of patients, and have a fulfilling professional career." To a young scholar, those goals can seem rather grandiose. However, after receiving a doctorate in pharmacy and four esteemed fellowships in two countries, Ensom proved her goals to be more of a prophetic nature.

From the time Ensom obtained her BS (Pharm) in 1978 and her PharmD in 1985—both from the College of Pharmacy—she has made a name for herself. Ensom has nearly 550 publications to her credit and has received roughly 85 awards for her scholarship, research, and service, all the while maintaining an impressive work-life balance.

She has worked as a hospital pharmacist, clinical pharmacist, and pharmacy professor, holding titles like Fellow, Preceptor, Director, Assistant and Associate Professor, Professor, Research Associate, Clinical

Pharmacy Specialist, and Editor. When asked how UK has helped her in achieving her goals, Ensom's response was succinct, "The Kentucky connection is second-to-none."

"We all have various degrees of connectedness linking us to one another depending on which links you choose to view," said Ensom. "Professor to student, colleague to colleague, friend to friend. It's these relationships, fostered by the University of Kentucky, that result in the exchange of sage advice and words of wisdom," she said. "I owe much of what and who I am to the University of Kentucky."

The level of awareness Ensom displays in regard to what it takes to motivate pharmacy preceptors, residents, and students can be traced back to when she was in her freshman chemistry class at UK. Her chemistry professor Paul Sears learned all 150 students by name by the second week of school. This had such an impact on Ensom she decided to follow suit. "I said to myself, 'If I ever become a professor, that's what I'm going to do.'"

Once Ensom became a professor, she set to work. "I'd photocopy the pages [from the yearbook] so that I could cut out the individual photos and make flashcards. I would study the yearbook photos to learn all my students' names before the first day of class."

The work that Ensom has done has undeniably made an impact on the work of her students and presumably her students' students. In her words, "The teachings, research, and discoveries of my students will continue



to propagate and make a difference now and in the future." Thus, extending the Kentucky connection another degree.

"Seeing my former trainees and students become rising stars in the profession and knowing that I played a part in their professional development was one of the best aspects of my job and time spent at the University of Kentucky," says Ensom. "How much better can it get than THAT?! If that isn't a fulfilling professional career, I don't know what is!"

Thanks to dedicated educators and scholars like Ensom, our pharmacy family continues to grow each time it's extended another degree of connectedness, effectively making the Kentucky connection exactly as Ensom described: second-to-none.

OUR ALUMNI

"No matter where I went, all I had to say was that I was a UK College of Pharmacy graduate and no one ever challenged my competency."

SUZANNE GREEN, CLASS OF 1974

Dr. Russell May Awarded 2018 Paul Parker Award



Dr. J. Russell (Rusty) May, a UK College of Pharmacy alumnus and R98 in the UK HealthCare Pharmacy Residency program, was named the 2018 recipient of the Paul F. Parker Award.

“Paul Parker was a mentor to me during my residency and

this relationship continued for years after I graduated,” said May. “We spent many hours together on residency accreditation site visits. Our evening conversations during these trips shaped my practice and teaching philosophies. Dr. Parker was a huge influence on my career. Winning this award, named in his honor, is priceless. Words cannot express how appreciative I am.”

May was one of the first clinicians appointed to the Commission on Credentialing and currently serves as

a guest surveyor for ASHP residency accreditation site visits for PGY-1 and PGY-2 residencies. In addition, he helped write the Residency in Pharmacy Practice standard and has worked with ASHP to develop the objectives for the Drug Information Specialty Residency standard.

He was one of the early practitioners in drug information, having started the Drug Information Center at the Medical College of Georgia (MCG). His work at MCG eventually led to his being named the Director of Pharmacy. In that role, he was responsible for a large expansion of the clinical pharmacy program and educational opportunities at MCG for pharmacy students.

May currently serves as Clinical Professor and Associate Department Head for the Department of Clinical and Administrative Pharmacy at the University of Georgia College of Pharmacy. He earned his BS from the University of Kentucky in 1978, and a PharmD from the University of Kentucky in 1981.

“Paul Parker was a mentor to me... our conversations shaped my practice and teaching philosophies.”

DR. RUSSELL MAY, PAUL PARKER AWARD RECIPIENT

NOMINATE A UKCOP LEADER

To nominate someone for the UK Hall of Distinguished Alumni, please use the nomination form at bit.ly/ukyalumni. If possible, please submit your nominee’s CV/resume. Questions can be directed to Rosa Mejia, Alumni Director. Nominations are open all year long and selected each fall.

A Commitment to Elevating Care & Scientific Inquiry



Gloria H. Doughty (top) and Kevin S. Harrod, the latest inductees into the UK College of Pharmacy’s Hall of Distinguished Alumni.

