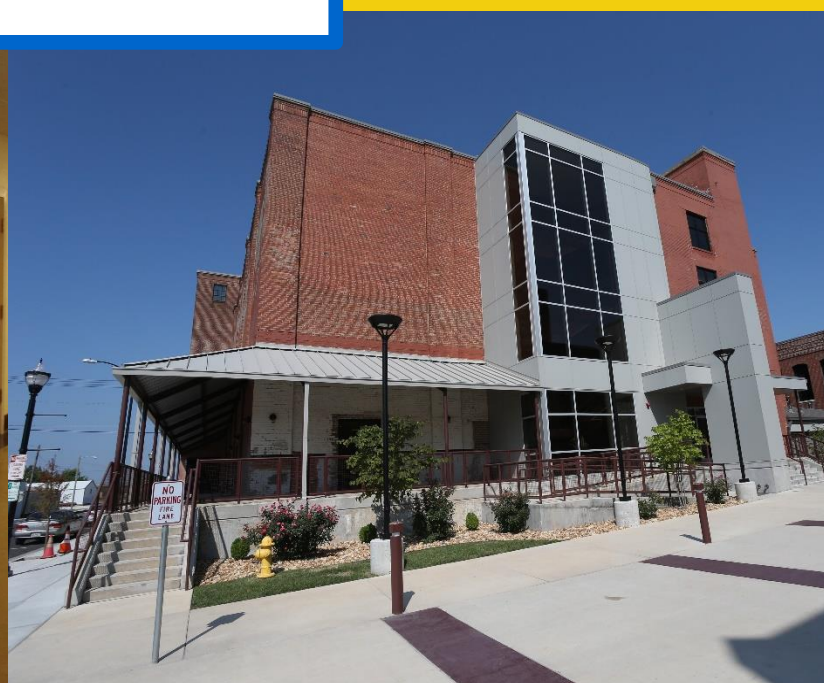




2017
Annual Report



Leading
Education and
Research



Message from the Dean

The UMKC School of Pharmacy sees itself shaping the future of health care and improving lives. To achieve that vision, we set our mission to educate, innovate, discover, engage, and serve to improve health. We have four major goals with placing student success at the center of everything we do being the first and primary driving goal.

We steadfastly advance statewide engagement, outreach, and impact of our program. We strive to promote diversity creating an inclusive environment where all can feel welcome and appreciated. And, we persist in our efforts to lead in the life and health sciences excelling in research and economic development.

Throughout this 2017 annual report, you will find evidence that we truly have placed student success at the center of our efforts. We are graduating highly knowledgeable and skilled pharmacists who are not only prepared to pass necessary board exams, but also achieve high placement rates in employment and, we believe, leave here prepared to practice the profession in 2018 and beyond. We are graduating scientists who have made significant contributions to new drug development, drug delivery, and understanding of processes underlying health and disease. We reached a major milestone in our goal to advance statewide engagement by enrolling our fourth



cohort of students in the Springfield expansion at Missouri State University. We have also expanded our efforts to recruit a diverse student body.

Through all of this our students, staff, and faculty are bringing national attention to our university through significant publications, major national awards, and high-profile leadership in national and international organizations. This suggests that we have made headway in our goal to lead in the life and health sciences.

We are pleased to present the annual report of the University of Missouri-Kansas City School of Pharmacy summarizing some major highlights of 2017. A much more detail is available in our annual programmatic assessment report.

Russell B. Melchert, PhD
Dean, UMKC School of Pharmacy

TABLE OF CONTENTS

Program Reports.....	4
Admissions	
Early Assurance	
Scholarships	
National Examination Rates	
Residency Match	
Job Placement	
Students.....	10
Poverty Simulation	
HemoTool App	
Student Athletes	
Student Association Activity	
Alumni and UMKC Foundation.....	18
Alumni Association	
Alumni Achievement Award	
UMKC Foundation	
Diabetes Study by Alumni	
Faculty.....	26
New Faculty	
A Chair-Elect	
Opioid Research	
Health Sciences District	
International Award	
UMKC Summer Camp	
Faculty Publications	



Three Campus Sites

One Bold Mission

Mission

To educate, innovate, discover, engage, and serve to improve health

Vision

Shaping the future of healthcare, improving lives

Core Values

Leadership

Community

Professionalism

Innovation

Service Orientation

Excellence

Triple Threat

Three Sites Serving Missouri

Kansas City

- Metro area with more than 2 million people
- Students enjoy urban campus life near two great hospitals: Truman Medical Center and Children's Mercy
- Campus on Hospital Hill with School of Medicine, School of Dentistry, and School of Nursing



Springfield

- Home of Missouri State University and newest addition to program
- Students enjoy newly renovated building in Brick City district
- Students can train at Mercy Hospital Springfield, Cox Health System, or Jordan Valley Community Health Center

Columbia

- Home of University of Missouri, the state's largest public research university
- Student can train at the MU Health Care University Hospital and the Harry S. Truman Memorial Veterans' Hospital
- MU houses the state of the art Sheldon Clinical Simulation Center

Pharm.D. Class of 2021

2017 Admissions Information

Number Applied
to UMKC SOP

363



Number of Offers
Made

195



Matriculated
Class of 2021

154



PCAT Performance	
Biology	56
Reading Comprehension	53
Quantitative Ability	56
Chemistry	57
Composite	56
National Average PCAT Composite	60

Student Characteristics	
Percent Missouri Resident	85 %
Percent Female Students	57 %
Average Age	22
Average Cumulative GPA	3.488
National Average Cumulative GPA	3.31

Racial Demographic Data	
White	65.6%
Asian/Pacific Islander	17%
Black or African American	3.2%
International/Foreign	3.2%
American Indian or AK National	0%
Hispanic or Latino	5.2%
Two or more races	2.6%
Not Specified	3.2%

Building Future Classes

2017 Early Assurance Program

Description

The Early Assurance (EA) Program allows 40 incoming college freshmen priority status for the Pharm.D. program at UMKC. Students apply for EA during their senior year. Students admitted to the EA program graduate high school knowing they are on track to earn their seat in the School of Pharmacy.

EA students will spend their first two years on UMKC's Volker Campus completing the pre-pharmacy requirements. They will enjoy opportunities that prepare them for the Pharm.D. application process and their professional career.

Benefits

Once students are admitted to the EA Program they will receive certain benefits setting them apart from other pre-health students. These benefits will include a press release to their high school, priority advising appointments, special networking opportunities with School of Pharmacy faculty students and alumni, as well as additional resources to help them prepare for the Pharm.D. program.

Eligibility

To qualify for the Early Assurance Program, students must meet all UMKC freshman admission requirements and:

- Have at least a **3.5 GPA** at the end of junior year
- Have at least a **25 ACT** composite score or **1200 SAT**

Missouri residents and non-residents are eligible to apply.

