



# School of Pharmacy Annual Strategic Plan Report 2012





July 12, 2012

Dear Colleagues,

The UMKC School of Pharmacy experienced an outstanding year in 2012 as our students, staff, and faculty continued to bring significant prestige and international visibility to our programs, School and University.

A major milestone occurred in 2012 when we admitted our first group of pharmacy students in the "2-4" curriculum. With the new curriculum, approximately two years of pharmacy prerequisite courses are required for admission to our program, and the professional doctor of pharmacy program is four years in duration. These were also the first students admitted through PharmCAS, a national system that allows us to electronically manage applications and provides important information for the evaluation of our admissions process.

In 2012, our pharmacy student organizations were recognized among the top, if not the top (e.g. APhA-ASP) chapter in the country! Also in 2012, our graduate disciplines in the Interdisciplinary Doctor of Philosophy program continued to enjoy significant successes. Our graduate students published 44 primary research papers in high impact journals and continued to be recognized by national and international scientific organizations with numerous awards. We are very proud of our pharmacy and graduate students as well as the faculty who directed their learning and service and the staff who supported all of them!

While we continued to work diligently on the existing Strategic Plan initiatives in 2012, a major new initiative was advanced. With the support of the Missouri state legislature, we made significant progress toward the expansion of our professional pharmacy program to Springfield. We continue to appreciate the assistance in this expansion effort from our partners at Missouri State University and the pharmacists in the hospitals, clinics, and pharmacies throughout Springfield and the surrounding communities in southwest Missouri. In 2012, physical space for the expansion was designed and 15,000 sq ft of building renovations were initiated in 2013. All of the design processes in 2012 required significant time and effort of faculty and staff. In

addition to space design, committees began to consider the impact of the expansion and began to plan for necessary changes in instructional delivery and program administration.

I am pleased to present to you the 2012 annual strategic plan report of the University of Missouri-Kansas City School of Pharmacy. The current strategic plan was developed and approved by school faculty and staff in 2009. It was revised in 2011 to eliminate goals related to programs or activities that were no longer being implemented and to make the goals more measurable. The timeframe for the plan is 2009-2014, and it defines our direction and guides resource prioritization. In 2013, the School will begin revision of the Strategic Plan to produce the all new 2015-2020 plan.

Please take time to review all of the outstanding accomplishments of our students, staff, and faculty in this annual report.

Sincerely,

Russell B. Melchert, Ph.D., R.Ph.

Dean & Professor

The University of Missouri-Kansas City (UMKC) is comprised of 12 academic units, and the School of Pharmacy (SOP) is one of four health science units. The SOP contributes significantly to the university's mission to lead in the life and health sciences, to develop a professional workforce and to collaborate on urban issues.

**Mission statement**

UMKC's mission is to lead in life and health sciences; to deepen and expand strength in the visual and performing arts; to develop a professional workforce and collaborate in urban issues and education; and to create a vibrant learning and campus life experience.

**SOP MISSION**

To educate students, health care professionals and scientists, conduct research, and serve the public and the pharmacy profession in order to meet pharmaceutical needs and advance the standard of health care.

The school's core values represent the cultural and personal principles that guide school-related decision making and individual conduct. Members of the school are committed to the following core values when acting on behalf of the school:

*Leadership: We lead with courage and vision while considering the needs of our people.*

*Professionalism: We act with integrity, honesty, reliability, ethics, moral courage, humility, respect, and accountability.*

*Service orientation: We serve others in an altruistic and cooperative manner.*

*Community: We care about others by being a learning organization that enriches and values our human wealth and promotes civility, diversity, and mutual respect.*

*Collaboration: We engage in creative partnerships locally and globally to advance health education, research, and practice.*

*Innovation: We seek and develop resources, infrastructure, and knowledge to promote discovery.*

*Excellence: We strive for excellence in all we do.*

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**Strategic Initiative I. Curriculum: Deliver state-of-the-art curricula that prepare graduates who meet the needs of society**

The current strategic plan was implemented in 2009. At the time, the School of Pharmacy offered three degree programs: a Bachelor of Science in Pharmaceutical Sciences (BS/PS), the Doctor of Pharmacy (PharmD), and the Interdisciplinary Doctor of Philosophy (IPhD). In 2010, the faculty voted to close admissions to the BS/PS degree program due to low enrollment and workforce demand. As of December 2012, eight students remain in the program and have been advised that they must complete the program prior to May 2016.

A major curricular change was implemented in the PharmD program. The faculty voted in December 2009 to change from a 1-5 to a 2-4 curriculum. Our program was the only 1-5 PharmD program; the vast majority of programs are 2-4 in length. This change resulted in suspension of new admissions for the 2011-2012 academic year with an initial 2-4 class enrolled in Fall 2012. Another major change to the PharmD program is the planned expansion to a third site. Thirty students are expected to begin classes at the UMKC SOP at Missouri State University (MSU) site in Springfield in Fall 2014. The expansion is supported by funding from the state legislature and is expected to meet regional needs.

Graduate students enrolled in the IPhD program develop individual plans of study. The opportunity to collaborate with faculty and peers on funded research projects is a key component of exemplary graduate education. Our graduate students continue to receive outstanding research training as part of their graduate curriculum.

**Goal I.A. Pharm.D.: Graduate generalist pharmacists who are capable of practicing in a range of contemporary settings**

**Objective I.A.1. Align curricular outcomes with the latest ACPE standards, other relevant documents and feedback from key constituent groups**

**Objective I.A.2. Develop and implement learning experiences that optimize student achievement of curricular outcomes**

**Objective I.A.3. Initiate interprofessional experiences with other schools/academic units that capitalize on shared curricular outcomes**

**Objective I.A.4. Align practice faculty placements to meet curricular needs**

**Objective I.A.5. Sustain a number of students participating in post-graduate training and degree opportunities consistent with national norms**

**Measures of Success:**

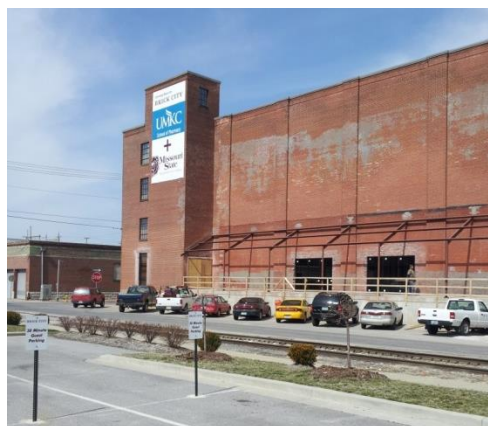
- Ongoing ACPE accreditation
- Number of interprofessional experiences available and number of students who participate
- Number of international rotations developed and number of students who participate
- On-time graduation rate
- NAPLEX pass rate first attempt percentage
- MJPE pass rates
- Percentage of students employed or enrolled in post-graduate training (School of Pharmacy exit interview)
- Students pursuing post-graduate training
  - Number of students placed in residencies as reported in the ASHP report for the resident matching program and post-match scramble

- AACP graduating student survey data

### Accreditation

The PharmD program is fully accredited by ACPE. Our last self-study was conducted in 2009-2010. Interim reports have been completed each year. A focused self-study will be submitted in December 2013 for the program's proposed expansion to Springfield. The next full self-study is scheduled for 2015-2016. Accreditation activity for 2012 follows:

- ACPE:
  - The School of Pharmacy has maintained ongoing accreditation status and conducted normal reporting related to the school's activities.
  - A report on our monitoring of student retention was filed in October 2012.
  - An overview of the school's expansion plans was filed in November 2012.
- ASHP:
  - In September, the American Society of Health-System Pharmacists Commission on Credentialing granted three-year reaccreditation of the postgraduate one-year community pharmacy residency program
- University:
  - In June, the school received a letter from the Missouri Department of Higher Education's Coordinating Board for Higher Education, which stated its approval for the expansion to the Missouri State University campus.



### Interprofessional experiences

One of our Columbia-based faculty members is serving as the pharmacist on a team of interprofessional educators at the University of Missouri. Funding has been provided by the Macy Foundation to create an interprofessional faculty development training program. As a result of this collaboration, the first IPE activity for PharmD students will be introduced into Pharmacotherapy III in Spring 2013.



A group of faculty and administrators from the UMKC health sciences has also been meeting on a regular basis to identify and develop IPE. Discussions are ongoing with the goal of developing IPE activities on the UMKC health sciences campus among Pharmacy, Nursing, Dentistry, and Medicine.



#### International Rotations

- Three students completed a month-long rotation in Nicaragua in April 2012.
- A rotation in Honduras was planned for July; however, it was cancelled when the U.S. Department of State issued a travel warning about the security situation in Honduras.

#### Graduation and attrition statistics

Entry Year	On Time Graduation Year	Total	Graduated on Time	%	Delayed Graduation (ACPE < 15%)	%	Student Withdrawals (ACPE < 6%)	%	Academic Dismissals (ACPE < 6%)	%	Total Attrition (ACPE < 24%)	%	Total Graduated Based on Original Class Size	%
2007 Total	2012	123	107	87%	3	2%	3	2%	10	8%	16	13%	110/123	89%
KC	2012	95	82	86%	2	2%	3	3%	8	8%	13	14%	84/95	88%
Columbia	2012	28	25	89%	1	4%	0	0%	2	7%	3	11%	26/28	93%



Notes:

- Student progression rates are recalculated at the end of each semester
- Students are tracked with the entering class, not their graduating class
- Percentages are rounded

Overall attrition rates were well within the standards set by ACPE. However, attrition due to academic dismissal for the class of 2012 was 8% which exceeded the 5% limit indicated by ACPE in their policies and procedures. The program is working to reduce attrition through more stringent and thorough admissions procedures and closer monitoring of student progression through the program. A Student Success Program was implemented in the Fall of 2011 to detect academic struggle throughout the semester and to intervene as needed. In addition, the curriculum changed from a 1-5 to a 2-4 program with the entering class of 2012 (graduating class of 2016). Over a third of our attrition occurred during the first year of the 1-5 program; therefore, we believe the change to the 2-4 may eliminate a significant portion of our attrition. Regular seminars and individual meetings with instructors are also being held to provide instructional and assessment improvement strategies.

North American Pharmacist Licensure Examination (NAPLEX) pass rates for 2012 with comparator school rates

School name	2012 Graduates			
	All attempts	Pass Rate	First-time attempts	Pass rate
University of Missouri-Kansas City	113	93.81%	107	93.46%
Creighton University	151	100%	151	100%
Drake University	107	99.07%	106	99.06%
Southern Illinois University-Edwardsville	73	98.63%	73	98.63%
Southwestern Oklahoma State University	55	100%	55	100%
St. Louis College of Pharmacy	181	98.34%	179	98.88%
University of Arkansas	106	97.17%	104	98.08%
University of Illinois at Chicago	165	92.12%	156	92.31%
University of Iowa	115	96.52%	112	97.32%
University of Kansas	101	99.01%	100	99.00%
University of Nebraska	65	100%	65	100%
University of Oklahoma	117	100%	117	100%

Multi-state Pharmacy Jurisprudence Exam (MPJE) pass rates for 2012 with comparator school rates

School name	2012 Graduates			
	All attempts	Pass Rate	First-time attempts	Pass rate
University of Missouri-Kansas City	87	98.85%	87	98.85%
Creighton University	40	100%	40	100%
Drake University	48	93.75%	45	93.33%

Southern Illinois University-Edwardsville	57	94.74%	54	96.30%
Southwestern Oklahoma State University	51	94.12%	48	93.75%
St. Louis College of Pharmacy	140	91.43%	129	91.47%
University of Arkansas	N/A	N/A	N/A	N/A
University of Illinois at Chicago	144	97.92%	142	97.89%
University of Iowa	67	92.54%	63	93.65%
University of Kansas	95	98.95%	94	98.94%
University of Nebraska	60	100%	60	100%
University of Oklahoma	93	93.55%	87	93.10%

2012 pass rates for our program were high for both the NAPLEX and MPJE (>90%). Our pass rates were similar to our neighboring and urban peers.