This past April, two accomplished University of Kentucky College of Pharmacy alumni became the latest inductees into the College’s Hall of Distinguished Alumni for 2018-2019. They were recognized for their professional achievements at a reception held at 21c Hotel in downtown Lexington on Thursday, April 25, 2019.

The 2019 inductees included Gloria H. Doughty (‘51) one of the original founders of the Kentucky Pharmacy Museum and one of only two women in her graduating pharmacy class of 80 students, as well as Kevin S. Harrod (‘94), PhD, professor, and Benjamin Monroe Carraway Endowed chair of Anesthesiology and Perioperative Medicine at the University of Alabama in Birmingham School of Medicine.

Doughty has been a mentor to many pharmacy students and has continued to push the profession forward within Kentucky and beyond. She received a BS in Pharmaceutical Chemistry (‘48), a BS in Pharmacy (‘51), as well as her Master’s in Social Work (‘84). She went on to work at what is now UK HealthCare, impacting patient lives across the Commonwealth, and contributed greatly to the success of the UK College of Pharmacy. Many would be hard-pressed to meet a current pharmacy alumnus who hasn’t had the pleasure of hearing one of Doughty’s stories or being inspired by her generous spirit. Doughty’s passion for pharmacy is palpable, and even in retirement, she is an active member of the Bluegrass Pharmacist Association.

Harrod’s contributions as a scientist are also noteworthy. Not only is he chair of a top-5 nationally ranked department, but he has emerged as an international

leader in the respiratory infectious disease field, widely regarded for his work across a spectrum of basic, translational, and clinical research in pulmonary and infectious disease. He is the author of over 70 peer-reviewed publications and 100 technical reports, with an impressive track record of extramural research funding during a very competitive period in American science.

Harrod pioneered the development of preclinical models of respiratory disease for drug development and validation now widely used in academic and biopharmaceutical laboratories across the world. He has trained over 30 academic, government, and private industry professionals, faculty, and career scientists. Many of his trainees note his humility and willingness to “give more than he takes.” He encourages creativity and has an infectious enthusiasm for research.

The UK College of Pharmacy is one of the nation’s leading centers of pharmacy education and research, which is a direct result of our people. Our alumni have dedicated their lives to improving the communities around them, and I’m continually inspired by their bold innovation and commitment to patient health. It is an honor to celebrate their contributions to their fields.

OUR FACULTY

“I want to thank all of the faculty who have helped me become who I am today, not just as a student, but as an individual as well. I am so thankful for all of the professors who have taken time to get to know me and help me become successful!”

CHELSEY KILPATRICK, CLASS OF 2021

Faculty Awards & Accomplishments

With bold leadership, UKCOP faculty continue to impact the world of pharmacy and pharmaceutical sciences.

Bjoern Bauer

NIH Funding - National Institute of Neurological Disorders & Stroke

David Burgess

Extramural Funding from Merck and Company Inc. and Tetrphase Pharmaceuticals Incorporated

Penni Black

PY3 & PY4 Professor of the Year

Jeff Cain

PY4 Professor of the Year

Joseph Chappell

Extramural Funding from National Institute for Pharmaceutical Technology and Education, Enepret Incorporated, and PhRMA Foundation

Chris Delcher

NASTAD Funding - National Alliance of State and Territorial AIDS Directors

Linda Dwoskin

NIH Funding - National Institute on Drug Abuse (3)

Joseph Fink

Extramural Funding from American Foundation for Pharmaceutical Education

Trish Freeman

PY2 Professor of the Year, 2019-2020 University of Kentuck Research Professorship, NIH Funding - \$87M HEAL Initiative

Sylvie Garneau-Tsodikova

Extramural Funding from National Institute of Allergy and Infectious Diseases and University of Louisville

Gregory Graf

NIH Funding - National Institute of Diabetes and Digestive and Kidney Diseases

R. Kip Guy

Extramural Funding from Mathile Family Foundation, Medicines for Malaria Venture, Global Health Innovative Technology Fund, Oregon Health and Sciences University, and Oxular Limited

Jimmi Hatton Kolpek

AACP President-elect

Eric Johnson

ACCP Foundation Mentored Research Investigator Training (MeRIT) Program

Hannah Johnson

ACCP Foundation Mentored Research Investigator Training (MeRIT) Program

Mikael Jones

ACCP Foundation Mentored Research Investigator Training (MeRIT) Program

Mark Leggas

Extramural Funding from KY Cabinet for Health and Family Services

Patrick Marsac

Extramural Funding from Bend Research Incorporated, US Worldmeds LLC, and PhRMA Foundation