65 Applicants



57 Eligible for Admission

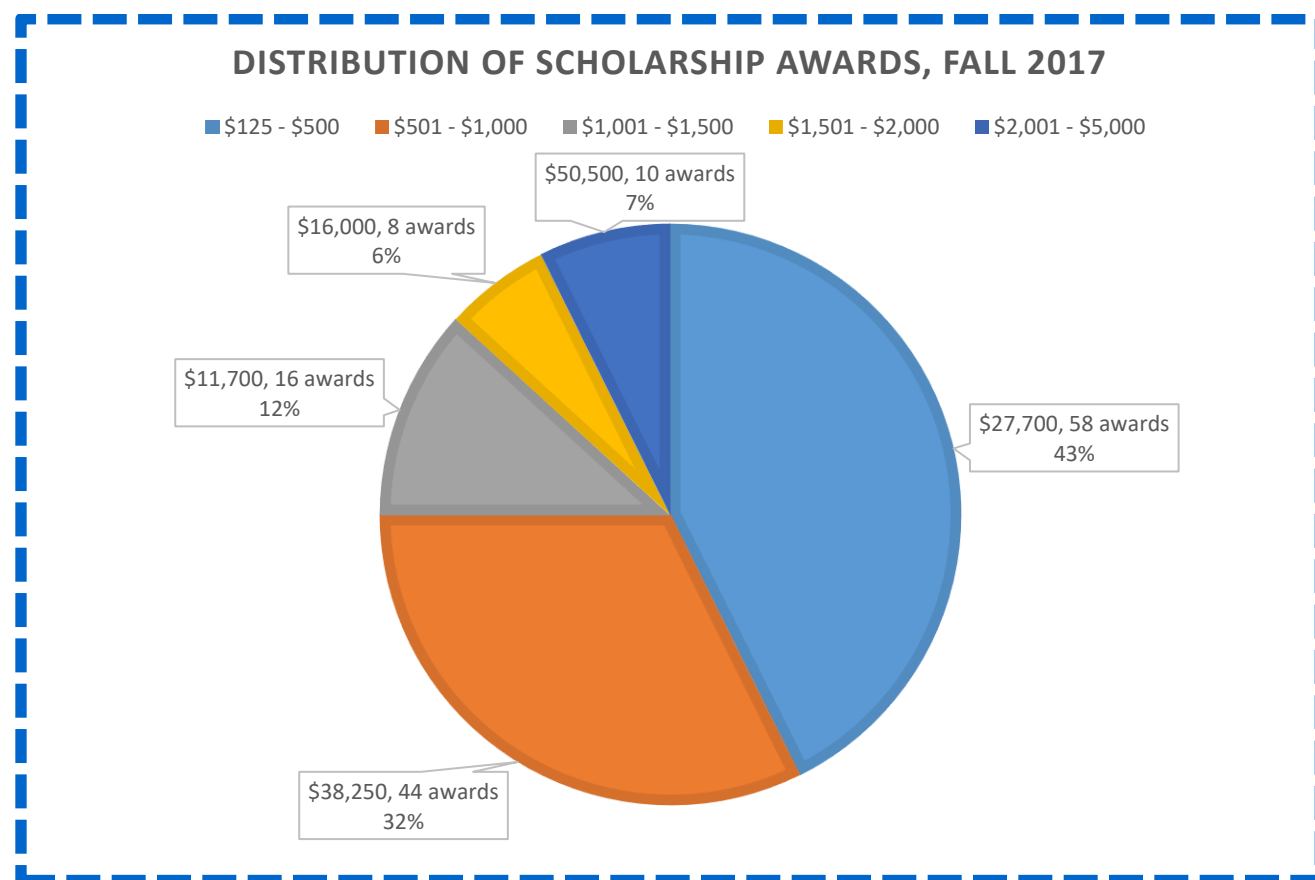


37 in Fall 2017
EA Class



Student Scholarships

Funding a Future



In 2017, UMKC School of Pharmacy was able to provide \$144,150 in scholarship funds to students. Through the UMKC Pharmacy Foundation, the School was able to provide about \$20,000 more in scholarships than in the two previous years.

Percentage of Students that Received a Scholarship	
Pharm.D. Students	76 %
Graduate Students	37 %

Passing Rates and Beyond

Excelling at National Standards & Job Placement

North American Pharmacist Licensure Examination (NAPLEX) Passing Rates		
Year	National Pass Rate on First Attempt	UMKC Pass Rate on First Attempt
2015	92.6 %	95.1 %
2016	85.9 %	81.5 %
2017	88.0 %	89.5 %

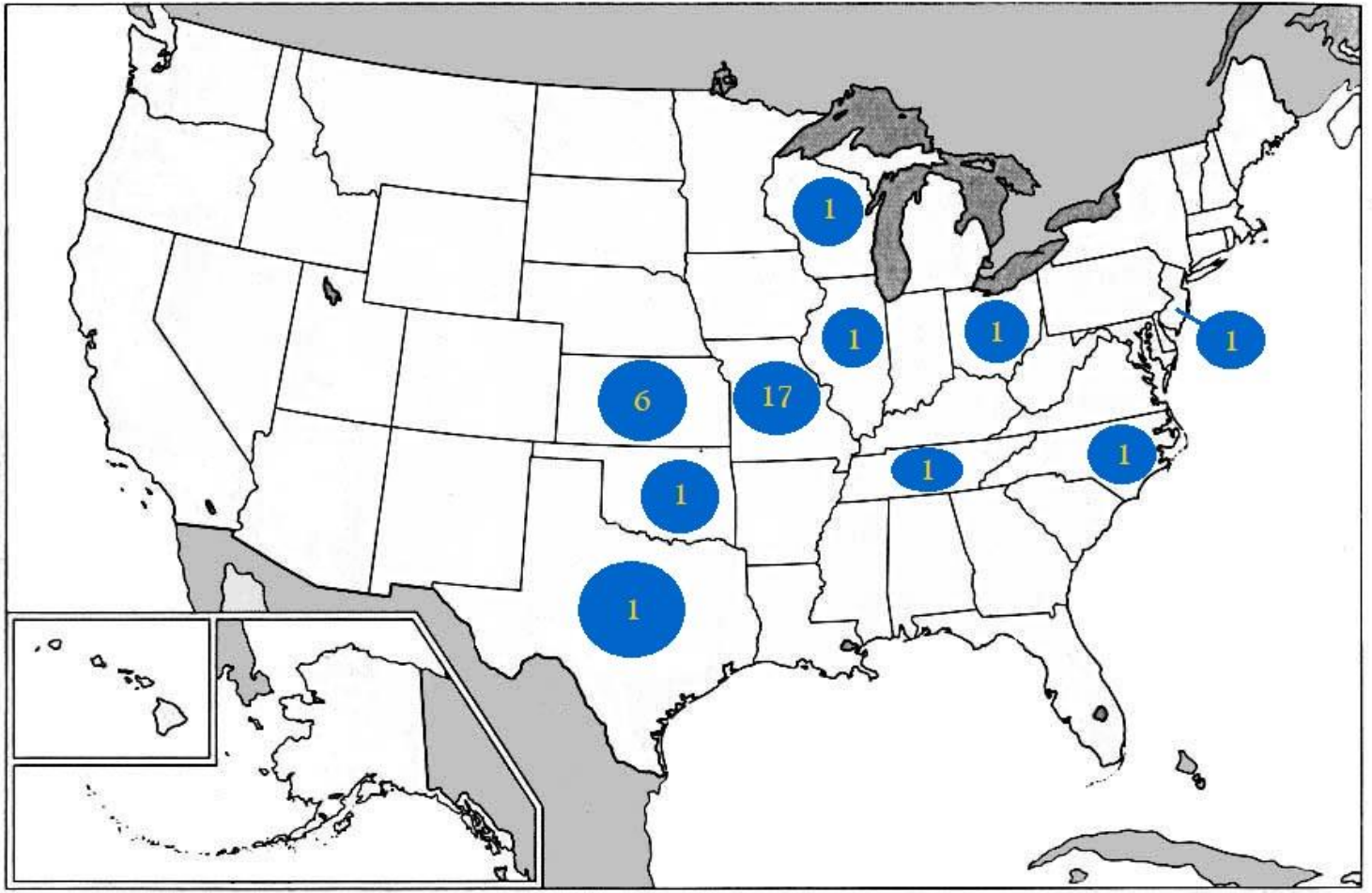
Multi-State Pharmacy Jurisprudence Examination (MPJE) Passing Rates		
Year	National Pass Rate on First Attempt	UMKC Pass Rate on First Attempt
2015	94.4 %	97.0 %
2016	84.7 %	85.3 %
2017	85.2 %	90.0 %

Class of 2017 Post Graduate Placement	
Employment	74 %
Residency or Fellowship	26 %

Class of 2017 Satisfaction		
Satisfaction Categories	National Rates	UMKC SOP Rates
Felt prepared to enter pharmacy practice	94.7 %	95.1 %
If restarting career, they would choose pharmacy again	80.9 %	86.9 %
Would choose same pharmacy program again	82.8 %	94.3 %

Residency Match

Placing Graduates above the National Average



2017 Match Rate Data

- National Match Rate: 67%
- UMKC SOP Match Rate: 72.5%
- Number of UMKC Applicants: 40
- Number of UMKC Matched: 29

UMKC students who participated in PGY-1 Match had higher placement rate than national average

53 % of UMKC students placed in residency programs in Missouri

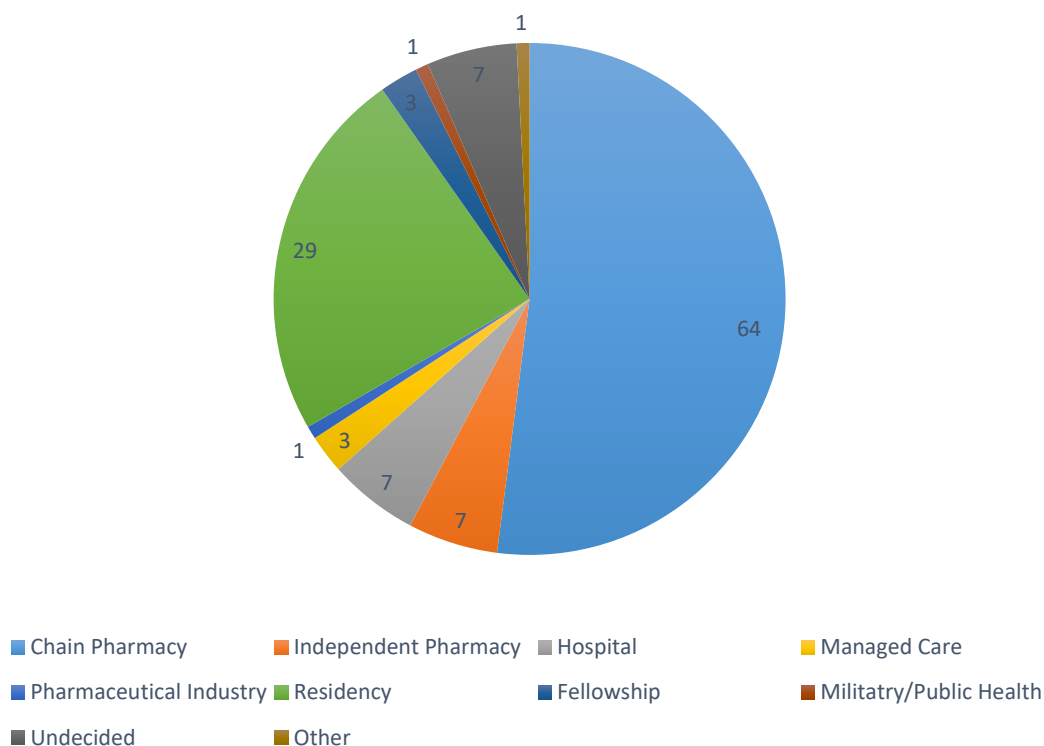
Career Paths

Success for Graduate and Professional Students

Employment Data for 2017 PhD Students

PhD Students	Position	Employing Institution
Dr. Anantha Nookala	Staff Scientist	Covance
Dr. Yan Zhang	Research Associate	University of Kansas Medical Center
Dr. Harika Vemula	Research Scientist	Harvard University School of Medicine
Dr. Vibhuti Agrahari	Assistant Professor	Shenandoah University, Bernard J. Dunn School of Pharmacy
Dr. Wei Jin	Postdoctoral Fellow	University of Kansas-Lawrence School of Pharmacy