#### PharmD Post-graduate Employment and Training

CAREER CHOICES*	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Pharm.D. Total N =	57	58	60	63	59	61	77	79	73	71	111	111	107
Residency/Fellowship	37%	23%	25%	23%	40%	17%	22%	15%	23%	20%	18%	30%	26%
Community Chain	41%	52%	50%	30%	38%	49%	41%	53%	53%	38%	47%	35%	40%
Community Independent				11%		5%	11%	10%	4%	14%	9%	6%	6%
Hospital	10%	4%	8%	16%	7%	6%	10%	8%	11%	4%	7%	8%	7%
Industry (Sales/Clin Res)	7%	4%	2%	2%	--	2%	--	1%	2%	0%	0%	0%	0%
Grad School	2%	4%	0%	0%	--		1%	0%	2%	3%	0%	3%	0%
Other^	0%	4%	0%	2%	--		3%	0%		1%	3%	9%	4%
Unknown	0%	4%	8%	11%	10%	14%	5%	6%		1%	2%	5%	0%
Undecided	3%	5%	7%	5%	5%	7%	7%	5%	5%	18%	17%	4%	17%

\*Survey taken at time of graduation

^Govt, Military, Nucl., Benefits, Mail Order

88% of the doctor of pharmacy class of 2012 were employed or had plans to enroll in post-graduate training at the time of graduation from the program.

#### UMKC PharmD placement in residency programs

A record 1,522 residency programs (951 PGY1, 601 PGY2) were available in 2012. More candidates applied than in the previous year: 13% more PGY1 and 25% more PGY2 applicants. The national match rate was 61% for PGY1 and 65% for PGY2. Our match rate was higher than the match rate for both PGY1 (UMKC=68%) and PGY2 (UMKC=75%). Tables showing March 2012 counts for schools in the ASHP Resident Matching Program are displayed below.

Applicants for PGY1 programs, compared with neighboring publicly funded schools:

<u>SCHOOL</u>	<u>REGISTERED</u>	<u>ACTV W/LIST</u>	<u>MATCHED</u>	<u>UNMATCHED</u>
UNIVERSITY OF ARKANSAS	18	13	8	5
UNIVERSITY OF IOWA	59	49	35	14
UNIVERSITY OF KANSAS	37	33	19	14
UNIV OF MISSOURI - KANSAS CITY	44	40	27	13
UNIVERSITY OF NEBRASKA	20	19	11	8

SW OKLAHOMA STATE UNIVERSITY	10	7	5	2
UNIVERSITY OF OKLAHOMA	22	18	12	6

Applicants for PGY1 programs, compared with Urban 21 publicly funded schools:

<u>SCHOOL</u>	<u>REGISTERED</u>	<u>ACTV W/LIST</u>	<u>MATCHED</u>	<u>UNMATCHED</u>
FLORIDA AGRIC. & MECHAN. UNIV	53	41	14	27
UNIVERSITY OF ILLINOIS	75	65	36	29
WAYNE STATE UNIVERSITY	35	30	23	7
UNIV OF MISSOURI - KANSAS CITY	44	40	27	13
UNIVERSITY OF CINCINNATI	27	22	13	9
UNIVERSITY OF TOLEDO	34	30	18	12
TEMPLE UNIVERSITY	34	26	16	10
UNIVERSITY OF PITTSBURGH	47	42	32	10
UNIVERSITY OF HOUSTON	39	32	22	10
VIRGINIA COMMONWEALTH UNIV	47	39	28	11

Applicants for PGY2 programs, compared with neighboring publicly funded schools:

<u>SCHOOL</u>	<u>REGISTERED</u>	<u>ECP</u>	<u>ACTV W/LIST</u>	<u>MATCHED</u>	<u>UNMATCHED</u>
UNIVERSITY OF ARKANSAS	2	0	2	0	2
UNIVERSITY OF IOWA	9	4	5	5	0
UNIVERSITY OF KANSAS	6	0	6	3	3
UNIV OF MISSOURI-KANSAS CITY	6	2	4	3	1
UNIVERSITY OF NEBRASKA	6	1	4	2	2
SW OKLAHOMA STATE UNIVERSITY	0	0	0	0	0
UNIVERSITY OF OKLAHOMA	7	2	5	5	0

Applicants for PGY2 programs, compared with Urban 21 publicly funded schools:

<u>SCHOOL</u>	<u>REGISTERED</u>	<u>ECP</u>	<u>ACTV W/LIST</u>	<u>MATCHED</u>	<u>UNMATCHED</u>
FLORIDA AGRIC. & MECHAN. UNIV	6	0	4	4	0
UNIVERSITY OF ILLINOIS	25	4	17	10	7
WAYNE STATE UNIVERSITY	8	0	6	4	2
UNIV OF MISSOURI-KANSAS CITY	6	2	4	3	1
UNIVERSITY OF CINCINNATI	9	3	6	4	2
UNIVERSITY OF TOLEDO	10	1	9	5	4
TEMPLE UNIVERSITY	8	0	7	5	2
UNIVERSITY OF PITTSBURGH	11	5	5	3	2
UNIVERSITY OF HOUSTON	16	6	9	7	2
VIRGINIA COMMONWEALTH UNIV	10	6	4	3	1

### PharmD graduates pursuing other degrees and post-graduate training

Data from 2012 AACP graduating student survey:

- “Dual degree program participated in while completing doctor of pharmacy program”
  - 1 – Pharm.D./MBA
  - 3 – Other
- “Current plans upon your graduation from the college/school of pharmacy”: Further Education
  - 32 – Pharmacy residency program
  - 1 – Pharmacy Ph.D. program
  - 8 – MBA program
  - 4 – JD or other law program
  - 3 – Other health professions (MD, DDS, DVM, etc.)
  - 1 – Other non-pharmacy master’s program
  - 1 – Fellowship

### **Goal I.B. Graduate Program: Educate scientists that contribute to innovation and application of pharmaceutical/biomedical science**

**Objective I.B.1. Provide learning experiences and programs of study that reflect contemporary course work and high quality scientific training and support the career aspirations of students**

**Objective I.B.2. Promote interdisciplinary interactions between basic science and clinical educators to enhance translational research**

#### **Measures of Success:**

- Number of full-time students in Ph.D. program
- Number of fellowships awarded
- Student awards and honors from external entities
- Peer-reviewed publications by graduate students
- Presentations at national/international scientific meetings by graduate students
- Percentage placement within six months of graduation
  - Academic positions
  - Pharmaceutical industry careers
  - Government
  - Post-doctoral fellowships

### Graduate Program Statistics

Graduate students enrolled in nine or more credits during a regular semester or five credits during a summer session are considered full-time students. All students registered for fewer than those specified totals are classified as part-time students, unless they hold a teaching or research appointment at UMKC.

Full-time enrollment for students holding graduate teaching assistant or graduate research assistant appointments (GTA/GRAs) is six hours in a regular semester or three hours in a summer session. GTAs/GRAs are expected to make normal progress toward their degrees and should enroll in a minimum of six hours per semester (three credits in the summer session). However, GTA/GRA appointees who have completed all required coursework for the degree and who are working full time on research need only enroll for the minimum of three credits. (UMKC catalog: <http://cat-edit.umkc.edu/~Catalog/ViewCatalog.aspx?htmlink=true&pageid=viewcatalog&catalogid=98&topicid=111590&topicgroupid=55714>)

Continuous enrollment is required. Students who are enrolled and do not meet the criteria for full-time enrollment are considered to be part-time graduate students.

- Enrollment:
  - Spring 2012 – 47 full-time students, 10 part-time
  - Fall 2012 – 44 full-time students, 16 part-time
- Postdoctoral appointments:
  - 2 postdoctoral fellows in the Drug Information Center
  - 1 postdoctoral associate in the Division of Pharmacology and Toxicology
  - 4 postdoctoral associates in the Division of Pharmaceutical Sciences
- Awards:
  - At the 2012 UMKC Health Sciences Research Summit, pharmacy students received best poster awards in the following categories:
    - Pharmacy Practice and Administration: Catherine Trimble, Kristin Vetter
    - Pharmacology and Toxicology: Anwesha Chatterjee, Amruta Ronghe, Ankit Shah
    - Pharmaceutical Sciences: Piyush Jain, Aswani Dutt Vadlapudi, Divya Teja Vavilala
  - The UMKC Women's Council presents their annual Graduate Assistance Awards at a luncheon in the spring. Ph.D. and doctor of pharmacy students are among the women recognized for their research projects. In spring 2012, ten graduate students received awards:
    - Division of Pharmacology and Toxicology: Anusha Ande, Mengyao Jin, Xun Liu
    - Division of Pharmaceutical Sciences: Megha Barot, Namita Giri, Rubi Mahato, Ashaben Patel, Viral Tamboli, Ramya Vadlapatla, Divya Teja Vavilala
  - Division AA Winner National Chapter Achievement Award for the 2011-2012 reporting period at the APhA Meeting in Los Angeles.
    - APhA-ASP chapter was recognized for their efforts in the "Winter is Cold, but Advocacy is Hot" Campaign at the Political Leadership Reception.
    - APhA-ASP chapter was awarded the Region 6 Generation Rx Award.
    - APhA-ASP chapter was awarded the Region 6 Operation Heart Award



- Sarah Riley completed her one-year tenure in office as the National Member-at-large
  - Sheena Merwine was awarded the One to One Patient Counseling Award
  - Jaclyn Yaeger competed in the National Patient Counseling Competition
  - Ashley Capps served as the APhA-ASP representative to the APhA New Business Committed and the Missouri Delegate in the Big House
  - Lara Kerwin served as the APhA-ASP chapter delegate
  - Carolyn Huninghake presented a poster from her Directed Individual Study course entitle: "Use of a Screening Tool to Identify Immunization Needs".
- Division of Pharmacology and Toxicology:
- At the annual Society of NeuroImmune Pharmacology conference, Ankit Shah received a Young Investigator Travel Award. Mohitkumar Gangwani and Mengyao Jin received NIDA/AAPI Workgroup-Sponsored Awards for Early Career Investigators from under-represented racial/ethnic minority groups. Anusha Ande received a registration waiver award from the NIDA/AAPI.
- Division of Pharmaceutical Sciences:
- Sudheer Bobba participated in the UMKC Preparing Future Faculty Fellowship Program.
  - Aswani Dutt Vadlapudi received a UMKC Chancellor's Doctoral Fellowship for 2012-2013.
  - Megha Barot and Tao Zhang received awards in the UMKC Interdisciplinary Ph.D. Community of Scholars Research Poster Contest.
  - Megha Barot received the first place award in the AAPS Ocular Drug Delivery & Disposition Focus Group Graduate Student Poster contest
  - Mitan Gokulgandhi received a summer internship in the Analytics Biomolecular Department of Bayer- Global Biologics Development, Berkeley, California (June-August 2012)
  - Ramya Krishna Vadlapatla received an AAPS Clinical Pharmacology and Translational Research Section Travel Award
  - Zhijin Chen and Mitan Gokulgandhi received UMKC Interdisciplinary Doctoral Student Council Travel Grants
  - Kishore Cholkar, Zhijin Chen and Mitan Gokulgandhi received UMKC Graduate Student Travel Grants



#### Summary of graduate student research publications and presentations

IPhD Discipline	Publications	Presentations
Pharmaceutical Sciences (n =42 )	38	34
Pharmacology (n =18 )	8	14

Our graduate students demonstrate their research proficiency through participation in faculty research, development of their own related studies, and the dissemination of their work through peer-reviewed publications as well as presentations at scientific meetings. Typically, graduates from our doctoral programs have published multiple peer-reviewed articles and are engaged in an ongoing program of research. Our graduates are well-trained to work as independent scientists in industry and/or academe.

#### **Graduate Student Publications in Peer-Reviewed National and International Journals**

**Acharya G**, Hopkins R, Lee CH. Advanced Polymeric Matrix for Valvular Complications. J Biomedical Material Research. 2012: 100A(5): 1151-1159.

**Acharya G**, Lee Y, Lee CH. Optimization of Cardiovascular Stent against Restenosis: Factorial Design Based Statistical Analysis of Polymer Coating Conditions. PLoS ONE 2012: 7(8): e43100.

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**Cholkar K**, **Patel A**, **Vadlapudi A**, Mitra AK. Novel Nanomicellar Formulation Approaches for Anterior and Posterior Segment Ocular Drug Delivery. Recent patents on Nanomedicine. 2012: 2(2): 82-95.

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**Gokulgandhi MR**, **Barot M**, Bagui M, Pal D, Mitra AK. Transporter targeted lipid prodrugs of cyclic cidofovir: A novel approach for the treatment of cytomegalovirus retinitis. J Pharm Sci. 2012: 101(9):3249-63.