Craig Martin

PY1 Professor of the Year, Extramural Funding from Eastern KY University

Daniela Moga

Extramural Funding from National Institute on Aging

Eric Munson

Extramural Funding from Multiple Industry Sponsors and National Science Foundation

Hui Peng

Extramural Funding from University of Texas at Austin

Jeffery Talbert

Extramural Funding from KY Cabinet for Health and Family Services (6), University of Pittsburgh, Indiana University and NIH Funding - \$87M HEAL Initiative

Melissa Thompson Bastin

Extramural Funding from American Society of Health-System Pharmacists Foundation

Stacy Taylor

Women's Executive Leadership Program Participant

Jon Thorson

Extramural Funding from from Office of Directors National Cancer Institute (2), National Institute of General Medical Sciences, and National Institute of Allergy and Infectious Diseases

Steven Van Lanen

National Institute of Allergy and Infectious Diseases (2)

Vincent Venditto

American Heart Association (2)

Lee Vermeulen

2019 Willis G. Gregory Memorial Award, University of Buffalo School of Pharmacy & Pharmaceutical Sciences

Chang-Guo Zhan

Extramural Funding from University of South Carolina and National Institute on Drug Abuse

You Made This Year Happen

Thank you to everyone who partnered with us in 2019. Your gifts make our work possible. We couldn't do what we do without you.

Ms. Sallie K. Abbott
Mr. Paul Adams
Dr. Michelle Irene Addison
Mr. Michael S. Akers
Mrs. Cynthia C. Akers
Dr. David D. Allen II
Mrs. Loree Goheen Allen
Mrs. Pam Allen
Dr. Caitlin Allen
Mr. Gene R. Allen, RPh
Mr. Preston Art
Ms. Marsee C. Asher
Ms. Kafayat T. Badmos
Ms. Margaret R. Baker
Dr. Jeffrey N. Baldwin
Ms. Melissa Sue Barger
Mr. Thomas H. Barnard
Dr. Gregory J. Bausch
Dr. Carol L. Beck
Mr. Jerry Bessler
Dr. Rodney Blackburn
Mr. Joseph H. Blandford, Jr.
Dr. Andrea Colleen Bloomfield
Dr. Karen A. Bohuski
Dr. Ralph E. Bouvette
Mrs. Mildred I. Boyd

Ms. Jane E. Boyd
Ms. Paula C. Brockman
Ms. Lauren Brown
Col. Jimmy W. Buchanan
Mrs. Susan Burchett
Dr. David E. Burgio, Jr.
Dr. James A. Bustrack
Dr. William G. Byrd
Mrs. Vickie W. Byrd
Mr. George W. Campbell
Mr. Bryan L. Campbell
Ms. Lynn M. Campbell
Mrs. Elaine C. Campbell
Mr. and Mrs. Carl
Mr. Terry W. Case
Mr. Timothy P. Castagno
Dr. Carolyn J. Cates
Dr. John C. Cerrito
Mrs. Elizabeth Chappell
Dr. Joseph Chappell
Mr. William E. Clark
Ms. Sharon Leo Clouse
Mr. Richard M. Clouse
Mr. John T. Collins
Mrs. Jana M. Collins
Ms. Kristie Colón

Mrs. Bobbie M. Coltharp
Dr. Terri S. Cook
Mrs. Kimberly L. Corley
Mrs. Charlotte M. Cornett
Dr. Clark Cottrell II
Mrs. Rebecca C. Cox
Mr. David L. Cox
Dr. Kimberly S. Croley
Mr. Robert Croley
Ms. Helen Lisanby Danser
Mr. Thornton E. Daugherty, Jr.
Mrs. LaDonna G. Davis
Mr. Michael L. Davis
Dr. Patrick P. DeLuca
Mrs. Judy A. DeLuca
Mr. Kailin Deng
Dr. Beury B. Derstine
Mr. Michael P. Derstine
Dr. Karl A. DeSante
Dr. Rose E. Dillon-Norman
Dr. Holly S. Divine
Mr. Kevin Divine
Mrs. Jane A. Dunbar-Suwalski
Dr. Lynne C. Eckmann
Dr. David M. Eckmann
Mr. Joe M. England

Dr. Chelsea Fischer
Mr. Dane Fischer
Dr. Joseph C. Fleishaker
Mrs. Dona L. Fleishaker
Ms. Nancy Fleming
Dr. William K. Fleming
Dr. Theresa T. Forbes
Dr. R. Thomas Fossett
Dr. Mary G. Foster,
Dr. Michelle DeLuca Fraley
Dr. Virginia E. France
Dr. Andrew P. France
Mrs. Elizabeth W. Francisco
Dr. George E. Francisco, Jr.
Dr. Patricia Rippetoe Freeman
Mr. Donald T. Fritts
Dr. Charles B. Frost
Mrs. Joan H. Frost
Mr. John M. Fuller
Dr. Lynn Z. Fuller
Dr. Carol G. Gallagher
Dr. Karen L. Garlitz
Ms. Joanna C. Gibbs
Ms. Sandra Y. Gile
Dr. Robert J. Goetz
Dr. Susan Goodin

OUR DONORS

“Alumni donations and scholarship support are, simply put, the sole reason I am able to attend UK College of Pharmacy. I am confident that because of my scholarship I will be a better professional and a better pharmacist.”