Class of 2017 PharmD Practice Plans: 123 Students



Poverty Simulation

Experiential Learning

In Kansas City, nearly one in five residents live below the poverty line – a harsh reality shared by many patients UMKC students see on Hospital Hill.

To better understand the challenges and frustrations of those living in poverty, students participated in a large-scale poverty simulation, part of the Interprofessional Education (IPE) program on the UMKC Health Sciences campus.

In November 2017, more than 400 UMKC medical, nursing, pharmacy and dental students, along with faculty and volunteers, joined to experience the virtual realities of poverty and its effects on patients. The simulation was designed to incorporate IPE, an emerging teaching approach addressing the future of health care, in which a close-knit team of dentists, physicians, nurses and pharmacists provides personalized, integrated attention to patients.

In the simulation, one of five such sessions this fall, students role-played living for a month in poverty, with each “week” lasting 15 minutes. The goals were to keep their home, pay all bills, hold down jobs and feed their family and children each day – all while managing issues such as an illness in the family, a stolen car and expenses to repair their plumbing.

Students could rely on stations around the room, such as employers, a grocery store, a health care center, social services, a pawn shop and a quick cash outlet, to help them meet their goals.

Following the simulation, the group members spent time sharing their experiences and discussing lessons learned.

“It was sad to realize that all my time was spent thinking about just getting the minimum needs taken care of, and that sometimes even the minimum isn’t enough,” one student said.



Interim Chancellor and Provost Barbara A. Bichelmeyer addressed the participants after observing the simulation. She noted that the first place people went was the employer, and that many sought help from the pawn shop rather than turning to other resources. **And the one station that didn’t get much business? The medical center, a point not lost on the room full of future health-care providers.**

“Today’s program shows poverty is not about people not being well-intentioned, but about people not being well-resourced,” Bichelmeyer said.

The simulation, created by the Missouri Association for Community Action, was created to help people – such as future health-care providers – understand the challenges of living in poverty day to day. It lets participants look at poverty from a variety of angles and then discuss the potential for change within their communities.

According to Stephanie Ellison (UMKC School of Medicine), who coordinated the simulation with Valerie Ruehter (UMKC School of Pharmacy), the day purposely included data about poverty in Missouri.

“The activity is very personal and designed to have students walk in the shoes of someone in poverty,”



Ellison said. “The takeaway is to empathize with our patients and learn very specifically about the problems our patients face.”

Ruehter agrees. “We sometimes get frustrated when our patients aren’t doing what we asked them to do or don’t show up for clinic appointments,” she said.

“This is an opportunity for students to come together and wear the other shoe, to see that it’s not always as easy as we think it might be. We can create individual practitioners, but in health care today, it takes an entire team to create positive patient outcomes. With IPE, we give students the chance to become familiar with what every discipline brings to the table, which hopefully will make a more seamless health care system.”

That’s a goal of IPE, Ellison said. “If we have our students learning in silos, but they are expected on day one in practice to begin working together as a team, then we haven’t really done our job. At UMKC, we are breaking down those silos.”

At the conclusion of the simulation, students heard a call to action: to do more, learn more, go where the patients are and ask how you can help change the system, even a little bit.

“If what we do at UMKC is to help our health-care professionals in the future think about the humanness of the people they are working with, both their peers and their patients, then I think we will have made a really significant contribution,” Bichelmeyer said.

Student Develops Health App

HemoTool

Dakota Rosenfelt, who has hemophilia, created an app (HemoTool) which helps manage blood conditions.

Rosenfelt is a 22-year-old PharmD student with Severe Hemophilia A. Diagnosed at 13 months of age, he grew up only knowing life with a bleeding disorder. However, he refuses to let that set him back, define who he is, or limits his goals. From an early age, he learned the importance of maintaining a prophylactic schedule, keeping track of bleeds, and knowing when it was time to order more factor. In other words, there is MUCH more to managing a bleeding disorder beyond just self-infusion.

During high school, Rosenfelt began to fill his schedule with various activities and events which made time-management more important. He began thinking of how he could manage the activities of his daily life along with the various responsibilities which come with having Hemophilia. The “lightbulb” moment came, he explains, once he was approached by his local HTC in Kansas City to take part in an extended half-life factor trial. “While participating in the study, I was given a device to track all my treatments and the thing was cumbersome and just plain awful.”

He began researching other current technologies and apps. He found one thing they shared in common: they lacked simplistic functionality and ease-of-use. Rosenfelt began his journey to create a mobile app that was all-encompassing— a “tool” one could fit in their pocket which allowed a user to independently manage their hemophilia when it was convenient and with minimal hassle. HemoTool was born!

His work did not end there. He felt there was more he could do for his community and for the many others worldwide living with chronic medical conditions. To make his mission possible, he started a 501(c)(3) non-profit that was created to assist those living with chronic medical conditions in managing their overall health and improving their clinical outcome.

“I have made it my personal mission to ensure all affected by chronic conditions have one less thing to worry abouts. We shouldn’t have to say ‘I suffer from a chronic condition.’ We should be saying, ‘A chronic condition suffers from me!’”

HemoTool is available in the App Store and on Google Play.



Student Athletes

PharmD Excellence in Multiple Fields

Pick a sports metaphor about facing a challenge and UMKC School of Pharmacy student-athletes are living it.

They're pursuing health doctorates while competing at the Division I level. For track-team captain Mallory Short, it's one more hurdle to jump. For runner Katie Tuck, it's not a sprint, it's a marathon. For tennis player Melinda Johnson, it's keeping a lot of balls in the air.



UMKC Men's and Women's Tennis.

"Only a select few student-athletes are going to go pro in their sports so our job is to give them the tools to be successful in the workforce."

Coaches have been able to accommodate nearly all graduate-degree programs. They worked with Johnson's, Short's and Tuck's academic

schedules by creating special one-on-one practice sessions – some starting as early as 5 a.m.

"There have been some points where I've asked myself if I can do this, and I know these will be the two most challenging years of my life so far," said Johnson, who is a UMKC Tennis team captain and on track to receive her Doctor of Pharmacy in 2020. "I am grateful that the UMKC School of Pharmacy and UMKC Athletics have helped make this possible for me and other student-athletes. It's really unusual that a Division I school will let you compete while pursuing a health professions degree."

Indeed, Johnson, who has wanted to become a pharmacist since she was a high-school freshman, began her academic and athletic career at the University of Kansas. It became apparent she wouldn't be able to both study pharmacy and compete there so she transferred to UMKC.

At UMKC, coaches say there's a reason they're called student-athletes: they're students first, athletes second.

"People want to hire athletes because they can juggle and manage a lot," said Kendell Hale, head coach for

"There were a lot of practices in the dark," said Short, an All WAC Conference and All WAC Academic in track. Short and her student-athlete colleagues met with UMKC School of Pharmacy administrators and professors to coordinate academic requirements with athletics schedules, which includes traveling to universities in the western states of the U.S. UMKC is part of the WAC – Western Athletic Conference.

"This has taken tremendous feats of time management and sacrifice on their parts," said Patricia Marken, associate dean for student affairs at the UMKC School of Pharmacy. "Although it's challenging, everyone benefits from the student-athletes and their leadership skills and passion for health and wellness."

Johnson, Short and Tuck all acknowledge they're not able to become involved as they'd like to with pharmacy school student organizations and activities. Still, Tuck thrives on the hectic schedule. "I do better when I'm challenged and busy," she said.

Student Association Activity

UMKC Chapter of APhA-ASP

The American Pharmacists Association – Academy of Student Pharmacists is a national organization for students preparing for professional careers in pharmacy. The chapter at UMKC has been very active over the last year.