**Gokulgandhi MR, Vadlapudi AD, Mitra AK.** Ocular toxicity from systemically administered xenobiotics. *Expert Opin Drug Metab Toxicol.* 2012; 8(10):1277-91.

**Jain N, Francis S, Friedman SH.** The Inhibition of Therapeutically Important Polymerases with High Affinity Bis-Intercalators, *Bioorganic and Medicinal Chemistry Letters.* 2012; 22(14): 4844-48.

**Jin M, Earla R, Shah A, Earla RL, Gupte R, Mitra AK, Kumar A, Kumar S.** A LC-MS/MS method for concurrent determination of CYP2A6-mediated nicotine metabolites and analysis of nicotine-mediated oxidative stress in U937 macrophages. *J. NeuroImmune Pharmacol.* 2012; 7(1):289-299.

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#### **Graduate Student Book Chapter**

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#### **Graduate Student Posters and Presentations at National and International Scientific Meetings**

**Acharya G,** Lee Y, Lee CH. Nitric oxide releasing stent for acute myocardial infarction during pregnancy. The 2nd International Congress on Cardiac Problems in Pregnancy. Berlin, Germany, May 2012.

**Archarya G,** Lee Y, Lee CH. Optimization of stent coating parameters for Nitric oxide delivery. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Agrahari V, Putty S,** Mathes C, Gutheil WG, Youan BB. Evaluation of Degradation Pathways of Tenofovir Using a Stability Indicating LC-MS Method. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Ande A, Jin M,** McArthur C, Sinha N, Kumar S. Role of CYP2A6 in Nicotine metabolism mediated oxidative stress and HIV-1 replication. SNIP, Honolulu, HI, 2012.

**Ande A,** Sinha N, McArthur C, Kumar S. Central role of cytochromes P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with hiv-1 pathogenesis and neuroAIDS. 9<sup>th</sup> ISNV Conference, New York, NY, May -June 2012.

**Barot M, Gokulgandhi M,** et al. Moxifloxacin: a valuable new addition to chemotherapeutic armamentarium for the treatment of retinoblastoma. ARVO annual meeting, Fort Lauderdale, FL, May 2012.

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**Barot M, Gokulgandhi M**, Pal D, Mitra AK. Inhibition of efflux transporters functionality by Moxifloxacin: A potential candidate to overcome multidrug resistance. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Bobba S, Putty S**, Jamindar D, Gutheil WG. A liquid chromatography–tandem mass spectrometry assay for the Marfey's derivative of D-Ala-D-Lac: Application to vancomycin resistance in VRE. 60<sup>th</sup> ASMS annual meeting, Vancouver B.C., May 2012.

**Chen Z, Jin W**, Cheng K. Identification of Peptide transporters in prostate cancer cells. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Cholkar K, Gunda S**, Earla R, Mitra AK. Novel aqueous, clear mixed nanomicellar sirolimus topical drops for the back of the eye delivery. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Earla R, **Ande A, Jin M**, Silverstein PS, Mitra AK, Kumar A, Kumar S. Nicotine Metabolism-mediated Oxidative Stress in Astrocytes and Macrophage Studied by using 3200 QTRAP Tandem Mass Spectrometry. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Gokulgandhi M**, Bagui M, **Barot M**, Mitra AK. Biological evaluation of SMVT targeted lipid prodrugs of cyclic cidofovir. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Gokulgandhi M, Barot M**, Bagui M, Pal D, Mitra AK. SMVT targeted lipid prodrug of cidofovir: novel treatment strategy for CMV retinitis. ARVO annual meeting, Fort Lauderdale, FL, May 2012.

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**Jin M**, Kumar A, Kumar S. CYP2E1-mediated alcohol metabolism induces expressions of CYP2A6 and CYP2E1 through oxidative stress-induced PKC signaling cascades in monocytes and astrocytes. 18th SNIP Conference, Honolulu, HI, April 2012.

**Khurana V, Vaishya R, Gokulgandhi M**, Patel SP, Mitra AK. Development and Characterization of a Novel Polymeric Nanomicellar Formulation (Size 50-60 nm) for Intermediate and Posterior Uveitis. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

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Kumar S, **Jin M**. Central role of Cytochromes P450 (CYP) in alcohol-mediated oxidative stress and alcohol-antiretroviral therapy (ART) interactions. 18th SNIP Conference, Honolulu, HI, April 2012.

**Patel A**, Gaudana R, **Hao Y**, Mitra AK. Hydrophobic Ion Pairing (HIP) Complexation: A Novel Approach for Developing Polymeric Nanoparticulate Formulation of Antibody Therapeutics. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

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**Patel S**, Mishra GP, Tamboli V, Mitra AK. Evaluation of Novel Pentablock Copolymers as a Platform for Controlled Ocular Delivery of Protein and Antibody. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

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**Shah A**. et al. Signaling mechanisms involved in methamphetamine-mediated increase in the expressions of IL-6/IL-8 in astrocytes. SNIP conference, Honolulu, HI, April 2012.

**Shah S**, **Patel A**, **Patel S**, Mitra AK. Novel Nanomicellar Clear Aqueous Formulations Containing Hydrophobic Drugs For The Treatment Of Posterior Segment Ocular Diseases. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Vadlapatla RK**, **Vadlapudi AD**, Pal D, Mitra AK. Differential expressions of efflux and influx transporters in hypoxia induced retinal pigment epithelial cells. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Vaishya R**, **Gokulgandhi M**, Bagui M, Minocha M, Patel S, Mitra AK. Development and Characterization of a Novel Topical Polymeric Nanomicellar Formulation (size 25-30 nm) for Intermediate and Posterior Uveitis. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

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Xie C, **Jin W**, Xu Y, Lou L. Antitumor activity of lobaplatin as a single agent or in combination with anti-tubulin agents in non-small cell lung cancer. The 11th National Conference on Anti-tumor Pharmacology and Cancer Chemotherapy.

**Zhang T, Zhang C, Olyer NA, Youan BB.** Direct Quantification of Tenofovir in Simulated Biological Fluids from pH-Sensitive Microparticles using <sup>1</sup>H-NMR. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

#### **Graduate Student Posters and Presentations at local and regional scientific meetings**

**Acharya G, Lee Y, Lee CH.** Nitric oxide releasing stent against restenosis. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Agrahari V, Putty S, Mathes C, Gutheil WG, Youan BB.** Evaluation of Degradation Pathways of Tenofovir Using a Stability Indicating LC-MS Method. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Ande A, Jin M, McArthur C, Sinha N, Kumar S.** Role of CYP2A6 in Nicotine metabolism mediated oxidative stress and HIV-1 replication. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Chatterjee A, Ronghe A, Singh B, Bhat HK.** A synthetic analog of resveratrol: 'ARSMA' a better drug against breast cancer. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Cholkar K, Gunda S, Vadlapudi A, Mitra AK.** Synthesis and characterization of novel lipid prodrugs of ganciclovir. IDSC Community of Scholars, School of Graduate Studies Awards Ceremony, UMKC, Kansas City, MO, April 2012.

**Cholkar K, Gunda S, Vadlapudi A, Mitra AK.** Synthesis and characterization of novel lipid prodrugs of ganciclovir. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Jain PK, Friedman SH.** Multidimensional control of gene expression using Light Activated RNA Interference (LARI). Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Patel A, Gaudana R, Hao Y, Sabates N, Ashim AK.** A novel nanoparticulate based formulation encapsulating an antibody-polysaccharide hydrophobic ion pairing complex. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Patel M, Mandava N, Gokulgandhi M, Mitra AK.** Amino Acid Prodrugs: An Approach to Circumvent P-gp and MRP2 Mediated Efflux of Protease Inhibitor, Lopinavir. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Ronghe A, Chatterjee A, Singh B, Bhat HK.** Screening of resveratrol analogs to develop better drugs against breast cancer. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Shah A. et al.** Signaling mechanisms involved in methamphetamine-mediated increase in the expressions of IL-6/IL-8 in astrocytes. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Shah S, Fofaria N, Vadlapatla RK, Pal D, Mitra AK.** Mechanism Of L-Ascorbic Acid Transport By Human Prostate Cancer Cells: Evidence For Involvement Of Sodium Dependent Vitamin C Transporter. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

**Stancil SL.** Adolescent Development and Discussing Difficult Topics with Teens. Sexual Assault Nurse Examiner-Pediatric (SANE-P) Certification Course, Kansas City, MO, September 2012.

**Stancil SL.** Improving Interactions with Teens. CMH Ambulatory Nursing Education Conference, Kansas City, MO, May 2012.

**Stancil SL.** Improving Interactions with Teens. CMH OR Continuing Education, Kansas City, MO, May 2012 and October 2012.

**Vavilala DT, Ponnaluri VK, Vadlapatla RK, Pal D, Mitra AK, Mukherji M.** Honokiol inhibits HIF pathway and hypoxia-induced expression of histone lysine demethylases. Health Sciences Research Summit, UMKC School of Pharmacy, Kansas City, MO, April 2012.

#### Job Placement of 2012 IPHD Graduates

##### **Division of Pharmaceutical Sciences**

Name	Company/University	Position Held
Sriram Gunda	Pharmaceutical Product Development (PPD), Richmond, Virginia	Pharmacokineticist
Mukul Minocha	Center for Translational Medicine, School of Pharmacy, University of Maryland	Post-Doctoral Fellow
Wanyi Tai	Joint Department of Biomedical Engineering, University of North Carolina at Chapel Hill and North Carolina State University	Post-Doctoral Fellow
Viral Tamboli	Teva Pharmaceuticals, Pomona, New York	Scientist I

#### **Strategic Initiative II. Our People: Foster the growth and success of students, faculty and staff**

##### **Goal II.A. Students: Recruit, retain and graduate a highly qualified and diverse student population**

**Objective II.A.1. Enhance recruitment efforts to increase the student population diversity**

**Objective II.A.2. Align recruitment efforts with indicators of success to maximize on-time graduation for all School of Pharmacy Programs (i.e., Pharm.D., graduate degrees)**

**Objective II.A.3. Develop and implement a process for early identification of at-risk students along with interventions to optimize student progression rates within all School of Pharmacy programs**



**Measures of Success:**

- Pharm.D.
  - Number of qualified applicants each year
  - Percentage male and percentage minority applicants and enrolled students
  - On-time graduation rate, attrition and deceleration rates
  - > 75% agreement with statements in the AACCP graduating student survey
  - > 75% satisfaction with school services as reported in the end of year survey
  - List of school diversity initiatives (e.g., diversity task force report, director of minority recruitment activities)
  - Student body diversity as compared to Missouri (goal is to be at least as diverse as the state of Missouri)
  - > 75% of graduating Pharm.D. students remain in the state of Missouri for employment
- Graduate students
  - Graduate student attrition rates, timely progression through the program, and graduation numbers each year
  - Percentage U.S. citizens or permanent residents in program

A number of changes occurred in the recruitment, screening, and matriculation of PharmD students in 2012. The school participated in PharmCas for the first time with the 2012 applications. This online application system is utilized by more than 100 pharmacy programs and is supported by the AACCP. In addition, the admissions committee began using a 'whole file' review screening process whereby committee members could consider all of the materials in the applicant's file rather than being limited to a numerical summary index of the variables in the admissions process. Lastly, the program changed to a 2-4 curriculum in 2012.