KAITLIN MUSICK, CLASS OF 2020

Mrs. Janet L. Graham	Dr. Melissa Hutchinson	Dr. William H. Lyle	Ms. Alice J. Mudd	Mrs. Edith Hines Rice	Mrs. Lisa L. Smith	Mr. Glenn L. Watson	APSC Foundation
Mr. Thomas W. Gravely	Dr. Anita M. Isaacs	Dr. Karen C. Mahaney	Ms. Ann C. Murphy	Ms. Autumn Rice	Dr. Kelly M. Smith	Ms. Sherry L. Watson	AstraZeneca LP
Mrs. Nancy C. Gravely	Mr. Marc D. Isaacs	Dr. Robert C. Mahaney	Dr. Patrick O. Murphy	Mr. Stewart K. Riley	Mr. Al Smith	Dr. David S. Watt	CVS Health Foundation
Mr. William W. Gravely, Jr.	Mr. David L. Jaquith	Dr. Katherine Marie Malloy	Dr. Jerri Hall Murphy	Mr. Andrew Riley Ritzel	Mr. Daniel D. Snavely	Dr. Doris Weilert	Eli Lilly and Company
Mr. Robert E. Graves	Mrs. Wanda Jaquith	Dr. Henry J. Mann	Mr. Daniel P. Nall	Mrs. Marcie Robinson	Mrs. Deborah B. Snavely	Mrs. Donna R. Weinman	Exelixis Market Access Team
Ms. Nancy I. Grider	Mr. David L. Joffe	Ms. Dorothy R. Manning	Dr. Ruth B. Nall	Dr. Frank Romanelli	Mr. Larry H. Spears	Mr. Tom Weinman	Gallagher Charitable Fund
Dean Rodney K. Guy	Dr. Rolley E. Johnson	Dr. Craig A. Martin	Mr. David L. Nation	Dr. Heidi N. Romero	Ms. Suezane B. Speight	Mrs. Theresa K. Weitendorf	Genworth Foundation
Dr. Rod D. Haddix	Dr. Hannah Eshing Johnson	Ms. Valerie P. Martin	Dr. Harry A. Nesta	Mrs. Cynthia D. Rorer	Mrs. Mary Spruill	Ms. Lucy B. Wells	Humana Pharmacy Solutions
Ms. Deirdre C. Haddix	Mrs. Iona K. Johnson	Dr. Joey Mattingly II	Mrs. Janet P. Ng-Yuen	Mr. Robert A. Roser	Mr. James D. Spruill, Jr.	Dr. Michael L. Wells	James B. and Christina Y. Ullum Family Foundation
Mrs. Bettye H. Hanks	Dr. Melinda C. Joyce	Dr. Ashlee Mattingly	Ms. Alexandra L. Nilges	Mrs. Glee Roser	Mr. Archie A. Stahl	Dr. Cynthia L. Whalen-Ashcraft	KAPPA PSI Alumni Fraternity
Mr. Dudley Hanks	Mr. Jeffrey S. Joyce	Mr. R. Alan Mattingly	Ms. Nancy L. Olson	Dr. Melody A. Ryan	Dr. J. Tyler Stevens	Mr. Charles S. Wheeler	Kentucky Pharmacists Association, Inc.
Ms. Julia H. Hanks	Ms. Tammy S. Kamer	Mrs. Cynthia A. Mattingly	Dr. Jack W. Olson	Dr. Stephen J. Ryan	Mrs. Laura Webb Stone	Dr. Mary Faye S. Whisler	KY Society of Health System Pharmacists
Mrs. Barbara A. Harned	Ms. Angela Keene	Dr. Philip R. Mayer	Dr. Candace N. Olusola	Dr. Larry K. Schaefer	Dr. Cindy D. Stowe	Mr. Glen Whisler	KY Society of Health System Pharmacists
Clarice Carol Sharpe Harper	Ms. Mary A. Keen Doorn	Mr. Thomas R. Mayhugh, Sr.	Blanca Elizabeth Orozco	Ms. Tammy L. Schlensker	Mr. Gerald L. Stuart	Dr. Tyler R. Whisman	Mayer and Frances Shaikun Fund
Dr. Kathleen B. Haynes	Ms. Nicole Keenan	Mrs. Andrea M. McAlpin	Mr. Frank Otero	Dr. Mark E. Schneiderhan	Dr. Jamie Sturgill-Stevens	Dr. Nina Crossley Whitehouse	Norton Healthcare
Mr. James A. Haynes	Mrs. Deborah L. Kelsey	Ms. Catherine R. McClish	Mr. Bradford T. Palmer	Mrs. Betty A. Schutte	Dr. Victor R. Swinney	Mr. Colin Whitehouse	P. D. R. Pharma Consulting, LLC