National Recognition: Chapter of the Year Award

The UMKC chapter of the APhA-ASP won the 2016-2017 Chapter of the Year Award.

“This was an amazing accomplishment considering there are more than 130 chapters of APhA-ASP around the country,” said Russell Melchert, dean of the UMKC School of Pharmacy. The UMKC chapter also won this distinction in 2012.

The UMKC chapter was recognized for its work in providing wellness screenings – such as blood glucose, blood pressure, heartburn and bone mineral density – as well as immunizations, medication counseling and other services.



The UMKC chapter reaches out and provides those services for those most in need including the underserved and underinsured.

National Leadership and Acknowledgments

Sierra Woods (Columbia) ran for Regional Delegate. Sierra was elected as the Region 6 Delegate for the 2017-2018 year.



Sierra Woods and Shannon Stiles (Kansas City) received the Member Recognition Award in thanks for their enthusiasm, hard work, and commitment to the UMKC Chapter.

The Chapter also received three Patient Care Project Awards for providing patient care to

surrounding communities. Those initiatives recognized were Generation RX, Operation Heart, and Operation Immunization.



Elizabeth Rodman was also the recipient of the 2017 APhA-ASP Senior Recognition Award. Rodman also received the APhA foundation Student Scholarship Program. Sara Massey was appointed to the National Standing Committee on Communications. She served as the committee's chair.

The National APhA-ASP Facebook page featured OTC Medicine Safety and two of UMKC's local initiatives: Root4Health and Operation Self-Care. The UMKC Chapter was able to educate 197 patients at the 11th Annual Kansas City Health and Public Safety Fair.

Self-Care Initiative

According to the CDC, only about 17 percent of U.S. adults are considered to be in a state of optimal mental health. Based on this statistic, it is likely that someone around you has been affected by a mental health



condition, whether it is your parent, sibling, neighbor or friend.

The University of Missouri-Kansas City School of Pharmacy APhA-ASP Chapter has recognized this need and is taking steps to educate members of the community about mental health.

Kimberly Ehrhard, a third-year pharmacy student, set out to achieve this mission and has launched a new, chapter-specific patient care initiative called Operation Self Care. Ehrhard's efforts were featured in an article ("Tragedies Inspire New Community Project) in the *Student Pharmacist's Magazine: Mental Health* issue.

Local Awards and Events

In 2017, Vincent Cascone and Amanda Peterson received the APhA-ASP Senior of the Year Award. Vincent Cascone also received the Graduate

Graduate/Professional Student Award from the UMKC Student Government Association (SGA). The same organization provided further praise to the efforts and leadership of the UMKC's APhA-ASP chapter.

The UMKC SGA presented the Chapter with Outstanding Service Program of the Year Award at the 2017 SGA Gala Awards. At that same ceremony, Sara Massey also received the Outstanding Leader Award as the chapter's president. These awards were among 350 student organizations and were a true testament to the leadership and teamwork of the chapter.

The local chapter participated in MDS Awareness Week by supporting Bone Marrow

Registration Drives. All three sites held an event as well as Neosho, MO. The local chapter added nearly 300 people to the national registry in Marcy 2017.

Over the year, the UMKC chapter held 366 events, educated and provided services to 19,938 patients, and reached a total of 2,405,172 patients through public relations efforts. Through these activities, the chapter reached 80 of the 114 counties in the state of Missouri.

These activities represent just a few of the amazing things, the UMKC Chapter of APhA-ASP was able to accomplish in 2017.



Student Association Activity

Dynamic Involvement: Student Group Reports

Academy of Managed Care Pharmacists

National distinction: AMCP Foundation/Pfizer Summer Internship program

- UMKC Members: Kody Nelson & Amber Reinert

Description: This 10-week, immersive experience is designed to develop future leaders in managed health care through exposure to population health and managed care pharmacy principles while working with Pfizer Medical Outcomes Specialists and AMCP Foundation representatives. After the completion of Kody and Amber's experience, they presented their capstone research projects on a national stage at AMCP Nexus in Dallas, TX

In total, seven students attended AMCP Nexus in October. In addition to Kody and Amber, another student served as a member on a national committee. The students attended seminars about value-based contracting, the specialty drug pipeline, and many great topics in managed care pharmacy. AMCP hosted four guest speakers in Fall 2017 who talked about their non-traditional roles as pharmacists

Local awards

- Senior of the Year 2017: Katelyn Lutz
- Member of the Year 2017: Sam Breckenridge



Kappa Epsilon

Over the past year, Kappa Epsilon has accomplished many different things. First, the chapter received several recognitions from the Kappa Epsilon Biennium National Meeting including Honorable Mentions in Alumni Outreach and New Member Recruitment. Our chapter welcomed 28 new members to the organization in Fall 2017.

During the pledge season, our chapter held our 10th annual Bowling for Breast Cancer event where we raised and donated \$695 to the Young Survivors Coalition. Some of the other service events that have been held throughout the semester include poison prevention education, trunk or treat, and adopt a family for Christmas.

Kappa Psi

Volley For Charity: Annual beach volleyball philanthropy event in memory of Brother Wes McIntire, who lost his battle to cancer in 2005. This





past year we were successful in raising over \$3,000.00 to be donated to the American Cancer Society.

CVS Professional Development: UMKC and Kappa Psi alumni Dr. Zach Kissel presented on professional development strategies, how to be successful in your practice, and the future of pharmacy.

IV Therapy Education: Kappa Psi collaborated with the UMKC Nursing School to provide an event to educate student pharmacists on IV administration. Senior nursing students provided information and hands-on demonstrations on the basics of IV administration, pumps, lines, and different types of IV access. The goal of the event was to improve communication between the two professions. By decreasing miscommunication between nursing and pharmacy, errors can be avoided and patient outcomes improved

Annual Halloween Party: Held at the Westport Flea Market, the chapter was able to raise \$100 and collect around 50 canned goods for the Harvesters Food Network.

Rho Chi

Rho Chi Alpha Omega Chapter presented two awards last year

- Faculty of the year: Dr. Kylie Barnes
- Senior of the year: Elizabeth Rodman

During an informational meeting we give a brief overview describing Rho Chi, planned activities, and eligibility requirements. Dr. Andrew Smith also gave a brief talk on being successful in pharmacy school and in a career. This year students gave a “survival guide” to the P1 students who attended. This guide included input from current Rho Chi members on places to study, local discounts with a student ID, local food specials, common food trucks to look for on hospital hill, resources students have access to through Blackboard and the health sciences library, and study tips. Each campus had a survival guide designed specifically for them with the same categories. Other services provided to students included the following:

- Introduced a study room for any pharmacy school student to attend every Tuesday from 4 to 9 pm. This was to offer a quiet place to study with peers to promote community and support.
- We were able to offer Chipotle for dinner during the study session during finals week
- During finals week, we offered coffee and donuts from Lamar’s for pharmacy students to stop by and enjoy during a stressful week



Alumni Association

Sustained Service



Pharmacy Alumni Association Reunion Dinner

On October 7, 2017, the UMKC Pharmacy Alumni Association held a Reunion and Alumni Awards Dinner at Lidia's Italy restaurant. That evening the Association honored five alumni who have provided so much to our community. One alumnus received the Honorary UMKC Alumnus Award and four were recognized as Preceptors of the Year.

Honorary UMKC Alumnus Award

Robert W. Piepho, Ph.D., FCP
Dean Emeritus, UMKC School of Pharmacy
Professor Emeritus, Pharmacology and Toxicology

Preceptors of the Year

Terry Blakley, BS Pharm (1985)
Kelly Cochran, PharmD (UMKC faculty)
Karrie Derenski, PharmD (1996)
Derick Miranda, PharmD (2011)

Alumni Association Board of Directors

President
Eric Wombwell

Immediate Past President
Amy Sipe

Secretary/Treasurer
Phil King

Kim Davis
Rob Foundree
Doug Hall
Glenn Harte

Board Members
Todd Krueger
Cydney McQueen
Nancy Ogden

Doug Reed
Heather Rottjackob
Jess Wissinger
John Witt



Alumni Achievement Award

Heather Lyons-Burney, PharmD

Having a passion for both chemistry and biology, Heather Lyons-Burney (Pharm.D. '94) knew early on that she wanted a career in health care. She would eventually take her two passions and become an educator, co-owner of multiple pharmacies and co-founder of a health clinic serving those in need in the Branson, MO region.

As an undergraduate, she worked in a community pharmacy where two pharmacists told her about a new clinical pharmacy degree that would allow her to combine both clinical and science skills. Lyons-Burney says her decision to attend the University of Missouri-Kansas City was, in large part, due to its strong science curriculum. She also credits the university's many scholarship opportunities for helping her succeed in the pharmacy program.