2012 Pharm.D. applications, class of 2016:

Total Applicants	518
Matriculated	123
Denied	146
Incomplete	127
Withdrew	56
Alternate	17
Declined Offer	46
Rescinded	3

Application and admission statistics:

**All Pharm.D.  
applicants**

	2004	2005	2006	2007	2008	2009	2010	2012
# applied	407	445	597	589	639	544	502	518
% MO Resident	59%	58%	49%	53%	57%	58%	67%	47%
Refused to Indicate Gdr							3%	
% Female	62%	65%	56%	60%	73%	58%	62%	57%

**All Pharm.D.  
applicants**

	2004	2005	2006	2007	2008	2009	2010	2012
% Prev Baccalaureate	18%	17%	24%	22%	15%	23%	18%	30%*
Average Age	23	24	24	23	24	24	24	24
Average Cum GPA	3.294	3.182	3.25	3.39	3.354	3.416	3.315	3.33
Average S/M GPA	3.17	3.172	3.157	3.262	3.272	3.31	3.3	3.2
Average # Cr. Hours	84	96	100	95	102	92	95	120
<b>Ethnicity</b>								
White	65%	64%	58%	65%	60%	60%	60%	59%
Asian/Pacific Islander	15%	18%	22%	18%	17%	18%	13%	19%
Refused to Indicate	7%	6%	6%	7%	8%	7%	13%	4%
Black or African Amer	8%	8%	11%	7%	10%	10%	10%	9%
International/Foreign	2%	2%	1%	1%	1%	1%	1%	3%
American Indian or AK Nat	1%	1%	1%	1%	1%	0%	1%	1%
Hispanic or Latino	2%	1%	1%	1%	2%	1%	2%	3%
Two or more races						1%		2%
Not Specified						2%		
<b>PCAT %</b>								
Verbal	52	57	56	68	58	56	56	53
Biology	57	58	59	59	61	56	56	61
Reading Comprehension	55	62	58	74	60	54	52	45
Quantitative Ability	60	64	64	74	64	56	50	48
Chemistry	61	59	55	57	58	51	48	54
Composite								55

1 end of fall term 2011

**Pharm.D. Application and Admission Stats – Interviewed Applicants 2009 and 2012**

*Note: Missing data for 2010 and no class admitted for 2011*

Year entered	2009	2012
# interviewed	215	222
% MO Resident	69%	71%
% Female	58%	55%
% Prev Baccalaureate	23%	45%
Average Age	23	24
Average Cum GPA**	3.59	3.506
Average S/M GPA**	3.507	3.403
Average Prereq GPA**		
Average # Cr. Hours	87	104
White	76%	75%

Asian/Pacific Islander	10%	11%
Refused to Indicate	6%	4%
Black or African Amer	5%	5%
International/Foreign	0%	1%
American Indian or AK Nat	0%	0%
Hispanic or Latino	1%	4%
Two or more races	1%	.9%
Not Specified	1%	
Verbal	67	61
Biology	63	68
Reading Comprehension	64	52
Quantitative Ability	65	54
Chemistry	57	60
Composite		60
<b>Key</b>		
^No forgiveness policy		
* 1:5 program (2:4 program is 2012 forward)		
** GPA fixed end of fall semester of year prior to admission		

#### Entering Pharm.D. class

	2004^	2005*	2006*	2007*	2008*	2009*	2010*	2012*
# accepted	141	155	159	160	170	175	161	169
# matriculated	85	114	118	123	137	138	138	123
% MO Resident	84%	79%	59%	81%	77%	82.5%	89%	89%
% Female	66%	69%	55%	72%	73%	53%	68%	57%
% Prev Baccalaureate	15%	21%	25%	14%	15%	21%	17%	12% (28%) <sup>†</sup>
Average Age	23	23	23	22	24	22	23	22
Average Cum GPA	3.623	3.535	3.526	3.535	3.576	3.64	3.615	3.54
Average S/M GPA	3.539	3.445	3.436	3.373	3.477	3.58	3.57	3.45
Average # Cr. Hours	70	82	93	81	81	79	76	92
<b>Ethnicity</b>								
White	86	76%	76%	85%	80%	78.1%	80%	80%
Asian/Pacific Islander	9	14%	11%	4%	7%	8.76%	10%	11%
Refused to Indicate	0	4%	6%	8%	7%	6.57%	5%	0%
Black or African Amer	1	3%	4%	2%	4%	2.92%	2%	3%
International/Foreign		2%	1%	0	0	0.73%	0%	0%
American Indian or AK Nat	0	0	1%	0	1%	0.73%	1%	0%
Hispanic or Latino	1	1%	1%	1%	1%	0.73%	2%	4%
Two or more races						0.73%		2%
Not Specified						0.73%		0%
<b>PCAT %</b>								

**Entering Pharm.D. class**

	2004 <sup>^</sup>	2005*	2006*	2007*	2008*	2009*	2010*	2012*
Verbal	61	65	69	64	60	70	64	60
Biology	54	64	66	60	59	62	59	66
Reading Comprehension	67	71	67	69	63	68	58	51
Quantitative Ability	71	73	79	70	66	65	56	51
Chemistry	69	65	66	54	56	54	49	57
Composite								60

<sup>^</sup>includes Adv Standing    \* includes satellite    †end of summer semester immediately prior to matriculation

**Attrition and Retention**

Entry Year	On Time Graduation Year	Total	Graduated on Time	%	Delayed Graduation (ACPE < 15%)	%	Student Withdrawals (ACPE < 6%)	%	Academic Dismissals (ACPE < 6%)	%	Total Attrition (ACPE < 24%)	%	Total Graduated Based on Original Class Size	%
2007 Total	2012	123	107	87%	3	2%	3	2%	10	8%	16	13%	110/123	89%
KC	2012	95	82	86%	2	2%	3	3%	8	8%	13	14%	84/95	88%
Columbia	2012	28	25	89%	1	4%	0	0%	2	7%	3	11%	26/28	93%

**Notes:**

- Student progression rates are recalculated at the end of each semester
- Students are tracked with the entering class, not their graduating class
- Percentages are rounded

**AACP Graduating Student Survey**

On the 2012 AACP graduating student survey, two items had ratings that fell below the school's benchmark of 75%; one of them previously had a rating above 75%, and the other item had a 5.2%

increase from the previous year, but still remained below 75%. Three items that had fallen below the benchmark in the 2011 survey had ratings above 75% in 2012.

Financial aid advising met my needs.

The college/school of pharmacy effectively managed academic misconduct by students.

I was aware of opportunities to participate in research activities with faculty.

2010	2011	2012
71/92 (77.2%)	60/84 (71.4%)	59/77 (76.6%)
72/82 (87.8%)	75/86 (87.2%)	68/93 (73.1%)
59/104 (56.7%)	57/98 (58.2%)	64/101 (63.4%)

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### SECTION III: Pharmacy Practice Experiences

My introductory pharmacy practice experiences were valuable in helping me to prepare for my advanced pharmacy practice experiences.

My introductory pharmacy practice experiences permitted my involvement in direct patient care responsibilities in both community and institutional settings.

85/107 (79.4%)	79/111 (71.2%)	81/107 (75.6%)
89/107 (83.2%)	75/107 (70.1%)	92/107 (86%)

Seventeen items on the 2012 survey received a rating of 98% or above:

### SECTION I: Professional Competencies/Outcomes

The PharmD Program prepared me to...

Communicate with health care providers.

Communicate with patients and caregivers.

Gather and use specific information (e.g., patient histories, medical records) to identify patient medication-related problems.

Develop a patient care plan to manage each medication-related problem.

Work with other stakeholders (e.g., patients and other health professionals) to engender a team approach to assure appropriate use of health care resources in providing patient care.

Work with other stakeholders (e.g., patients and other health professionals) to identify and resolve problems related to medication use.

Promote wellness and disease prevention services.

Reflect critically on personal skills and actions and make plans to improve when necessary.

Accept and respond to constructive feedback.

106/107 (99.1%)
105/107 (98.1%)
105/107 (98.1%)
105/107 (98.1%)
103/105 (98.1%)
105/106 (98.1%)
104/106 (98.1%)
105/107 (98.1%)
105/107 (98.1%)

### SECTION II: Doctor of Pharmacy Curriculum

I was provided opportunities to engage in active learning (e.g., laboratories, recitations, student portfolios, problem-based learning, in-class activities).

106/107 (99.1%)
-----------------

### SECTION III: Pharmacy Practice Experiences

In the ambulatory care setting, I was able to apply my patient care skills.

My pharmacy practice experiences allowed me to have direct interaction with diverse patient populations (e.g., age, gender, ethnic and/or cultural background, disease states, etc.).

My pharmacy practice experiences allowed me to collaborate with other health care professionals.

106/107 (99.1%)
105/107 (98.1%)
106/107 (99.1%)

### SECTION V: The Student Experience

Overall, preceptors modeled professional attributes and behaviors in the pharmacy practice experiences.

Overall, preceptors provided me with individualized instruction, guidance and evaluation that met my needs as a Doctor of Pharmacy student.

I was aware of expected behaviors with respect to professional and academic conduct.

The college/school of pharmacy was supportive of student professional organizations.

105/107 (98.1%)
106/107 (99.1%)
106/107 (99.1%)
104/106 (98.1%)

## Diversity Initiatives

- The Hy-Vee/UMKC Summer Pharmacy Explorations Program gives high school students the opportunity to learn about pharmacy and pharmacy careers, and gain hands-on experience working part-time in a Hy-Vee pharmacy. Students in the month-long program receive a biweekly stipend of \$600. The 2012 program had 32 applicants, and 14 participants.
- In June, the Schools of Pharmacy, Nursing and Dentistry sponsored the Hospital Hill Health Science Camp for high school sophomores, juniors and seniors. The camp is a year-long academy that provides a one-week on-campus residential experience in the summer and three on-campus meetings throughout the school year. It is designed to introduce high school students, primarily from minority and underrepresented populations, to health science careers. Students learn about dentistry, nursing, and pharmacy professions; participate in experiential learning activities, tour health profession schools, and receive academic enrichment. Following the summer academy, participants have the opportunity to take part in year-round didactic and clinical activities exposing them to a variety of professional career and clinical specialty opportunities. Woven throughout the curriculum are social and cultural support functions designed to build a sense of community and overcome academic and environmental obstacles to program completion.



## Racial Distribution of Pharm.D. Students

### Ethnicity - Fall Terms

	2005		2006		2007		2008		2009		2010		2011		2012	
White	359	82.72	373	80.39	380	76.31	420	75.40	467	76.68	494	79.81	401	81.01	406	79.6
Black or Afr Amer	23	5.30	19	4.09	16	3.21	17	3.05	21	3.45	21	3.39	12	2.42	15	2.94
Hispanic or Latino	5	1.15	4	0.86	4	0.80	3	0.54	4	0.66	6	0.96	5	1.01	10	1.96
Asian or other PI	36	8.29	41	8.84	45	9.04	50	8.98	54	8.87	46	7.43	36	7.27	46	9.2
Amer Ind or Nat AK	5	1.15	1	0.22	1	0.20	2	0.36	1	0.16	3	0.48	3	0.61	2	0.39
Other/Unknown	2	0.46	19	4.09	47	9.44	57	10.23	52	8.54	42	6.79	31	6.26	24	4.7
Foreign	4	0.92	7	1.51	5	1.00	8	1.44	7	1.15	7	1.13	3	0.61	2	0.39
Two or More ethnicities									3	0.49	0	0	4	0.81	5	0.98
Grand total	434		464		498		557		609		619		495		510	

### **2010 U.S. Census Data for Racial Diversity in Missouri\***

<b>Race</b>	<b>%</b>
White	81.0
Black or African American	11.5
Hispanic or Latino	3.5
Asian	1.6
American Indian and Alaskan Native	0.4
Native Hawaiian and Other Pacific Islander	0.1
Some other race	0.1
2 or more races	1.8

*\*Obtained from U.S. Census Bureau web site*

### **Plans to Remain in the State of Missouri for Employment**

In the senior exit interviews conducted in 2012 (N = 99), students were asked where they planned to practice after graduation:

	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Missouri	5	62	67 (67.7%)
Other State	7	25	32 (32.3%)
Total	12 (12.1%)	87 (87.9%)	

### **Graduate Students**

- Student Progression – Number of credit hours completed through fall semester 2012: -
  - 0-25 credit hours: 18
  - 26-50 credit hours: 11
  - 51-75 credit hours: 28
  - more than 75 credit hours: 3
- Citizenship:
  - Spring 2012
    - 2% of full-time Ph.D. students are U.S. citizens or permanent residents
    - 5% of both full- and part-time Ph.D. students are U.S. citizens or permanent residents
  - Fall 2012
    - 7% of full-time Ph.D. students are U.S. citizens or permanent residents
    - 7% of both full- and part-time Ph.D. students are U.S. citizens or permanent residents



**Goal II.B. Staff: Recruit, retain and support a highly qualified and diverse staff who provide key support for the school**

**Objective II.B.1. Develop and implement effective recruitment and selection processes**

**Objective II.B.2. Ensure staff roles and responsibilities are well articulated and match the current needs of the school**

**Objective II.B.3. Provide opportunities for staff to participate in ongoing development of skills to be prepared to meet evolving responsibilities**

**Objective II.B.4. Provide annual performance feedback to all staff members**

**Objective II.B.5. Assess job satisfaction annually**

**Measures of Success:**

- > 90% retention rate over five years
- Percentage of staff who complete professional development training each year
- Percentage of staff attending annual school retreat
- Development of updated job descriptions for all staff
- Number of qualified applicants per open staff line
- Development of a systematic process for staff recruitment
- Annual evaluation of staff performance
- Implementation of staff appreciation practices (e.g., staff awards, appreciation luncheon)
- Regular assessment of staff satisfaction with work environment

- In 2012, the staff retention rate was 100%. For all but one of the past seven years, the retention rate was above 90%.
  - 2006: 20 staff positions; 1 left; 95% retention
  - 2007: 21 staff positions; 4 left, 1 internally promoted; 81% retention
  - 2008: 24 staff positions; 2 left, 1 internally promoted; 92% retention
  - 2009: 23 staff positions; 2 left; 91% retention
  - 2010: 24 staff positions; 0 left; 100% retention
  - 2011: 24 staff positions; 1 left; 96% retention
  - 2012: 23 staff positions; 1 left; 100% retention Rodger Palmer left, retired and the position was eliminated.
- 91% of the staff completed professional development training in 2012.
- 91% of the staff attended the annual school retreat in 2012.
- In the hiring of 2 staff members in 2012, UMKC Human Resources forwarded 7 applications to the school and interviewed the top 7 applicants, and the [business office] interviewed the final 7 applicants.
- Staff recruitment and selection processes:
  - The School of Pharmacy adheres to the recruitment process described on the UMKC Office of Human Resources web page (<http://www.umkc.edu/hr/recruitment/administrative-recruiting-hiring-process.asp>). Positions are posted on the Human Resources career opportunities web page, and candidates must apply online.
  - Staff recruitments are overseen by the school's business manager. The chair or director of the division or the area where the staff member will be assigned works with the business manager to design the position description, screen the applicants and develop the interview itinerary.