Mrs. Leanne P. Head	Dr. Barbara A. Kemp	Dr. Aaron E. McIntosh	Mrs. Patricia G. Palmer	Mr. Philip A. Schwieterman	Ms. Patricia M. Taluskie	Mr. Ronald E. Whitmore	Pfizer, Inc.
Dr. Jeffrey L. Heiland	Dr. Michael G. Kendrach	Dr. Tera W. McIntosh	Dr. Vincent J. Peak	Mrs. Tracy M. Schwieterman	Dr. Hao-Chuan Tau	Dr. Lewis D. Wilkerson	PK Pharma LLC
Mrs. Marla L. Helton	Mrs. Angela C. Kendrach	Dr. Barbara J. McKee	Mr. Dan Perry	Mrs. Ginger G. Scott	Mr. Tommy R. Thomas	Dr. Kim W. Wilkerson	Space Tango Inc.
Dr. Flory G. Herman	Ms. Leslie K. Kenney	Dr. Robert C. McKee	Madhav S. Kamat, Ph.D.	Dr. Joe B. Scott, Jr.	Mrs. Elizabeth Traxel	Dr. Lisa C. Willshaw	State Farm Insurance Co.
Dr. James G. Herron	Mrs. Melissa B. Kennon	Ms. Beverly F. McKee	Astra Maria Liepa-Bessler, Pharm.D.	Mr. David A. Seibert	Dr. Tina Ling Triue	Dr. Susan C. Wilson	The BeeTripleJ Fund
Ms. Samantha Leigh Hillard	Ms. Barbara A. Kiel	Dr. Patrick J. McNamara	Ms. Ayako L. Phillips	Mrs. Becky S. Sergent	Mr. Shelby Spencer Tungate	Mr. Jacob Wishnia	The Betty A. Schutte Fund - DAF
Mr. Walter E. Holland	Ms. Mollie Brennin Kilgallin	Mrs. Lynda H. McNamara	Dr. Lance T. Piecoro	Mr. Don Sergent	Ms. Christina Ullum	Dr. Barbara Woodward	The Frederick B. and Ayako I. Phillips Foundation
Dr. Emily A. Horn	Mr. Robert L. Kimbrell	Mrs. Celeste McRae	Mrs. Mary G. Piecoro	Mr. Phil Shaikun	Mr. Jim Bruce Ullum	Dr. Michael A. Woodward	Veteran Drug Club
Dr. Eulena B. Horne	Mrs. Linda J. Korn	Mr. David H. McRae	Dr. John J. Piecoro, Jr.	Dr. Mitsuko P. Shannon	Ms. Catherine Elizabeth Van	Dr. Brian Wayne Wortham	Walgreens
Mrs. Nancy Mueller Hoskins	Ms. Julianne Bateman Kravetz	Dr. Kim T. Meyer	Dr. Kyle D. Pijut	Mr. William K. Shannon	Ms. Marjorie A. Vanderwagen	Dr. Jennifer G. Wright	YourCause, LLC Pfizer
Mrs. Lori H. Ho-Tung	Mr. Max P. Kreitman	Dr. Douglas E. Miller	Dr. Sonja N. Pijut	Mrs. Jane Shipley	Mr. Vincent J. Venditto	Ms. Anna M. Wright	
Mrs. Donna W. Howell-Smith	Dr. Robert J. Kuhn	Dr. Lakin Rachelle Mills	Mr. Anthony Pistilli	Mr. Todd Albert Sizemore	Dr. Susan L. Victor	Dr. Weili Yan	
Dr. Gavin Taylor Howington	Mrs. Janet M. Kuhn	Ms. Brianna Nicole Mills	Mrs. Judith C. Pistilli	Dr. Philip M. Skees	Dr. Lindsay M. Villalobos	Mr. Daniel P. Yeager	
Dr. Luisa H. Hoyt	Dr. Prakash S. Kulkarni	Mr. Julian H. Mitchell	Dr. Kenneth E. Record	Mr. Dallas T. Skiles	Mr. Paco Villalobos	Mrs. Jane B. Yeager	
Dr. William P. Hudson	Ms. Huaichen Liu	Ms. Trenika R. Mitchell	Dr. Pamela W. Renard	Dr. Megan E. Smetana	Dr. Charla L. Wagers	Dr. Mary D. Yoblinski	
Mrs. Peggy A. Humphries	Robert L. Long, RPh	Mr. Jason T. Mitchell	Mr. Levi Rice, Jr.	Ms. Candace Smigla	Dr. Steven D. Wagers	Dr. Robert A. Yokel	
Dr. Thomas R. Humphries	Dr. William C. Lubawy	Ms. Daniela Moga	Dr. JoAnn M. Rice	Ms. Annette W. Smith	Mrs. Catherine M. Waldschmidt	American Pharmacy Services Corporation	
Dr. Serena J. Hunter	Ms. Hannah Marie Luttrell	Dr. Ashleigh Ritchie Mouser	Dr. Peter J. Rice	Dr. Deborah A. Smith	Mr. William E. Waldschmidt		