"I received the Chancellor's award as an undergraduate, as well as various scholarships through the UMKC Pharmacy Foundation. Financial assistance was critical to my ability to succeed at UMKC by removing some of the worry about funding my education," says Lyons-Burney. Today as a practicing pharmacist, Lyons-Burney considers her most important work to be instructing future generations of health care professionals as a UMKC School of Pharmacy faculty member, teaching patients about their diseases and medications, and talking to community groups and youth about the dangers of drug abuse. She says that living her life according to the Bible scripture Luke 12:48, "...to whom much is given, much is expected,"



she has made community involvement and promoting the pharmacy profession her personal mission. That leadership led to her selection as the 2017 UMKC School of Pharmacy Alumni Achievement Awardee.

Following her residency at Cox Health Systems in Springfield, MO, Lyons-Burney served as a clinical pharmacist for neonatal and obstetrics units for several years until 1999. That next year she became co-owner of the community pharmacy Branson Drug, located in Branson, Mo. In partnership with her husband, who is also a UMKC School of Pharmacy alumnus, Lyons-Burney was able to expand Branson Drug and open two additional locations – one in Branson and another in Hollister, Mo. As a community pharmacy owner, Lyons-Burney developed innovative services to better serve patients and engage in public health efforts.

Lyons-Burney joined a catalyst group of community citizens who identified the need for affordable health care for the mainly tourist-driven Branson economy.

“Although drug prices weren’t as high as they are now, I recognized that patients also needed access to medications and became a part of the holistic team-based approach to providing care,” says Lyons-Burney. Thus, she cofounded the non-profit health care clinic, Faith Community Health. The clinic opened its doors in 2010 with limited hours and has since grown to reach those in need of affordable medical, dental, vision, mental health and medication therapies. As a practitioner on the Faith Community Health medical team, Lyons-Burney and her colleagues have served about 1,000 patients.

“By improving the health of one patient at a time, we seek to improve the overall health of our community,” says Lyons-Burney, who has taught at the UMKC School of Pharmacy’s Springfield campus, since 2014.

As a clinical assistant professor, Lyons-Burney has served on the School of Pharmacy’s curriculum, assessment and admissions committees, and also as a faculty adviser at the Missouri State University

pharmacy campus. Associate Dean of the School of Pharmacy, Paul O. Gubbins, says that “without a doubt, hiring Heather as the first faculty member for the Springfield site laid a solid foundation for the school’s success.” In addition to teaching and practicing at Faith Community Health, Lyons-Burney volunteers with a number of professional organizations including as president of the Missouri Pharmacy Association. She has also been a long-time board member of and donor to the UMKC Pharmacy Foundation.

“Dr. Lyons-Burney is a tremendous example of a UMKC alumnus who has applied her education and experience into health care opportunities for her community, her profession and her alma mater,” says Russell Melchert, dean and professor, UMKC School of Pharmacy.

Lyons-Burney was honored during UMKC’s annual Alumni Awards Luncheon on April 20. The event took place in Swinney Recreation Center on the UMKC campus.



Pharmacy Foundation

A Year of Support

Mission of the Pharmacy Foundation

The foundation's purposes are to promote and further the education of future pharmacy professionals in the state of Missouri and to help the University of Missouri-Kansas City School of Pharmacy achieve its mission by garnering and extending support for its students, faculty and staff.

History

The University of Missouri-Kansas City Pharmacy Foundation was founded in 1951 by a concerned group of men who felt that the School of Pharmacy needed a broad base of support to develop into a state-of-the-art educational institution. With the help of J. Leo McMahon, Mathew "Bill" Wilson and others, the foundation and the Century Club developed a financial foundation for the school. The foundation continues to support the school through scholarships, special events and annual contributions.



Achievers of Excellence Ceremony

The UMKC Foundation holds an annual ceremony where it awards a number of scholarships to students who demonstrate a commitment to excellence. This year the foundation was able to award 95 students with 105 scholarships, contributing approximately \$90,200 to the education of UMKC Pharmacy students.

Foundation Officers and Board Members

President
Nancy Miller

Secretary
Leigh Anne Nelson

Treasurer
Robert Piepho

Past President
Dennis Bond

Investment Manager
Bill Larmer

Executive Director
Jana Boschert

Staff
Jane Poe

Board Members

Seth Berry	Steve Erickson	Doug Hall	Rebecca Leonard	Pat Minard	Valerie Ruehler
Heather Burney	Sue Garnett	Glenn Harte	Elaine Manieri	George Oestreich	Dale Smith
Alan Carter	Maqual Graham	Matt Hartwig	Stanley McDermott	Keith Perkins	Roger Sommi
David Eden	Mary Beth Guy	Tami Jones	Denise McNerney	Betsy Reynolds	Fred Tonnies



23rd Annual Pharmacy Foundation Golf Tournament

The J. Leo McMahon Memorial Golf Tournament has become a proud tradition. Every year, the UMKC Pharmacy Foundation holds the tournament to raise funds for scholarships. In 2017, the event was able to raise a fair amount of money as well as the spirits of all those that were in attendance.

Small Insulin Study, Huge Diabetes Concerns

Important Work of an Adjunct Instructor and Alumnus



Adjunct and alumnus Alan Carter's research is rocking the industry

His modest but technologically advanced study centered on only 18 vials of prescription insulin. But what researcher Alan Carter, adjunct UMKC School of Pharmacy faculty member, discovered about them has sent the giant diabetes industry reeling and raised concern among patients and their advocates.

Carter examined insulin bought at multiple pharmacies, supplied by different wholesalers, in Kansas and Missouri. The concentration, or number of insulin units in the liquid solution, was labeled as 100 units per milliliter. But they averaged less than half of what they were labeled—and none met the 95-unit minimum standard. His discoveries were published

Dec. 21 in the *Journal of Diabetes Science and Technology*.

"Our findings are quite alarming and need to be further explored," said Carter, who also is a UMKC School of Pharmacy alumnus. "My hope is that a larger, fully comprehensive study will be conducted sampling both the U.S. and European supply chains to examine any impact the supply chain may have on insulin.

"This will take unprecedented cooperation between disparate groups not accustomed to working together—not to mention it won't be cheap," he added.

Carter performed the research while working as a contract researcher at MRIGlobal, a not-for-profit contract research firm next door to UMKC's Volker Campus. Even though the study was small,

it has raised concern among diabetes experts, patient advocacy groups and insulin makers — including the American Diabetes Association. Carter's findings also have been reported by the Associated Press and published in dozens of news sources including the Washington Post.

Insulin is a natural hormone secreted by the pancreas. Many people with diabetes are prescribed insulin because their bodies don't produce insulin (type 1 diabetes) or don't use insulin properly (type 2 diabetes). About 6 million Americans inject synthetic insulin each day. The study raised alarm, for starters, because without enough insulin, diabetics can eventually suffer from a multitude of serious complications: blindness, limb amputations and life-threatening damage to the kidneys and heart.

The U.S. Food and Drug Administration requires that insulin batches are tested before leaving the factory. The insulin must be kept cool as it is shipped to a warehouse and then to pharmacies. The FDA conducts spot checks during the process

Carter wonders whether his results might help explain why insulin users sometimes find a dose doesn't work as well as normal. Doctors usually attribute that to patient error: not injecting enough insulin before a meal, not

following dietary guidelines or skipping exercise.

Carter isn't faulting the two manufacturers of insulin, Eli Lilly and Novo Nordisk, and shared the study with them before it was published. Instead, Carter thinks the insulin might have gotten too cool or too warm somewhere between the factory and the pharmacy, causing some of the molecules to break apart.

Or, it's possible that the insulin molecules "stick together" so

tightly during shipping and storage that when a dose is given, some clumps don't come apart. When injected, the doses would be diluted and agitated enough in the bloodstream to break the clumps up quickly and work as expected.

"A rough analogy: think of mixing flour and water," Carter said. "If stirred vigorously, the clumps will break up. If not stirred well, the clumps remain."

In response to the study, endocrinologists and experts have

cautioned patients not to change their insulin routine.

"We strongly urge patients to talk with their doctors and pharmacists about any concerns they have with their insulin or diabetes treatment plan," wrote William T. Cefalu, chief scientific, medical and mission officer for the American Diabetes Association, in a blog post.



New Faculty at UMKC

Recent Additions to the SOP Family



Sarah Oprinovich received her PharmD from Purdue University and completed a Community Pharmacy Residency at UMKC and Price Chopper Pharmacy. She is currently a Clinical Assistant Professor in the Division of Pharmacy Practice and Administration at UMKC and the Residency Program Director for two community pharmacy residency programs. The programs are based at Ball Food Stores Price Chopper Pharmacy and Red Cross Pharmacy. She is a certified ambulatory care pharmacist.