- Responsibilities of the school include completing the hiring freeze exemption form, creating a job opening in eRecruit, reviewing the applications sent by the Human Resources office, interviewing applicants, completing reference checks for the final candidate, contacting the candidate to extend a tentative offer, initiating a criminal background check, and sending an e-mail to candidates who were interviewed but not selected. Human Resources assumes all responsibility for new-hire processing and employee orientation.
- Annual evaluation of staff performance: The guidelines from Human Resources state “a consistent 12 month review period for all employees is recommended across campus.” The School of Pharmacy follows the performance appraisal processes recommended by UMKC. Staff performance evaluations are completed in May of each year with a self-appraisal by the employee, followed by a performance appraisal by the supervisor.
- Staff appreciation and recognition:
  - In April 2012, the dean hosted a staff luncheon in recognition of Administrative Professionals Day, and the Pharmacy Foundation gave each staff member a \$20 gift card to Target.



- In December 2012, the dean hosted a holiday breakfast for the faculty and staff in Kansas City, and a holiday luncheon for the faculty and staff in Columbia. Staff awards were presented at the breakfast in Kansas City. The recipients were nominated and selected by a vote of all faculty and staff in the school. The names of the winners in each category were engraved on a plaque in the second-floor hallway of the Health Sciences Building. The names were also submitted to the campus staff awards committee as the School of Pharmacy’s nominees for the campus awards. The recipients were:

- Human Resources Campus Collaboration Award: Traci Parker Gray
- Chancellor's Education First Award: Dianna Brasington
- Chancellor's True Unsung Hero Award: Casey Ramsey
- Student Mentor Award: Steven McDonald



### **Staff Development**

- Both the UM system and the UMKC campus offer a range of staff development opportunities. The university and the school encourage attendance by staff at training seminars and development programs. These offerings provide support for work-related success and personal growth.
- The performance appraisal form has a section entitled “Training/Development Plans” that describes the staff member’s training and development need for the next evaluation period. These plans are approved by the supervisor. The self-appraisal form also includes the question “Indicate any training or development that you would like to have during the next review period.”
- In 2012, 91% of the staff participated in professional development activities. School of Pharmacy staff are allotted \$500 per fiscal year to fund various staff development opportunities (training seminars, books, etc.) pending approval of the supervisor. Staff have until May 1 to use the funding each year. There are also many free resources available through the university.

### **Staff Diversity**

2012	Staff		
	Male	Female	Total
American Indian			
Black		4	4
Hispanic		1	1
White	3	14	17
Asian			
Not Reported		1	1
Total	3	20	23
2011	Staff		
	Male	Female	Total
American Indian			
Black		3	3
Hispanic		1	1
White	4	15	19

Asian		1	1
Not Reported			
Total	4	20	24
2010	Staff		
	Male	Female	Total
American Indian			
Black		3	3
Hispanic		1	1
White	4	15	19
Asian		1	1
Not Reported			
Total	4	20	24
2009	Staff		
	Male	Female	Total
American Indian			
Black		3	3
Hispanic		1	1
White	4	14	18
Asian		1	1
Not Reported			
Total	4	19	23

**Goal II.C. Faculty: Recruit, retain and support a highly qualified and diverse faculty****Objective II.C.1. Align faculty recruitment with current programmatic needs****Objective II.C.2. Further develop practices that enhance faculty retention****Objective II.C.3. Provide written annual performance feedback for all faculty****Objective II.C.4. Provide opportunities for professional development for all faculty****Objective II.C.5. Develop and implement evaluation strategies to ensure all instructors (faculty, preceptors and adjunct faculty) provide quality educational experiences for students****Measures of Success:**

- Percentage of new hires retained over first six years
  - Annual faculty turnover
  - Percentage of faculty making adequate progress toward tenure and promotion on annual review
  - Peer-reviewed national/international publications regarding teaching/assessment
  - Faculty national/international presentations/posters regarding teaching/assessment
  - Faculty authored textbooks and book chapters (instructional materials)
  - Percentage of faculty possessing advanced certification and licensure (when applicable)
  - Regular feedback on faculty performance
  - Provision of faculty supports and resources (e.g., faculty development seminars, support for presentations at scientific meetings)
  - Editorial board appointments
  - Elected leaders in local, regional, and national organizations
- Progress toward tenure and promotion:
    - In 2011-2012, three faculty members were under mandatory tenure review, and all three received promotions with tenure. Two other faculty members applied for non-mandatory review; they did not receive promotions. One non-tenure track faculty member applied for and received promotion in 2012.
    - The Promotion and Tenure Committee conducted annual promotion and tenure reviews of four faculty members.

**Faculty Diversity**

2012	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	2		2			
Hispanic				1	1	2
White	6		6	12	22	35
Asian	9		9	1	1	2
Not Reported	1		1	1	1	2
Total	18		18	15	25	40

2011	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	3		3			
Hispanic					1	1
White	6		6	12	23	35
Asian	7		7	1	1	2
Not Reported					1	
Total	16		16	13	26	39
2010	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	3		3			
Hispanic					1	1
White	6		6	10	21	31
Asian	7		7	1	1	2
Not Reported						
Total	16		16	11	23	34
2009	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	3		3			
Hispanic					1	1
White	5		5	8	20	28
Asian	7		7	1	2	3
Not Reported						
Total	15		15	9	23	32

- Retention of new hires: From 2006 through 2012, 32 new faculty were hired. 31 are still with the school, for a 96.9% retention rate.
- Faculty turnover: From 2006 through 2012, 14 faculty members left the School of Pharmacy
  - 2006: 5
  - 2007: 1
  - 2008: 2
  - 2009: 3 (one was a retirement)
  - 2010: 1
  - 2011: 1
  - 2012: 1

### **Teaching/Assessment Related Publications**

**Elias EC, Phillips DC**, Luechtefeld ME. E-books in the classroom: a survey of students and faculty at a school of pharmacy. *Currents in Pharmacy Teaching and Learning* 2012; 4(4):262-66.

Medina MS, Bouldin AS, Gonyeau M, Kissack JC, Maldonado WT, **Melchert RB**, Moukhachen O, Plaza CM. Report of the 2011-2012 Academic Affairs Standing Committee: The evolving role of scholarly teaching in teaching excellence for current and future faculty. *Am. J. Pharm. Ed.* 2012;76(6):1-16.

Nyberg C, Patterson B, **Rasu R**. Do Pharmacy Students Have Positive Attitudes Towards Persons Living With HIV/AIDS? A Survey of Pharmacy Students to Evaluate Stigmatizing Beliefs. *The International Journal of Pharmacy Education and Practice*, 2012; 8(2):1-10.

**Ruehter V, Lindsey C, Graham M, Garavalia, L**. Creation and incorporation of online modules to enhance knowledge and skills application during the introductory pharmacy practice experience. *American Journal of Pharmaceutical Education*, 2012: 76(4), Article 69, 1-9.

**Santee J, Mead T, Garavalia L, Fincham J**. Scope of professional electives. *American Journal of Pharmaceutical Education*, 2012:76(10), Article 195, 1-6.

**Smith AJ, Hardinger K**. Perceptions of Faculty Development Needs Based on Faculty Characteristics. *Currents in Pharmacy Teaching and Learning* 2012;4 232–239.

**Stoner SC, Fincham JE**. Faculty Role in Classroom Engagement and Attendance. *American Journal of Pharmaceutical Education*, 2012:76(5): 75.

### **Faculty national/international presentations/posters regarding teaching/assessment**

**Cochran K, Phillips D, Caligiuri F, Odum L, Ottis E, Aistrope D, Anliker L**. Consensus Gathering and Development of a Pharmacy Family Pheud Game to Teach Pharmacotherapy Pearls in Introductory Pharmacy Practice Experience. Roundtable Presentation at AACP 2012 Annual Meeting , Kissimmee, FL, July 2012.

Deppe S, **Sawkin M, Stoner S, Rasu R**. Assessing Health Literacy and Medication Adherence among an Underserved Population. Poster presentation at AMCP Annual Meeting, San Francisco, CA, April 2012.

**DiDonato K, Ruehter V, Odum L, Brownfield A, Lindsey C**. Implementation of an Immunization Protocol at a School of Pharmacy with Two Campuses to Expand Student Opportunities to Provide Immunizations. American Pharmacists Association Annual Meeting and Exposition, New Orleans, Louisiana, March 2012. *J Am Pharm Assoc* 2012; 52(2): 228 (abstract).

Englin E, Nguyen T, Palecek W, **Caligiuri F, Wombwell E**. Assessment of student and faculty perceptions on a series of web-based student journal clubs presented synchronously to multiple distance locations. Presented at *the American Society of Health-System Pharmacists Midyear Clinical Meeting and Exhibition* in Las Vegas, NV, December 2012.



**Graham MR, DiDonato KL.** Survey Results Describing Students' Perceptions of the Quest/Scholar Process Utilized For Patient Assessment and Recommendation of Nonprescription Pharmacotherapy. Poster presented at the Nonprescription Medicines Academy Annual Conference, Cincinnati, OH, September 2012.

Inge L, **Winans EA, Graham MR**, Kopacek KJ, **Marken PA**, Novak MA, Weitzel K. Electronic Medical Records (EMR): an Opportunity to Expand Interprofessional Education and Advance Case Based Learning. AACP Special Session; American Association of Colleges of Pharmacy annual meeting, Kissimmee, Florida, July 2012.

**McQueen, C.** Student Pharmacist Compounding Competition: Two Years' Experience. Round table presentation and discussion; American Academy of Colleges of Pharmacy; Orlando, FL, July 2012.

**Sawkin MT, Caligiuri FJ**, Deppe SJ, **Obering CD, Phillips DC.** UMKC School of Pharmacy: Advancing Interprofessionalism through the curriculum, experiential sites and community service. UMKC School Poster Presented at AACP Annual Meeting, Kissimmee, FL, July 2012. Am J Pharm Educ 2012;76(5):130 (abstract).

**Stoner SC, Ruehter VL, Graham MR.** Development and Assessment of an Administrative Academic Pharmacy APPE Rotation. Poster presented at the American Association of Colleges of Pharmacy's Annual Meeting in Kissimmee, FL, July 2012.; AJPE 76 (5) Article 99 (abstract).

Vouthy K, Beckmon M, Chen C, **Mead TN, Schauner SM.** Student Pharmacists' Clinical and Educational Contributions to a Family Medicine Residency Program. Poster presentation at the American Society of Health System Pharmacists Midyear Clinical Meeting, Las Vegas, NV, December 2012.