ADVANCING THERAPIES

Our frontline researchers are committed to solving health care problems in Kentucky and across the globe.



Addressing the Opioid Epidemic

One Prescription at a Time

BY JACOB LEWIS

A new study out of the University of Kentucky's College of Pharmacy reports that state policies to simplify access to naloxone results in large increases in naloxone dispensing. Naloxone—more commonly known as Narcan—is a prescription drug known to rapidly reverse the effects of an opioid overdose.

The study was conducted in part by Dr. Jeffery Talbert and Dr. Patricia Freeman, who are part of the team of UK researchers collaborating on the \$87 million HEALing Communities study to reduce overdose deaths in Kentucky. Their current study found that naloxone became more widely available when states mandated co-prescription of naloxone to persons receiving high dose opioid medications and to others at risk for overdose.

“The findings of our study suggest that implementing state policies requiring prescribers to offer naloxone prescriptions to individuals at high risk for an opioid overdose increases the dispensing of naloxone in community pharmacies. Ensuring persons at risk for overdose have access to naloxone—whether through co-prescription or by making naloxone available without an individual patient-specific prescription—has the potential to save lives,” said Talbert, who also serves as the director of the Institute for Pharmaceutical Outcomes and Policy.

The study was a state-level observational study assessing the association between the legal requirements for naloxone co-prescription and the number of naloxone prescriptions dispensed using

longitudinal data analysis. Dispensing data came from the IQVIA national prescription audit which detailed the transactions in retail pharmacies from Jan. 1, 2011 to Dec. 31, 2017.

The fight against opioids has become a national crisis. The United States has an average of over 130 opioid-related deaths every day and there are approximately 58 opioid prescriptions per 100 people.

When focusing on Kentucky alone the statistics are even more disproportionate. According to the National Institute on Drug Abuse, Kentucky has an average of about 87 opioid prescriptions per 100 people, one of the highest rates in the country. In the year 2017, there were approximately 1,160 opioid-related deaths, making Kentucky fifth overall when it comes to opioid-related deaths.

The opioid crisis in Kentucky is an inspiration for the HEAL Grant's mission: to reduce opioid overdose deaths by 40 percent. The goal is to find evidence-based solutions that can eventually be scaled to the entire state and then the entire nation. Kentucky is often viewed as a microcosm of the general U.S., meaning that if the solutions can be found within the state, they could then be applied nationally. The University of Kentucky was one of only four states selected by the National Institutes of Health to contribute to this research.

“The opioid epidemic is one of the most prevalent issues facing our communities today. Opioids cause

harm regardless of who you are or where you come from. These are our families, friends, and communities being impacted. Right now, the goal is to slow this epidemic any way that we can.” said Freeman.

Efforts like those made by Drs. Freeman and Talbert are essential in the fight against opioid use disorder and in providing hope to all of the families, communities, and individuals impacted.

The HEALing Communities study has brought together state leaders and researchers from six different colleges to reduce opioid deaths by 40 percent. Those involved with HEAL have earned the largest grant in the history of the university: \$87 million.

Researchers will conduct a randomized study including 16 Kentucky counties that are impacted by opioid use disorder and overdose. Researchers will work with communities to develop a localized plan to implement evidence-based practices that can be used as a national model for addressing the opioid epidemic.

Other contributors to this study were Dr. Zhengyan Huang, Dr. Minji Sohn, and another HEAL Grant collaborator, Dr. Michelle Lowfall.

For further updates about UK's HEALing Communities study, visit uky.edu/healingstudy.