Dr. Oprinovich's clinical practice site is Ball Food Stores Price Chopper Pharmacy. She provides patient coaching and education for diabetes and cardiovascular disease, immunizations, medication therapy management, and health screenings. As part of her role in the advancement of the practice at the clinical site, she also participates in practice management activities. Dr. Oprinovich's research interests include expansion of community pharmacy practice, and scholarship of teaching and learning



Melissa Palmer received her Doctor of Pharmacy degree from the University of Missouri – Kansas City School of Pharmacy in 2015. She completed two years of post-graduate training at the Chillicothe VA Medical Center in Chillicothe, Ohio. Dr. Palmer's PGY2 specialization was psychiatry. She is a Clinical Assistant Professor for the University of Missouri – Kansas City School of Pharmacy and currently practices as a psychiatric consult liaison clinical pharmacist at North Kansas City Hospital. Dr. Palmer is a Board Certified Pharmacotherapy Specialist (BCPS). Her research interests include substance use, antipsychotic use, and indigent populations



Diana Tamer received her Bachelor of Science in Biology from the American University of Beirut, her Doctor of Pharmacy degree from the Lebanese American University, and concluded her training at the Houston Methodist Hospital, in Texas. She completed an ASHP accredited PGY-1 residency in pharmacy practice at HonorHealth Scottsdale Medical Center in Arizona, and an ASHP accredited PGY-2 residency program in hematology/oncology at Maine Medical Center in Maine.

She is currently a Clinical Assistant Professor for the University of Missouri – Kansas City School of Pharmacy and practices as a Hematology/Oncology Pharmacy Specialist at Shawnee Mission Cancer Center. Her research interests include hematologic malignancies, thrombosis in the cancer population, gynecologic malignancies, and oncology pharmacist's role in improving cancer patient outcomes

Chair-Elect and Ingram's Icon

A Dean Leading by Example



the same thing, but there's a real shortage of health professionals in more rural parts of the country, especially rural Missouri."

The thought behind the sites in Columbia and Springfield are that students will stay closer to home to practice pharmacy. With only the Kansas City campus option, students most often preferred to stay in

In 2017, Dean Russell Melchert received two great honors. First he was listed as an Icon of Education in Ingram's Magazine and then he was elected to prestigious position of leadership in the American Association of Colleges of Pharmacy.

the metropolitan area after graduation.

Ingram's launched the Icons of Education program in 2009, recognizing the career contributions of administrators, professors, academic researchers and teachers.

Ingram's Magazine has been a leading business publication in Missouri and Kansas for more than 40 years. Every year they compile a list of Icons of Education and they honored Dean Melchert for overseeing the expansion of the School of Pharmacy's program.

Dean Melchert came to UMKC in 2010 as the dean after serving as department chair of pharmacy sciences in the college of pharmacy at the University of Arkansas. He has expanded the UMKC School of Pharmacy's reach in Missouri through fostering the UMKC programs at the University of Missouri in Columbia and Missouri State University in Springfield.

"We're now one program with three sites, which creates increased accessibility of pharmacy education to students all over Missouri," Melchert said in the February issue of the magazine. "We're trying to get more—all health professions would say



Applied Research in Service

Maureen Knell Researches the Opioid Crisis



The research of Maureen Knell, clinical associate professor in the University of Missouri-Kansas City School of Pharmacy, is being cited with greater frequency in the wake of national leaders declaring America's opioid epidemic a public-health emergency.

The New York Times, The Kansas City Star and Kansas Public Radio have featured Knell and longtime collaborator Rafia Rasu of the University of Kansas School of Pharmacy. For years, they've been analyzing data from about 690 million outpatient clinic visits by patients who suffer from chronic pain not related to cancer.

Knell, who received her Pharm.D. from the UMKC School of Pharmacy, joined the UMKC faculty in 1997.

[An estimated 2 million Americans are addicted to prescription opioids and there are more annual](#)

[deaths from overdoses than car crashes. What surprising patterns have you found in the data?](#)

People 35 to 49 years old were more likely to get an opioid prescription than younger adults — and more likely to get one than those over 65. Maybe physicians have the assumption that they're safer in middle-aged patients. Financial factors might be at play, with providers more likely to steer Medicaid patients toward inexpensive generic opioids for pain rather than alternatives like physical therapy or newer brand-name non-opioid painkillers.

Linked to that we found discrepancies in opioid prescribing that seemed to be more cultural than clinical. Poverty and chronic health conditions are higher in the South, which could explain the higher rates of opioid prescription there.

As far as the patterns we saw, we found that opioid use was reported in 14.3 percent of the total patient visits. Fifty-nine percent of these visits reported use of at least one adjuvant pain medication. Adjuvant pain medications are drugs other than opioids, acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs), that have been found effective for pain. These include medications typically used for other conditions but have been found to be useful for pain such as certain antidepressants, anticonvulsants, muscle relaxants and even topical treatments.

[The New York Times article "Opioids Aren't the Only Pain Drugs to Fear" recently referenced and linked to your 2013 analysis of data from the National Ambulatory Medical Care Survey. What are examples of NSAIDs, and what's the issue?](#)

NSAIDs are nonsteroidal anti-inflammatory drugs such as ibuprofen and naproxen. Our analysis showed NSAIDs were used by nearly 95 percent of nearly seven million patient visits reported in the study who took at least one chronic pain medication. They're safe for most people, but they're powerful, especially when used at high doses or when used for long periods of time. For people with coronary artery disease, even taken short term,

NSAIDs can precipitate clogging vessels. They can cause gastrointestinal problems and sometimes ulcers, bleeding and kidney failure.

What's up next in your research?

Analyzing newer data. Our last study was based on data from 2000 to 2007, the most recent when we started.

A larger population – more than 100 million people – suffer from pain than from heart disease, cancer and diabetes combined. So our ultimate goal is to inform and influence both healthcare clinicians and policymakers in understanding chronic pain treatment and prescribing trends to identify ways to diminish treatment disparities and improve safe use of a variety of treatment options available for chronic pain.

I'm very proud that we worked with a number of UMKC pharmacy students who assisted us with research, analysis and writing. Four out of the five articles we wrote included student-authors, and of course, our future work will include students, too.



UMKC Health Sciences District

Unlike Any Other in the Nation

UMKC School of Pharmacy and nine other leading Kansas City health-care institutions team up to create UMKC Health Sciences District.

With a collaboration unlike any other in the nation, many of Kansas City's leading health-care institutions announced that they have agreed to align more closely to form the UMKC Health Sciences District. The newly created district combines the unique expertise and services of 10 partners to spur research and community outreach in service of the Kansas City region and beyond.

The UMKC Health Sciences District includes:

- The University of Missouri-Kansas City (UMKC) and its
 - School of Medicine
 - School of Nursing and Health Studies
 - School of Pharmacy
 - School of Dentistry
- Truman Medical Centers (TMC)
- Children's Mercy (CM)
- Kansas City, Missouri Health Department
- Missouri Department of Mental Health Center for Behavioral Medicine
- Jackson County Medical Examiner

"This formal collaboration is the most exciting development in our university's health professions

programs since the completion of the Health Sciences Building," said Russell Melchert, dean of the UMKC School of Pharmacy. "This formal agreement of collaboration with partners on Hospital Hill ensures that our collective output in patient care, interprofessional education and biomedical research will be far greater than the sum of our individual efforts."

There are other health districts in the U.S., but the UMKC Health Sciences District is unlike any other in the nation.

It is one of 18 areas in the country that have public schools of medicine, pharmacy, dentistry and nursing in one location along with a children's hospital and an adult, acute-care hospital. By including a health department, the medical examiner and a mental health center that brings together agencies of the city, county and state, the UMKC Health Sciences District is one of a kind.

Drawing on these institutions' efforts, the UMKC Health Sciences District has the potential to enhance collaboration on research and grant requests; combine efforts on community outreach; improve faculty recruitment; coordinate area parking, safety and transportation; and create shared opportunities in health and wellness for more than 16,000 health professionals, faculty members and students.

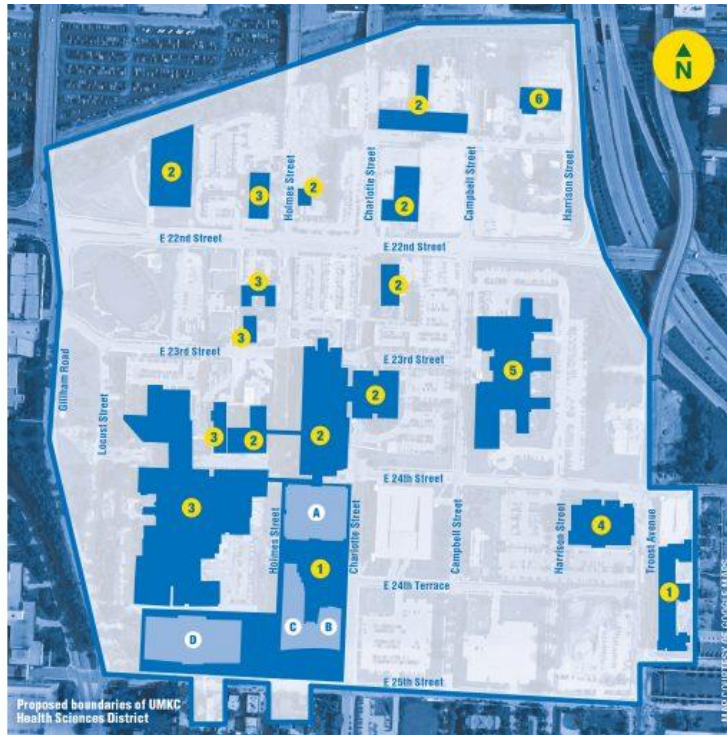


"We have all worked together already for a long time, and worked very well together, but today we are opening a new chapter," said UMKC Chancellor Leo E. Morton. "Today, we will sign an agreement designed to stimulate economic growth and job creation, attract new talent to Kansas City, create shared opportunities in health and wellness, and improve opportunities for recruiting and neighborhood outreach."