**Wombwell E, Caligiuri F.** Zoonotic Illnesses Elective: Student Perceptions and Course Description.

- Presented at the AACP Annual Meeting, Pharmacy Education 2012 in Kissimmee, FL, July 2012
- Am J Pharm Educ. 2012; 76(5) [abstract]
- Poster Presented at ASHP Annual Meeting – 2012 Las Vegas, NV

#### **Faculty Certifications and Licensure Status**

- In the Division of Pharmacy Practice and Administration, 21 out of 40 faculty (52.5%) have board certifications; 36 out of the 40 faculty (90%) have active pharmacist licenses in one or more states.

<b>Name</b>	<b>Certification(s)</b>	<b>Licensure Status</b>
Aistrophe, Daniel		Missouri active; Minnesota active
Anliker, Lynn	BCPS	Missouri active; Iowa active; Colorado active
Brown, Wayne	FSCIP	Missouri active
Brownfield, Angela		Missouri active
Bryant, Patrick		Missouri active; Nebraska active
Bzowyckj, Andrew	BCPS	Missouri active; Minnesota active; Connecticut active
Caligiuri, Frank		Missouri active; Iowa active
Cochran, Kelly	BCPS	Missouri active; Iowa active; Illinois active; Indiana active

<b>Name</b>	<b>Certification(s)</b>	<b>Licensure Status</b>
DiDonato, Kristen	BCACP	Ohio active; Missouri active
Fincham, Jack		Colorado active; Kansas active; Alabama inactive, Georgia inactive, Minnesota inactive, Mississippi inactive, Nebraska inactive
Garavalia, Linda		n/a
Graham, Maqual		Missouri active
Hampton, Jeremy	BCPS	Missouri active; North Carolina inactive
Hardinger, Karen	BCPS	Kansas active; Missouri active
Knell, Maureen	BCPS	Missouri active
Kuehl, Peggy	BCPS, FCCP	South Dakota inactive; Minnesota active; Illinois inactive; Missouri active; Kansas active
Lindsey, Cameron	BC-ADM; CDE; BCACP	Missouri active
Liu, Yifei		n/a
Marken, Patricia	BCPP, FCCP	Missouri active
McQueen, Cydney		Missouri active; Kansas active
Mead, Tatum		Missouri active; Iowa active
Nelson, Leigh Anne	BCPP	Missouri active
Odum, Lauren	BCPS	Missouri active
Ottis, Erica	BCPS	Missouri active
Pace, Heather		Missouri active
Patterson, Mark		n/a
Phillips, David	BCPS	Missouri active; Ohio active
Rasu, Rafia		n/a
Ruehter, Valerie	BCPP	Missouri active
Santee, Jennifer		Missouri active; Iowa active
Sawkin, Mark	AAHIVP	Kansas active; Missouri active
Schauner, Stephanie	BCPS	Missouri active
Smith, Andrew	BCPS (AQ Cardiology)	Missouri active; Kansas active
Snella, Kathleen	BCPS; FCCP	Missouri active; Texas inactive
Sommi, Roger	BCPP	Missouri active; Texas active
Sperry, Morgan		Missouri active; Nebraska active; Iowa active
Stahnke, Amanda		Missouri active; Illinois active
Stoner, Steven	BCPP	Missouri active; Nebraska inactive
Winans, Beth	BCPP	Missouri active; Oklahoma active
Wombwell, Eric	BCPS	Missouri active

- In the Division of Pharmaceutical Sciences, one faculty member is a registered pharmacist—Thomas Johnston (Kansas active; Minnesota inactive).
- In the Division of Pharmacology and Toxicology, two faculty members are registered pharmacists—Orisa Igwe (Louisiana inactive; Minnesota inactive; Ohio inactive) and Russell Melchert (Arkansas active; Oklahoma active).

### **Annual Performance Feedback for All Faculty**

A structured faculty performance evaluation is conducted each year via a management by objectives (MBO) process. Each faculty member provides their division chair with a set of projected goals for the upcoming academic year and a summary of their performance on the MBO for the current year. Faculty also submit, via the online faculty accomplishment system, a summary of all scholarly activity, teaching, and service provided to the school, university, profession, and community. All of the information is reviewed by the division chair and evaluated based on attainment of goals and objectives as stated in the current year MBO and on faculty citizenship. Discussion points with regard to performance of the previous year, as well as the establishment of goals for the upcoming year, are identified by the division chairs. Chairs meet personally with each faculty member to discuss the issues, and a memorandum summarizing the performance of the past year and the objectives for the coming year is sent to the faculty member for discussion and signature.

### **Faculty Advisors (FA)**

Each entering student is assigned a specific FA for the duration of their enrollment in the Doctor of Pharmacy program.

#### **2012-2013 data:**

- 39 faculty participated as advisors
- Each faculty averages 13 advisees (Range 3 – 22)

### **Professional Development Opportunities for Faculty**

- The task force's charges for 2011-2012 were based on the strategic plan:
  - Further develop practices that enhance faculty retention
  - Provide opportunities for professional development for all faculty
  - Assist the associate dean for academic affairs in describing the actual and planned mechanisms for faculty development related to the program expansion to Springfield
- The task force's charges for 2012-2013 were:
  - Further develop practices that enhance faculty retention
  - Provide opportunities for professional development for all faculty
  - Assist the associate dean for academic affairs in providing and describing faculty development initiatives related to the expansion of the Pharm.D. program to MSU as needed
- Faculty development seminars held in 2012:
  - January 18: Instructional technology and portfolios (Molly Mead)
  - February 22: Test question writing (Linda Garavalia)
  - April 4: Faculty Development Journal Club (Andy Smith)
  - June 21: Observational Structured Clinical Examinations (OSCEs) by Dr. Zubin Austin
  - June 21: Patent seminar with Dr. Manfred Wolff
  - June 22: Continuous Quality Improvement (Linda Garavalia and Trish Marken)
  - September 21: Instructional design and active learning strategies (Linda Garavalia and Mark Patterson)
  - October 17: discussion of report card use for pharmacotherapy instructors (Paul Gubbins) and The individual and institutional value of SOTL (Paul Gubbins)
  - November 28: The Affordable Care Act (Delores Furtado)

- Included in the awards and incentives for the School of Pharmacy faculty are:
  - Funding for development leave—an opportunity for faculty to gain or expand their skills in practice or research under the guidance of experts in their area of interest, including learning new educational techniques to enhance or expand their effectiveness as an educator.
  - Support for practice/education innovations—faculty members can request funding for resources such as equipment and texts that will enhance the educational environment for their students.

### **Editorial Boards**

- Bzowyckyj - Journal of Health-System Pharmacy Residents (JHPR)
- Fincham - Associate Editor, American Journal of Pharmaceutical Education; Annals of Pharmacotherapy, Editorial Board Member; Regional Editor for North America, International Journal of Pharmacy Practice; Editorial Board member, American Health and Drug Benefits
- Garavalia - Faculty Development Journal
- Hardinger - Conference Papers in Medicine; Dataset Papers in Medicine; Conference Papers in Immunology, World Journal of Transplantation
- Johnston - Journal of Pharmacy and Pharmacology; Journal of Ocular Biology, Diseases, and Informatics
- Lee - Advanced in Biomaterials (Hindawi Publishing Corp)
- Melchert – Cardiovascular Toxicology, Toxicology in Vitro, Regenerative Medicine Research
- Mitra - OA Drug Design & Delivery; Journal of Biotechnology & Biomaterials; Current Eye Research; European Journal of Drug Metabolism and Pharmacokinetics; Experimental Eye Research/Elsevier Editorial System; Pharmaceutical Research Editorial Advisory Board
- Wang - Neuroscience Journal; World Journal of Psychiatry

### **Officer Positions in Local, Regional and National Organizations**

- Bzowyckyj - Secretary-Treasurer; Kappa Psi Pharmaceutical Fraternity - Kansas City Graduate Chapter
- In April, Russell Melchert received a 12-month appointment to the AACP Center for the Advancement of Pharmaceutical Education (CAPE) Advisory Panel on Educational Outcomes.
- Mitra - Selection Committee for American Association for Advancement of Science
- Smith - President-Elect Missouri Society of Health-Systems Pharmacists; Region IV Councilor The Rho Chi Pharmacy Honors Society; Past-President Greater Kansas City Society of Health-Systems
- Stoner - AACP Council of Sections Secretary; AACP Pharmacy Practice Section in the COS - Chair Elect

### **Faculty Recruitment**

In 2012, the Division of Pharmacy Practice and Administration recruited for one clinical assistant professor positions which was filled in August 2012. The primary practice site was established in the ambulatory care outpatient clinics of the KC Veteran's Administration Hospital.

### **Faculty Retention**

On the 2012 AACP faculty survey, seven items had ratings that fell below the school's benchmark of 75% who agreed/strongly agreed with the statement. Three of those had a rating above 75% in the

2011 survey. Two items that had fallen below the benchmark in the 2011 survey had ratings above 75% in 2012.

SECTION I: Administrative System

I am given the opportunity to provide evaluative feedback of the administrators.

2011	2012
33/47 (70%)	23/36 (63.9%)

SECTION II: Recruitment and Retention

I receive formal feedback on my performance on a regular basis.  
The college/school consistently applies promotion and/or tenure policies and procedures.

35/48 (73%)	31/36 (86.1%)
28/37 (76%)	22/32 (68.8%)

SECTION III: Infrastructure

The physical facilities enable out-of-class interaction among administration, faculty, and students.

40/49 (82%)	26/36 (72.2%)
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SECTION V: Faculty Development

Funds are available to support my faculty development.  
Programs are available for non-practice faculty to orient them to the pharmacy profession and professional education.

30/46 (65%)	28/38 (73.7%)
22/35 (63%)	19/26 (73%)
Appropriate	Appropriate
28/47 (60%)	20/23 (87%)
37/48 (77%)	25/36 (69.4%)
15/27 (56%)	13/20 (65%)

SECTION VIII: Academic Roles

In my opinion, the proportion of my time spent on research is:

In my opinion, the proportion of my time spent on service is:

In my opinion, the proportion of my time spent on clinical service is:

Five items on the 2012 survey received a rating of 98% or above:

SECTION III: Infrastructure

I have access to library and other educational resources.

38/38 (100%)

SECTION VI: Curriculum, Teaching, and Assessment

The Pharm.D. Program prepares students to ...

develop and use patient-specific pharmacy care plans.

37/37 (100%)

promote the availability of health promotion and disease prevention initiatives.

36/36 (100%)

communicate with patients, caregivers, and other members of the interprofessional health care team.

36/36 (100%)

apply state and federal laws and regulations to the practice of pharmacy.

36/36 (100%)

### Strategic Initiative III. Research: Advance scientific innovation and translational research

**Goal III.A. Foster the creation of high quality research with on-going annual funding of \$5 million**

**Objective III.A.1. Support collaboration within and across all divisions (internal)**

**Objective III.A.2. Promote collaboration to strengthen graduate research**

**Objective III.A.3. Develop and implement interdisciplinary research projects as opportunities for funding**

**Objective III.A.4. Establish a mechanism for bridge grant(s) by the School of Pharmacy**

**Objective III.A.5. Establish a mechanism to increase research skills of faculty (practical/grant writing)**

#### Measures of Success:

- NIH funding (\$) per basic science FTE AACP ranking
  - Non-NIH federal funding (\$)
  - Industry, foundation and other funding (\$)
  - Number of grant proposals submitted each year
  - Number of grant proposals funded each year
  - Participation in grantsmanship seminars/workshops
- NIH Funding Per FTE:
    - In the fiscal year 2011 rankings by the American Association of Colleges of Pharmacy, the UMKC School of Pharmacy ranked 35th out of 75 schools in total NIH awards per FTE Ph.D. faculty
    - In the 2010 rankings, it ranked 36th out of 73 schools
    - In the 2009 rankings, it ranked 26th out of 68 schools
  - In 2012, faculty in the School of Pharmacy had 29 active grants: 13 NIH grants; 1 non-NIH federal grant; and 15 industry/foundation/other grants.
  - Faculty submitted 22 grant proposals in 2012. Five funded grants began in 2012.
  - Grantsmanship seminars/workshops
    - 1 faculty member participated in the Josiah Macy grant workshop on Faculty Development in Team-based care.