2.1
MILLION

APPROXIMATELY 2.1 MILLION
PEOPLE IN THE U.S. HAVE AN
OPIOID USE DISORDER

#5

IN 2017, KENTUCKY HAD THE
5TH HIGHEST NUMBER OF
OPIOID-RELATED OVERDOSE
DEATHS OF ANY STATE

54

OF THE 220 COUNTIES MOST
AT RISK OF A HEPATITIS C
OUTBREAK, 54 ARE IN KENTUCKY



Dr. Trish Freeman, part of a team of UK researchers collaborating on the \$87 million HEALing Communities study

OUR RESEARCH

“The research we are able to do is both cutting edge and collaborative, crossing the spectrum from basic science to translational science, to outcomes and policy. The UKCOP effect is real—we are pushing the field forward.”

LINDA DWOSKIN, PhD, CHIEF RESEARCH OFFICER

\$57.7
MILLION
IN COLLABORATIVE FUNDING

RESEARCH FUNDING
HAS **MORE THAN**
DOUBLED SINCE 2012

UK COLLEGE OF PHARMACY
WAS NATIONALLY RANKED:

#4 IN TOTAL
RESEARCH
GRANTS

#3 IN FUNDING
PER PI

PRIMARY & COLLABORATIVE RESEARCH FUNDING (DOLLARS IN MILLIONS)

FISCAL YEAR	PRIMARY RESEARCH FUNDING	COLLABORATIVE FUNDING
2015	\$12.0	\$26.5
2016	\$11.9	\$12.8
2017	\$17.9	\$31.2
2018	\$21.9	\$32.0
2019	\$21.1	\$57.7



234 PUBLICATIONS
PRODUCED BY UKCOP
FACULTY IN 2019

ELEVATING CARE

UKCOP is improving health care through pioneering research and innovative clinical practice.



First School of Pharmacy to Require Coursework in Differential Diagnosis as Part of PharmD Program

When we launched our new core curriculum in the fall of 2016, we did so with the commitment to continue advancing the pharmacy profession. As the pharmacy practice model has moved from hometown apothecaries to pharmacists being a central point of care for many in the United States, we wanted to make sure our students were more than equipped to practice at the top of their license. As a result, we introduced Differential Diagnosis as a required 2-credit hour stand-alone course for our third-year professional students.



We are continuing to develop collaborative patient care protocols with our medical colleagues and work toward building more sustainable models of pharmacy practice in the ever-changing landscape of healthcare.

To that end, we believe it is important to utilize a common language and be explicit about what students are learning in terms of pharmacists' clinical decision-making abilities using diagnostic reasoning.

When pharmacists provide patient-centered care, they engage in the differential diagnosis process, whether they realize it or not. Differential diagnosis is the process of developing a list of potential causes of a patient's presenting symptoms, prioritizing and risk stratifying the possibilities in terms of severity, probability, and ability to treat. Actively engaging in the differential thought process enables students to see and discuss how differential diagnosis is applied in pharmacy practice and how it

differs from its application in medical practice, which is an important distinction. For example, pharmacists utilize differential diagnosis when patients present to the pharmacy counter with a symptomatic complaint and ask for a recommendation, when evaluating whether a patient's symptoms are due to a potential drug therapy problem, or when evaluating the appropriateness, safety, and efficacy of drug therapy for an established diagnosis.

Our instructors for the class work as an interprofessional team, which consists of physicians, physician assistants, and pharmacists. Each section of the class meets weekly for 110 minutes to review patient cases with the instructors and think through and discuss possible diagnoses.

The course emphasizes the application of clinical reasoning through the process of differential diagnosis, a formalized and tangible process that enables instructors to add varying degrees of complexity and depth to the education students already receive, with the ultimate goal of preparing them to fully utilize the Pharmacists' Patient Care Process.

Being clear about the fact that our students are learning differential diagnosis allows the use of a common language across professions and fosters a necessary skill to address healthcare gaps in primary care. Using common language enhances interprofessional communication, mutual understanding in terms of clinical decision-making abilities, and mutual respect regarding roles, responsibilities, and scopes of practice among health professions.

Our students tell us that differential diagnosis training in pharmacy school improved their critical thinking skills, developed their clinical judgment, and built their confidence in communicating with patients and medical professionals regarding patient care. With this type of advanced training, our student pharmacists can be better advocates for their patients and better collaborators and communicators with other healthcare professionals. Our hope is to see this translate into confident pharmacists and change-agents for advancing the profession of pharmacy.