Map & Legend

- 1 University of Missouri-Kansas City
- A UMKC School of Medicine
- B UMKC School of Nursing and Health Studies
- C UMKC School of Pharmacy
- D UMKC School of Dentistry
- 2 Truman Medical Centers
- 3 Children's Mercy
- 4 Kansas City, Missouri Health Department
- 5 Missouri Department of Mental Health Center for Behavioral Medicine
- 6 Jackson County Medical Examiner



south by 25th Street; west by Oak Street; and east by U.S. 71 South.

The UMKC Health Sciences District will be governed by a board composed of approximately 20 members. Each participant institution shall have two representatives on the board. The board will appoint a chair for a two-year period beginning July 1, 2018. The chair will rotate among the following participants in the following order: UMKC, TMC and CMH.

“Better functioning health-care teams provide better patient care. Interprofessional education means educating future physicians, nurses, pharmacists, dentists and other health-care professionals to work effectively as members of those teams so that patients get the best and safest care possible,” said Steven L. Kanter, M.D., Dean of the UMKC School of Medicine. “The UMKC Health Sciences District is the perfect environment for students, scientists and health-care professionals to work and learn together as they deliver top-quality, personalized health care.”

The District is about two miles in circumference and will be bound on the north by 20th Street;

The first chair, who will serve a two-year term, will be the Chancellor of UMKC. The board also will name an executive director of the District. The first executive director, who will serve a three-year term, will be the Dean of the UMKC School of Medicine.



International Award

Pharmaceutical Sciences Chair Recognized

Ashim K. Mitra, University of Missouri-Kansas City School of Pharmacy professor and chair of the Division of Pharmaceutical Sciences, is receiving the Dr. Roger Vogel Award for Pharmaceutical Research from the ARVO (Association for Research in Vision and Ophthalmology) Foundation for Eye Research. He will be presented the award in May at ARO's annual meeting in Baltimore.

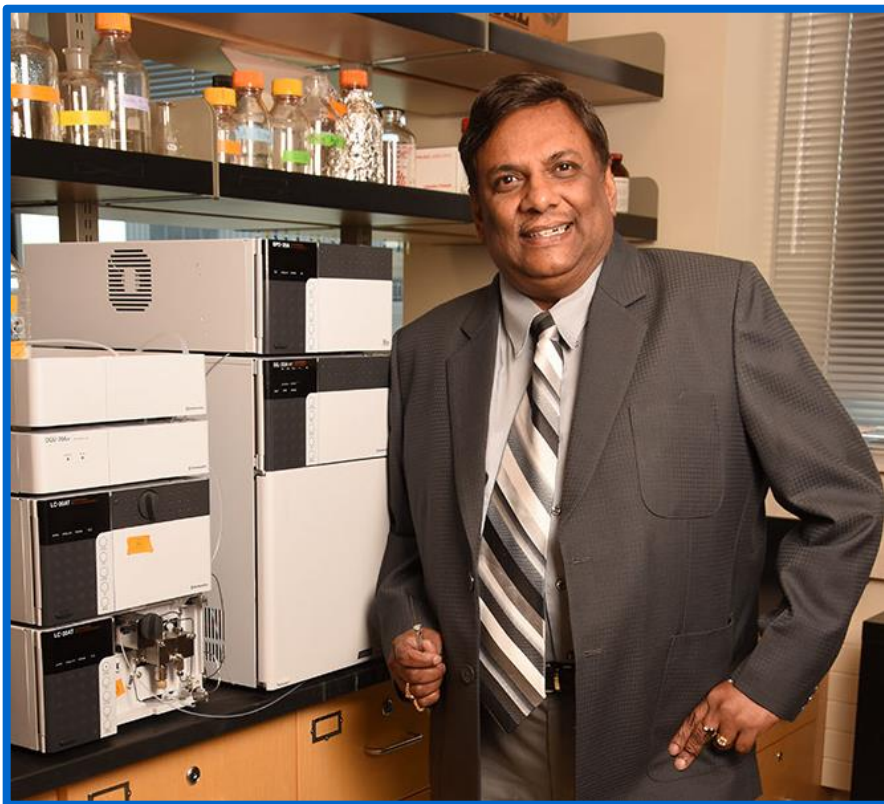
"I was surprised, and I am truly honored by this international recognition," Mitra said. ARVO members include 12,000 researchers from around the world – more than 75 countries.

Mitra, Ph.D., has more than 30 years of experience in the field of ocular drug delivery and disposition. He joined the UMKC School of Pharmacy in 1994, and is also Vice Provost for Interdisciplinary Research, UM Curators' Distinguished Professor of Pharmacy and co-director of the UMKC Vision Research Center at the School of Medicine.

Mitra boasts an outstanding research record. His work has secured more than \$7 million in extramural funding, including from the National Institutes of Health, Department of Defense and pharmaceutical companies. He has authored and co-authored more than 360 peer-reviewed articles, seven books and 67 book chapters about the formulation development of ocular drug delivery; his work has been cited more than 10,000 times. He holds 11 patents, has graduated more than 55 doctoral students and has mentored 14 post-doctoral scientists. He and his research group have delivered more than 725 presentations and abstracts at national and international scientific meetings.

The award Mitra will receive is in honor of Vogel, who was in the ophthalmic pharmaceutical business for almost 30 years and led the development of many of the medicines now used by ophthalmologists. The award is given annually to an ARVO member whose research furthers the development of pharmaceutical treatments for ophthalmic diseases. The recipient receives a cash award of \$10,000.

In 2016, Mitra received the University of Missouri System President's Faculty Award for Sustained Career Excellence



Pharmacy Summer Camp

Training the Next Generation

UMKC School of Pharmacy has made it a mission to provide an excellent education at an affordable price to students all over Missouri. In 2005 and 2014, satellite campuses opened in Columbia and Springfield respectively, to help achieve that goal.

Then, in summer 2016, the UMKC School of Pharmacy saw another need and inaugurated a one-day summer experience with the mission of introducing high school and college students to the field of pharmacy, with the goal to make it available to students across the state of Missouri. Many summer experiences can be expensive and time consuming, so students were provided an affordable and time-friendly option to learn about pharmacy. Both years resulted in camps filled to capacity at each site: Kansas City, Columbia and Springfield.

The UMKC School of Pharmacy is excited to announce that it will hold its third annual One-day Summer Camp this coming June 2018! Students and guests can choose to attend the camp at one of the three sites at the following dates: Columbia—June 1st, Springfield—June 15th or Kansas City—June 29th. This is a unique chance for high school and college students who are interested in exploring the field of pharmacy and learning about the many opportunities UMKC has to offer.

Students discover the profession through hands-on learning activities, professional panels featuring pharmacists in a wide variety of pharmacy settings and

interaction with current Pharm.D. students and faculty. Attendees explore one of our three campuses while meeting other campers their age who share the same interest.

Camp activities include (but are not limited to): compounding laboratory experiences, drug identification games, group health activities, introduction to pharmacy careers and current topics in pharmacy.

Here are a few things previous attendees have said:

- “It opened my eyes to all the different jobs that pharmacists can do.”
- “Learning the different paths and areas a pharmacist can go into and also enjoyed meeting new people and making connections.”
- “It was really cool to get hands on experience of what pharmacists might do.”
- “This camp was excellent, far better than expected. Surprised to learn pharmacy is more than just pharmacists who fill prescriptions!”

This year’s camp should again prove to be a great experience for students and their guest. Students who have completed 9th grade at the time of the camp are encouraged to register. Registration deadline is May 15, 2018. Cost is \$35/camper and \$15/guest.



Faculty Publications

Selected Chapters, Articles, and Reviews

BOOK CHAPTERS

Bryant, Patrick, and Cydney McQueen. "Literature Evaluation II: Beyond the Basics." *Drug Information: A Guide for Pharmacists, Sixth Edition*. Edited by Malone PM and Malone M. New York, NY: McGraw Hill, 2017. 203-277.

Gubbins, Paul, and Heather Lyons-Burney. "Chapter 4: Point of Care Testing." *Basic Skills in Interpreting Laboratory Data, Sixth Edition*. Edited by Lee M. Bethesda, MD: American Society of Health-System Pharmacists, Inc., 2017. 51-68.

Johnston, Thomas, Korolenko TA, Bgatova NP. "Chapter 2: Statins and yeast polysaccharides in the treatment of hyperlipidemia and liver steatosis, role of autophagy." *Advances in Medicine and Biology, Vol. 110*. Edited by Berhardt LV. Hauppauge, NY: Nova Science Publishers, Inc, 2017. 31-60.