#### Total NIH Funding

	2005	2006	2007	2008	2009	2010
School (n)	1,594,354	1,120,511	1,060,897	3,150,844	3,070,490	2,467,634
National (avg)	3,749,402	3,865,412	3,902,247	4,167,440	4,709,979	4,907,975
Cohort (avg)	4,409,811	6,541,481	5,735,792	5,037,814	5,945,896	5,517,231

Cohort: Creighton University, Southern Illinois University - Edwardsville, The University of Iowa, University of Arkansas for Medical Sciences, University of Kansas, University of Nebraska Medical Center

\*\*based on report from AAMS, March 2013

## **Research Support**

- The dean presented a draft bridge funding request policy to the Research Advisory Council at their May meeting, and requested the council members' input. The policy was finalized in August, and distributed to all faculty in the school. The dean committed funding of \$100,000 for 2012-2013, and requests were limited to \$15,000 each. Instructions for the application procedure and review process included:
  - "Faculty must submit an application to the division chair. Applications are due on or before September 17, 2012, with a possible start date of January 1, 2013."
  - "The division chair will forward the proposal along with a written recommendation regarding disposition of the proposal to the dean. The dean will forward the proposal and chair's recommendation to the Research Advisory Council (RAC) for review. The chair of the applicant's division will not participate in the deliberations of the RAC regarding the proposal other than to provide a written recommendation. The RAC will provide a recommendation to the dean regarding the disposition of the proposal. The dean will make the final funding decision."
- The dean received six proposals requesting a total of \$84,150; three proposals from faculty in the Division of Pharmacology and Toxicology, and three from faculty in the Division of Pharmaceutical Sciences. At their October meeting, the Research Advisory Council reviewed the proposals and provided comments and suggestions for the applicants. The dean accepted the council's recommendation to fund all six proposals; the applicants were given instructions to report back to the council on how they used the funding and what they accomplished.
- Patent Seminar: At the School of Pharmacy retreat in June 21, Manfred Wolff conducted an afternoon seminar on patents. Dr. Wolff is a registered patent agent and pharmaceutical/biotechnology/medicinal chemistry patent consultant.

## **Grants, 2009-Present** (those active in 2012 highlighted in yellow)

<i><b>Principal Investigator</b></i>	<i><b>Agency</b></i>	<i><b>Active Dates</b></i>	<i><b>Direct Costs</b></i>	<i><b>Indirect Costs</b></i>
Hari Bhat, Ph.D.	NIH National Cancer Institute	8/15/2009–7/31/2012	\$264,013.00	\$129,366.00
Kun Cheng, Ph.D.	NIH National Cancer Institute	1/1/2010–12/31/2012	\$255,376.00	\$110,077.00
Kun Cheng, Ph.D.	NIH National Institute on Alcohol Abuse and Alcoholism	9/10/2009–8/31/2011	\$150,000.00	\$59,780.00
Kun Cheng, Ph.D.	NIH National Institute on Alcohol Abuse and Alcoholism	9/15/2012–8/31/2013	\$233,507.00	\$109,190.00
Simon Friedman, Ph.D.	NSF Division of Chemistry	9/15/2011–8/31/2014	\$254,666.00	\$100,334.00
William Gutheil, Ph.D.	University of Kansas Medical Center Research Institute, Inc.	9/26/2011–5/16/2012	\$21,884.00	\$10,942.00
Orisa Igwe, Ph.D.	NIH National Institute of Dental And Craniofacial Research	7/1/2011–6/30/2014	\$299,999.00	\$138,882.00
Thomas Johnston, Ph.D.	Trilogic Pharma	4/1/2011–9/30/2011	\$36,700.00	\$5,138.00
Thomas Johnston, Ph.D.	Trilogic Pharma	8/1/2012–1/31/2013	\$36,700.00	\$11,010.00

<i><b>Principal Investigator</b></i>	<i><b>Agency</b></i>	<i><b>Active Dates</b></i>	<i><b>Direct Costs</b></i>	<i><b>Indirect Costs</b></i>
Anil Kumar, Ph.D.	NIH National Institute on Alcohol Abuse and Alcoholism	4/1/2007–3/31/2011	\$858,450.00	\$390,587.26
Anil Kumar, Ph.D.	NIH National Institute on Drug Abuse	2/1/2008–11/30/2011	\$2,038,439.11	\$998,834.89
Anil Kumar, Ph.D.	NIH National Institute on Drug Abuse	9/30/2008–3/31/2013	\$735,246.00	\$234,293.00
Anil Kumar, Ph.D.	NIH National Institute on Drug Abuse	4/1/2009–3/31/2013	\$782,120.00	\$383,238.00
Anil Kumar, Ph.D.	NIH National Institute on Alcohol Abuse and Alcoholism	9/10/2012–6/30/2013	\$250,00.00	\$125,000.00
Santosh Kumar, Ph.D.	NIH National Institute on Drug Abuse	5/1/2011–4/30/2013	\$174,783.00	\$87,391.00
Chi Lee, Ph.D.	Missouri Department of Economic Development	1/1/2009–12/31/2012	\$263,200.00	\$60,800.00
Yifei Liu, Ph.D.	Abbott Lab	5/24/2012–11/30/2012	\$9,715.74	\$4,857.92
Ashim Mitra, Ph.D.	NIH National Institute of Allergy and Infectious Diseases	1/15/2008–12/31/2013	\$992,525.00	\$486,337.00
Ashim Mitra, Ph.D.	NIH National Eye Institute	4/1/2010–3/31/2012	\$684,869.00	\$317,529.00
Ashim Mitra, Ph.D.	Summa Health System	9/1/2011–8/31/2013	\$77,956.00	\$38,978.00
Ashim Mitra, Ph.D.	NIH National Eye Institute	1/15/2006–12/31/2012	\$1,052,558.00	\$461,085.00
Mridul Mukherji, D.Phil.	Aplastic Anemia & MDS International Foundation	7/1/2011–6/30/2013	\$27,273.00	\$2,727.00
Leigh Anne Nelson, Pharm.D.	Covance Inc.	12/1/2008–12/1/2014	\$59,874.75	\$11,974.97
Leigh Anne Nelson, Pharm.D.	Covance Inc.	7/1/2009–6/30/2012	\$19,228.02	\$3,845.61
Leigh Anne Nelson, Pharm.D.	The Feinstein Institute For Medical Research	3/1/2010–9/20/2012	\$70,046.46	\$7,004.73
Leigh Anne Nelson, Pharm.D.	Otsuka Pharmaceutical Development & Commercialization	12/1/2011–12/1/2013	\$1,955.79	\$508.50
Mark Patterson, Ph.D.	University of Missouri Research Board	7/26/2011–7/26/2012	\$26,400.00	
Rafia Rasu, Ph.D.	Abbott Lab	9/1/2010–4/30/2012	\$40,000.00	\$20,000.00
Roger Sommi, Pharm.D.	Sanofi Aventis	9/1/2008–9/1/2012	\$26,825.40	\$6,974.60
Roger Sommi, Pharm.D.	Janssen Scientific Affairs	7/1/2010–12/31/2013	\$14,147.43	\$3,678.34
Jianping Wang, M.D., Ph.D.	University of Missouri Research Board	9/1/2011–8/30/2013	\$63,000.00	
Elizabeth Winans, Pharm.D.	Health Research Associates	11/1/2010–12/31/2011	\$2,000.00	\$600.00
BiBotti Celestin Youan, Pharm.D., Ph.D.	NIH National Institute of Allergy And Infectious Diseases	7/22/2009–6/30/2012	\$275,000.00	\$96,334.00



<i>Principal Investigator</i>	<i>Agency</i>	<i>Active Dates</i>	<i>Direct Costs</i>	<i>Indirect Costs</i>
BiBotti Celestin Youan, Pharm.D., Ph.D.	NIH National Institute of Allergy And Infectious Diseases	8/20/2011–7/31/2013	\$531,777.00	\$167,974.00
<b>TOTAL</b>			<b>\$10,380,234.7</b>	<b>\$4,585,271.82</b>

**Goal III.B. Establish and maintain a national reputation as a leader in scientific innovation and translational research**

**Objective III.B.1. Generate patents, publications in high impact journals, and presentations at national and international meetings**

**Objective III.B.2. Promote professional service, such as membership on editorial boards, participation in professional organizations, service on grant review study panels, leadership in professional societies, etc.**

**Measures of Success:**

- Peer-reviewed national/international publications regarding empirical or secondary research
- Research presentations/posters at national and international scientific meetings
- Number of faculty on NIH review panels

**Peer-reviewed national and international journal research and literature review articles**

*School of Pharmacy faculty names are highlighted. The following are publications with a print date of 2012 including articles in peer-reviewed national and international journals, book chapters, and other scholarly work.*

	School Divisions		
	Pharmaceutical Sciences (n=8)	Pharmacology & Toxicology (n=9)	Pharmacy Practice and Administration (n=42)
Peer-reviewed scientific journal articles	35	15	20
Book chapters	2	0	2
Other scholarly work	1	4	17
<b>Total</b>	<b>38</b>	<b>19</b>	<b>39</b>

*Note: Several publications are cross-divisional.*

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**Fincham, JE**. Stakeholder Perspective: Significant Potential for Health Information Exchange in Enhancing Quality of Care and Reducing Hospital Admissions in the United States, American Health and Drug Benefits, Vol. 5 (6), 2012, pp. 340-41.

**Fincham, JE**. Virtual Issue: Sharing best practice across continents, International Journal of Pharmacy Practice, Vol. Online ISSN: 2042-71-2012.

**Friedman, SH**. In your element: The four worlds of carbon. Nature Chemistry, 2012: 4, 426.

**Kumar, S.**, Challenges and Opportunities of Cytochrome P450-Mediated Phytoremediation. *Petrol. Envir., Biotechnol.* 2012: 4, 1-2.

**Kumar, S.** Role of cytochrome P450 in substance abuse mediated HIV-1 pathogenesis and neuroAIDS. *J. Drug Metab. Toxicol.* 2012: 3, 1-4.

**Kumar, S.**, Newsletter, Society of NeuroImmune Pharmacology (SNIP), April 2012. On the following published article in 2011 by an Early Career Investigator. Subhas Das, Jennifer Kelschenbach, Richard Charboneau, Roderick A. Barke, and Sabita Roy, Morphine Withdrawal Stress Modulates Lipopolysaccharide induced Interleukin 12 p40 (IL-12p40) Expression by Activating Extracellular Signal-regulated Kinase 1/2, Which Is Further Potentiated by Glucocorticoids. *J. Biol. Chem.* 286, 29806–29817.

**McQueen CE.** To D or Not to D....An Update on Use of Vitamin D. University of Missouri-Kansas City School of Pharmacy Alumni Weekend CE Meeting. Kansas City, MO, October 2012.

**McQueen CE.** How to Provide Dietary Supplement Help to Celiac Patients. University of Missouri-Kansas City School of Pharmacy Alumni Weekend CE Meeting. Kansas City, MO, October 2012.

**McQueen CE.** Buyer Beware: Making Wise Decisions about Dietary Supplements. Greater Kansas City Celiac Sprue Association meeting. Kansas City, MO, June 2012.

**McQueen CE.** Dietary Supplements 2012. Presentation to medical residents, Research Medical Center. Kansas City, MO, May 2012.

**Melchert RB** and **Fincham JE.** Escalating medication shortages: a public health and patient care crisis. *Missouri Medicine.* January/February, 2012.

Musselman, ME, **Hampton, J.** Letters: Alternative format for presenting research by pharmacy residents at national meetings. *Am J Health-Sys Pharm*, 2012: 69(1), 1282-83.

Nguyen T, Englin E, Palecek W, **Wombwell E.** Use of Naloxone for the Management of Opioid Overdose. *IOSR J Pharm.* 2012:2(5) Sept/Oct;8-11.

Nordeen JD, **Smith AJ**, Huke MA, Gregory TB, Gabriel ML, **Hampton JP.** Development of an advanced clinical pharmacy practice internship program: implementation and outcome evaluation. *The International Journal of Pharmacy Education and Practice.* Vol 8, Issue 2, Summer 2012.

**Odum L.** New oral anticoagulants: an update. Invited presentation for the Department of Pharmacy at the Harry S. Truman Veterans Hospital, Columbia, MO, July 2012.

**Odum L.** Smoking cessation. Invited presentation for the Department of Pharmacy at the Harry S. Truman Veterans Hospital, Columbia, MO, May 2012.

**Odum L.** Assessing stroke risk in patients with atrial fibrillation. Invited expert commentary web video for the Cardiovascular Clinician Web site, May 2012.