REVENUE

(DOLLARS IN MILLIONS)

\$32.7

TOTAL REVENUE

\$16.8

EDUCATION-DRIVEN FUNDS

\$14.7

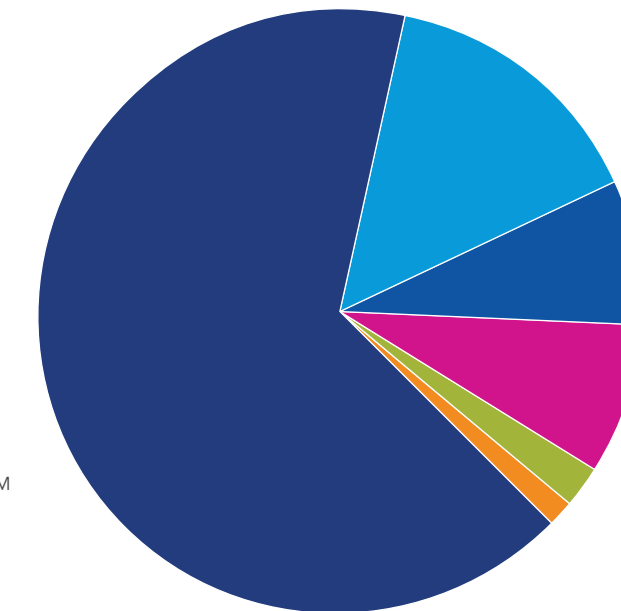
RESEARCH-DRIVEN FUNDS

\$1.2

ENDOWMENTS/GIFTS

EXPENSES

- \$22.2 MILLION RESEARCH
- \$4.9 MILLION PharmD PROGRAM
- \$2.6 MILLION INFRASTRUCTURE
- \$2.7 MILLION PhD PROGRAM
- \$0.8 MILLION RESIDENCY PROGRAM
- \$0.4 MILLION CENTERS



\$10.3M

FACULTY SALARIES

\$11.8M

STAFF SALARIES

\$3.3M

TRAINEE COSTS

\$7.3M

OPERATING EXPENSES

\$17.7M

ENDOWMENT MARKET VALUE

\$1.9M

IN PRIVATE PHILANTHROPY

423

GIFTS GIVEN TO THE COLLEGE

APPROXIMATE TUITION COSTS

\$28,000

IN STATE

\$51,000

OUT OF STATE

\$780,000

IN SCHOLARSHIPS DISTRIBUTED IN 2019

#ONEDAYFORUK2019

51 GIFTS \$7,795 RAISED

SAVE THE DATE FOR THE NEXT #ONEDAYFORUK ON APRIL 21, 2020

Top 5 Reasons to Update Your Info with UKCOP

- 1. REUNIONS.** What better way to reconnect with classmates than reunion weekend? As if you needed another excuse to visit Lexington just in time for football, Big Blue Madness, and Keeneland, you'll also get a chance to reminisce about your golden days at UKCOP with old friends. And have you seen the new building?
- 2. MENTORSHIP.** Our current students and recent graduates love hearing the success stories of our more established alumni. Our alumni love to share their tips and tricks for cracking the pharmacy industry. Moving to a new city? Looking to redirect your career? Let us be your mentorship matchmaker – no red roses required.
- 3. CHALLENGE COINS.** Been there, done that, got the coin. Oh, you don't have a challenge coin yet? We're happy to mail you one so you can join in on our newest tradition. Or, you could end up buying a round of drinks for not having your coin at the next conference. Your choice.
- 4. FLAGS.** Perfect for epic group photos at wedding receptions, showing off your #pharmfam pride while adventuring abroad, or displaying in your super cool man cave or she shed (you'd still have to send us pictures). We've got you covered.
- 5. THE (BI)MONTHLY DOSE.** If your inbox is not receiving the bi-monthly alumni newsletter, you're seriously missing out. We celebrate college wins, recognize alumni milestones, and keep you up to date on upcoming events, so you never have to wonder when the next reunion weekend will be (it's October 10th, 2020). And we promise, no spam.

READY TO UPDATE YOUR INFO? Send your first and last name, degree year, and the best email address to rosa.mejia@uky.edu or text it to 859-363-5577. If you'd rather talk to a human, call our Alumni Director, Rosa Mejia, at the same number to chat over the phone.



Consider setting up a recurring monthly gift to the College of Pharmacy Annual Fund to ensure the UKCOP legacy continues.

Would you be willing to help by making a gift in honor of our 150 year anniversary as a college? Every penny helps.

\$15/month

covers the cost of membership dues for a student to join a student organization

\$50/month

covers the cost of an iPad and Apple Pen for one student for four years

\$150/month

helps sponsor a student traveling for job/residency interviews

\$1,500/month

helps covers cost of tuition for any student in need

If you would like to share your time, talents, or resources in support of students and the mission of the UK College of Pharmacy, please reach out to our Senior Director of Philanthropy, Mary Beth Neiser marybeth.neiser@uky.edu. If you would like to give online, visit <http://bit.ly/giveukcop>.