Pace, Heather, and Sperry Morgan. "Drug Information and Contemporary Community Pharmacy Practice." *Drug Information: A Guide for Pharmacists, Sixth Edition*. Edited by Malone PM and Malone M. New York, NY: McGraw Hill, 2017 1085-1114..

Ruehler, Valerie, and Steve Stoner. "Chapter 63: Eating Disorders." *Pharmacotherapy: A Pathophysiologic Approach, 10th Edition*. Edited by DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM. New York, NY: McGraw Hill, 2017. 959-972.

ARTICLES

Bzowyckyj, Andrew, Stahnke, Amanda. "Hypersensitivity reactions to human insulin analogs in insulin-naïve patients: a systematic review." *Thearapeutic Advances in Endocrinology*

and Metabolism. 2017, Dec 26. doi: 10.1177/2042018817745484.

Bzowyckyj, Andrew, Dow A, Knab MS. "Evaluating the impact of educational interventions on patients and communities." *Acad Med*. 2017; 92(11):1531-5.

Janke KK, **Bzowyckyj, Andrew**, Traynor AP. "Editors' perspectives on enhancing manuscript quality and editorial decisions through peer review and reviewer development." *Am J Pharm Educ*. 2017; 81(4): 73.

Bzowyckyj, Andrew, Brommelsiek M, Lofgren M, Gotham HJ, Lindsey CC. "Reflecting on care: using reflective journaling to evaluate interprofessional education and clinical practicum experiences in two urban primary care clinics." *Journal of Interprofessional Education & Practice*. 2017; 8:6-9.

Jain N, **Friedman, Simon.** "A Tetra-Orthogonal Strategy for the Efficient Synthesis of Scaffolds Based on Cyclic Peptides." *International Journal of Peptide Research and Therapeutics*. 2017; doi.org/10.1007/s10989-017-9642-0.

Friedman, Simon, Nadendla K. "Light Control of Protein Solubility through Isoelectric Point Modulation. *J. Am. Chem. Soc.*, 2017; 139 (49): 17861-17869.

Hajavi J, Momtazi MM, **Johnston, Thomas**, Banach M, Majeed M, Sahebkar A. "Curcumin: a naturally occurring modulator of adipokines in diabetes." *J. Cell. Biochem*. 2017; 118(12), 4170-4182.

Johnston, Thomas, Karimian MS, Pirro M, Majeed M, Sahebkar A. "Curcumin and endothelial function: Evidence and mechanisms of protective

effects." *Curr. Pharm. Des.* 2017; 23(17): 2462-2473.

Mahmoud MO, Aboud HM, Hassan AH, Ali AA, **Johnston, Thomas**. "Transdermal delivery of atorvastatin calcium from novel nanovesicular systems using polyethylene glycol fatty acid esters: ameliorated effect without liver toxicity in poloxamer 407-induced hyperlipidemic rats." *J. Cont. Rel.* 2017; 254: 10-22.

Shahabipour F, Barati N, **Johnston, Thomas**, Derosa G, Maffioli P, Sahebkar A. "Exosomes: nanoparticulate tools for RNA interference and drug delivery." *J. Cell. Physiol.* 2017; 232(7): 1660-1668.

Lelli D, Sahebkar A, **Johnston, Thomas**, Pedone C. "Curcumin use in pulmonary diseases: state of the art and future perspectives." *Pharmacol. Res.* 2017; 115: 133-148.

Johnston, Thomas, Shahabipour F, Banach M, Pirro M, A. Sahebkar A. "Novel approaches towards the generation of bioscaffolds as a potential therapy in cardiovascular tissue engineering." *Int. J. Cardiol.* 2017; 228, 319-326.

Teymouri M, Pirro M, **Johnston, Thomas**, Sahebkar A. "Curcumin as a multifaceted compound against human papilloma virus infection and cervical cancers: a review of chemistry, cellular, molecular, and preclinical features." *Biofactors*, 2017; 43(3): 331-346.

Zabihi NA, Pirro M, **Johnston, Thomas**, Sahebkar A, "Is there a role for curcumin supplementation in the treatment of non-alcoholic fatty liver disease? The data suggest yes." *Curr. Pharm. Des.* 2017; 23(7): 969-982.

Knell, Maureen, Rasu RS, Vossen RK. "Assessing Prescribing Trends of Adjuvant Therapy in

Outpatients with a Diagnosis of Non-malignant Chronic Pain." *Clinical Journal of Pain.* 2017; 33(9): 786-792.

Rasu RS, **Knell, Maureen**. "Determinants of Opioid Prescribing Non-Malignant Chronic Pain in United States Outpatient Settings." *Pain Medicine.* 2017; 19(3): 524-532.

Patton AP, **Liu, Yifei**, Hartwig DM, May JR, Moon J, **Guthrie, Kendall**, Stoner Steve. "Community pharmacy transition of care services and rural hospital readmissions: a case study." *J Am Pharm Assoc.* 2017; 57(3):S252-S258.

Yang L, **Liu, Yifei**, Wen L, Wu J. "Examining the Impact Rehospitalization of Healthcare Cost of Myocardial Infarction Patients in Beijing: A Retrospective Observational Study." *Advances in Therapy.* 2017; 34(1): 109-119.

Mead, Tatum, Schauner, Stephanie. "Pharmacy Student Engagement in the Evaluation of Medication Documentation within an Ambulatory Care Electronic Medical Record." *Currents in Pharmacy Teaching and Learning.* 2017

McQueen, Cydney. "Herb-drug interactions: Caution patients when changing supplements." *Curr Psychiatry.* 2017; 16(6):38-41.

Naglich AC, Iuppa CA, **Nelson, Leigh**, Diefenderfer LA, Elliott ESR, **Sommi, Roger**. "Plasma Insulin Level Correlation to Metabolic Parameter Changes in Hospitalized Psychiatric Patients." *The Primary Care Companion for CNS Disorders.* 2017; 19(2): 16m02086.

Palmer, Melissa, Quillen A, Chin K., et al. "How to Treat Post-Traumatic Stress Disorder with Co-Morbid Cardiovascular Disease." *Curr Psychiatry.* 2017; 16(8):38-42.

Faculty Publications

Selected Chapters, Articles, and Reviews



Amin AP, **Patterson, Mark**, House JA, Giersiefen H, Spertus JA, Baklanov DV, Chhatriwalla AK, Safley DM, Cohen DJ, Rao SV, Marso SP. "Costs Associated with Access Site and Same-Day Discharge Among Medicare Beneficiaries Undergoing Percutaneous Coronary Intervention: An Evaluation of the Current Percutaneous Coronary Intervention Care Pathways in the United States." *JACC Cardiovas Interv.* 2017 Feb 27; 10(4):342-351.

Salvatore, Dominick, Gruss J, Voss J. "Development of Acute Kidney with Concomitant Use of Vancomycin and Piperacillin-Tazobactam" (Review). *American Journal of Hospital Medicine.* 2017; 1(3): doi: 10.24150/ajhm/2017.018.



Sumner-JD, Zinser-B, **Smith, Andrew**. "Dual Antiplatelet Therapy beyond One Year in Patients after Stent Placement: A Review." *J Pharm Pract.* 2017, Jan 1. doi: 10.1177/0897190017715560.

Stahnke, Amanda, Holt KM. "Ocrelizumab: A New B-Cell Therapy for Relapsing Remitting and Primary Progressive Multiple Sclerosis." 2017, Dec 12. doi: 10.1177/1060028017747635.

Zhang H, **Wang, Jianping**. "Disruption of type I IFN signaling decreases autoimmune development and kidney damage, but not anxiety behaviors in lupus-prone mice." *Journal of Depression and Anxiety.* 2017; 6(3): doi: 10.7172/2167/1044.1000271



Faculty and Staff Awards

Recognition from SOP Students and UMKC



Faculty Award from Class of 2018

First Place: Diane McClaskey
Runner Up: Leigh Anne Nelson



Faculty Award from Class of 2020

First Place: Thomas Johnston
Runner Up: Russell Melchert



Faculty Award from Class of 2021

First Place: Simon Friedman
Runner Up: Karyn Turla

UMKC Awards

N.T. Veatch Award for Distinguished Research and
Creative Activity (Research Award):

Simon Friedman

Trustees Faculty Fellowship Award (Research
Award):

Simon Friedman

SOP Staff Awards

Human Resources Campus Collaboration Award:

Nancy Bahner

Chancellor's Education First Award:

Shelly Janasz

Student Mentor Staff Award:

Shannon Vacek

Chancellor's True Unsung Here Award:

Mary Swick



pharmacy.umkc.edu

Russell B. Melchert, Ph.D., R.Ph | Dean and Professor | melchertr@umkc.edu

Patricia A. Marken, Pharm.D, FCCP BCPP | Associate Dean for Student Affairs and Professor
2464 Charlotte St, Kansas City, MO 64108 | (816) 235-2195 | markenp@umkc.edu

UMKC is an equal opportunity institution. For UMKC's complete non-discrimination statement, please visit www.umkc.edu