**Odum L.** Management of hypertension. Invited presentation for the Department of Pharmacy at the Harry S. Truman Veterans Hospital, Columbia, MO, February 2012.



**Stoner SC, Fincham JE.** Faculty Role in Classroom Engagement and Attendance. American Journal of Pharmaceutical Education, 2012;76(5): 75.

**Posters and Presentations at National and International Scientific Meetings:**

Agbor-Bawa W, **Rasu R.** Health Literacy and Its Impact on Medication Adherence and Self-Perceived Health Status. Poster presentation as encore research at 'Meeting in the Middle Conference', the biennial Southern Pharmacy Administration Conference (SPAC) and the Western Pharmacoeconomic Conference (WPC) meeting, Austin TX, June 2012.

Agbor-Bawa W, **Rasu R.** Health Literacy and Its Impact on National Health Care Utilization.

- Poster presentation at the International Society of Pharmacoeconomics and Outcomes Research (ISPOR) 17th Annual International Meeting, June 2012 at Washington, DC, USA.
- Poster presentation at 'Meeting in the Middle Conference', the biennial Southern Pharmacy Administration Conference (SPAC) and the Western Pharmacoeconomic Conference (WPC) meeting. June 2012, Austin TX.

Ande A, Jin M, McArthur C, **Kumar A, Kumar S.** Role of CYP2A6 in nicotine metabolism mediated oxidative stress in monocytes and astrocytes: Implications in HIV-1, 18th SNIP Conference, Honolulu, HI, April 2012.

Ande A, Sinha N, McArthur C, **Kumar S.** Central role of cytochromes P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with hiv-1 pathogenesis and neuroAIDS, 9th ISNV Conference, New York, NY, May/June 2012.

**Anliker LE,** Kiser TK, MacLaren R, Sherman D, Neumann R, Mueller SW, Fish DN. "Evaluation of Vancomycin and Cefepime Pharmacokinetics in Critically Ill Neurosurgical Patients." Poster #694. Society of Critical Care Medicine Annual Congress, Houston, TX, February 2012.

**Anliker, L.,** Kiser TK, MacLaren R, Sherman D, Neumann R, Mueller SW, Fish DN. Pharmacokinetic Analysis of Medication Clearance for Critically Ill Patients Receiving Continuous Renal Replacement Therapy. Society of Critical Care Medicine Annual Congress, Houston, TX, February 2012.

**Anliker LE,** Foster C, Kiser TK, Mueller S, Sherman D, MacLaren R, Neumann R, Fish DN. A Pharmacokinetic Evaluation of Vancomycin and Cefepime in Critically Ill Neurosurgical Patients." Poster presentation at the Society of Critical Care Medicine Annual Congress, Houston, TX, February 2012. Critical Care Medicine 2012; 40(12)(abstract).

Archarya G, Lee Y, **Lee CH.** Nitric Oxide Releasing Stent for Acute Myocardial Infarction During Pregnancy. The 2<sup>nd</sup> International Congress on Cardiac Problems in Pregnancy. Berlin, Germany, May 2012.

Archarya G, Lee Y, **Lee CH.** Optimization of stent coating parameters for Nitric oxide delivery. AAPS Annual meeting, Chicago, IL, October 2012.

Barot M, Gokulgandhi M, **Pal D, Mitra A.** Inhibition of Efflux Transporters Functionality by Moxifloxacin: A Potential Candidate to Overcome Multidrug Resistance, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Barot M, Gokulgandhi M, **Pal D, Mitra A**. Drug Interaction Studies using Moxifloxacin for Improving Ocular Permeability and Efficacy of Anticancer Agents for the Treatment of Retinoblastoma, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Bhat H**. Superoxide dismutases 2 and 3 at cross roads in breast cancer. Society of Mitochondrial Research and Medicine – Second Annual Conference on Mitochondria in Health and Disease, Gandhinagar, India, November 2012.

**Bhat HK**, Singh B. Induction of NAD(P)H-Quinone oxidoreductase 1 by antioxidants in female ACI rats is associated with decrease in oxidative DNA damage and inhibition of estrogen-induced breast cancer. Am Assoc Cancer Res Annual Meeting, Chicago, IL, April 2012.

Brooks M, **Liu Y, Kuehl PG**. Expansion of Personal Selling of Zoster Vaccine to Five Affiliated Supermarket Pharmacies with Incorporation of Outbound Automated Telephone Calls to Targeted Patients. Poster Presentation at the Midwest Social & Administrative Pharmacy Conference, Madison, WI, July 2012.

Brooks M, **Liu Y, Kuehl PG**. Financial Analysis of a Herpes Zoster Vaccination Program in 19 Affiliated Supermarket Pharmacies. Poster Presentation, Annual Meeting of the American Pharmacists Association, New Orleans, LA, March 2012.

Buchta MD, **Bryant P, Sperry M, Pace H**. Key elements of non-inferiority trials and how they are reported. ASHP Midyear Meeting; Las Vegas, NV, December 2012.

Chen Z, Jin W, **Cheng K**. Identification of Peptide transporters in prostate cancer cells. AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Cheng, K**. Challenges in siRNA delivery. Invited podium presentation at the 47<sup>th</sup> American Chemical Society (ACS) Midwest Regional Meeting, Omaha, NE, October 2012.

Cholkar K, Gunda S, Earla R, **Mitra A**. Novel Aqueous, Clear Mixed Nanomicellar Sirolimus Topical Drops for the Back of the Eye Delivery, AAPS Annual Meeting and Exposition, Chicago, IL, [R6075] October 18, 2012.

**Cochran K, Phillips D, Caligiuri F, Odum L, Ottis E, Aistrope D, Anliker L**. Consensus Gathering and Development of a Pharmacy Family Pheud Game to Teach Pharmacotherapy Pearls in Introductory Pharmacy Practice Experience. Roundtable Presentation at AACP 2012 Annual Meeting , Kissimmee, FL, July 2012.

Decker C, **Garavalia L**, Garavalia B, Gialde E, Chhatriwalla, A. Man versus machine: Physician level barriers to the incorporation of individualized risk estimates in medical decision making. Oral abstract presented at the American Heart Association Scientific Sessions, Los Angeles, November 2012.

Decker C, **Garavalia L**, Garavalia B, Gialde E, Chhatriwalla, A. Commission versus omission: A barrier to the use of risk estimates during PCI. Oral abstract presented at the American Heart Association Scientific Sessions, Los Angeles, November 2012.

Deppe S, **Sawkin M, Stoner S, Rasu R**. Assessing Health Literacy and Medication Adherence among an

Underserved Population. Poster presentation at AMCP Annual Meeting, San Francisco, CA, April 2012.  
**DiDonato K, Ruehter V, Odum L, Brownfield A, Lindsey C.** Implementation of an Immunization Protocol at a School of Pharmacy with Two Campuses to Expand Student Opportunities to Provide Immunizations. American Pharmacists Association Annual Meeting and Exposition, New Orleans, Louisiana, March 2012. J Am Pharm Assoc 2012; 52(2): 228 (abstract).

Earla R, Ande A, Jin M, **Silverstein PS, Mitra AK, Kumar A, Kumar S.** Nicotine Metabolism-mediated Oxidative Stress in Astrocytes and Macrophage Studied by using 3200 QTRAP Tandem Mass Spectrometry, American Association of Pharmaceutical Scientists, Chicago, IL, October 2012.

Englin E, Nguyen T, Palecek W, **Caligiuri F, Wombwell E.** Assessment of student and faculty perceptions on a series of web-based student journal clubs presented synchronously to multiple distance locations. Presented at *the* American Society of Health-System Pharmacists Midyear Clinical Meeting and Exhibition in Las Vegas, NV, December 2012.

Gokulgandhi M, Barot M, Bagui M, **Pal D, Mitra A.** Novel Lipid Conjugates of Cidofovir for the Treatment of Cytomegalovirus (CMV) Retinitis, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Graham MR, DiDonato KL.** Survey Results Describing Students' Perceptions of the Quest/Scholar Process Utilized For Patient Assessment and Recommendation of Nonprescription Pharmacotherapy. Poster presented at the Nonprescription Medicines Academy Annual Conference, Cincinnati, OH, September 2012.

Inge L, **Winans EA, Graham MR,** Kopacek KJ, **Marken PA,** Novak MA, Weitzel K. Electronic Medical Records (EMR): an Opportunity to Expand Interprofessional Education and Advance Case Based Learning. AACP Special Session; American Association of Colleges of Pharmacy annual meeting, Kissimmee, Florida, July 2012.

Iuppa C, **Nelson LA,** Elliott E, **Sommi RW.** Adverse Drug Reactions: A Retrospective Review Of Hospitalized Patients At A State Psychiatric Hospital. Poster presented at the 2012 Annual Meeting of the College of Psychiatric and Neurologic Pharmacists, Tampa, Florida, April 2012.

Jin M, **Kumar A, Kumar S.** CYP2E1-mediated alcohol metabolism induces expressions of CYP2A6 and CYP2E1 through oxidative stress-induced PKC signaling cascades in monocytes and astrocytes, 18th SNIP Conference, Honolulu, HI, April 2012.

Jost M, **Ottis E, Cochran K.** Assessment of the incidence of osteoporosis among chronic obstructive pulmonary disease patients following steroid burst therapy. Poster presentation at the American Society of Health-Systems Pharmacists Midyear Clinical Meeting, Las Vegas, Nevada, December 2012.

Kalist B, **Kuehl PG.** Tdap Administration Rates Associated with a Programmed Targeted Intervention in Four Chain Pharmacies. Poster presentation at the Annual Meeting of the American Pharmacists Association, New Orleans, LA, March 2012.

Kiser, **Bryant P, Pace H, Sperry M.** An evidence-based medicine analysis of natural product recommendations made by a popular health talk show host. ASHP Midyear Meeting, Las Vegas, NV, December 2012.

**Kumar S**, Ande A, Sinha N, McArthur C. Central role of cytochromes P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with hiv-1 pathogenesis and neuroAIDS, 7th Smoking, HIV/AIDS, and Cancer in Health Disparity, Fort Worth, TX, July 2012.

- **Kumar S**. Central role of cytochromes P450 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with HIV-1 pathogenesis and neuroAIDS, Future Virology (UK). Highlight from symposium, "Drugs of abuse-HIV infection and NeuroAIDS - A Global scenario", 3rd World Congress in Biotechnology, Hyderabad, India, Sep 13-15, 2012.
- **Kumar, S**. Central role of cytochrome P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with HIV-1 pathogenesis and neuroAIDS, Symposium: HIV-1, Substance abuse, and NeuroAIDS, 3rd World Congress in Biotechnology, Hyderabad, India, Sep 13-15, 2012.
- **Kumar, S**. Central role of cytochrome P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with HIV-1 pathogenesis and neuroAIDS, Tobacco/smoking, HIV/AIDS, and Cancer Workshop, 7th Annual Texas Conference on Health Disparities, 2012.
- **Kumar, S**. Central role of cytochromes P450 2A6 in tobacco-mediated oxidative stress in macrophages and astrocytes: implications with HIV-1 pathogenesis and neuroAIDS, HIV in the Nervous System and the 11th International Symposium on Neurovirology, 2012.

**Kumar S**, Jin,M. Central role of Cytochromes P450 (CYP) in alcohol-mediated oxidative stress and alcohol-antiretroviral therapy (ART) interactions, 18th SNIP Conference, Honolulu, HI, April 2012.

**Kumar, S**. Central role of cytochromes P450 in alcohol and tobacco-mediated oxidative stress in macrophages and astrocytes: implications with HIV-1 pathogenesis and neuroAIDS, Department of Microbiology, All India Institute of Medical Sciences, New Delhi, India, Sep 2012.

**Liu Y**, Cai J, Hong L, Hoff GL, Okah FA. Trends of emergency room visits vs. hospitalizations due to unintentional poisonings in Kansas City, Missouri. Poster presentation at the International Society for Pharmacoeconomics and Outcomes Research 17th Annual International Meeting, Washington, DC, June 2012.

**Liu Y**, Farris KB, Doucette WR. Patients' goal intention to seek drug information after exposure to direct-to-consumer advertising (DTCA) of prescription drugs from physicians and the internet. Poster presentation at the American Pharmacists Association 2012 Meeting, New Orleans, LA, March 2012.

**McQueen, C**. Student Pharmacist Compounding Competition: Two Years' Experience. Round table presentation and discussion; American Academy of Colleges of Pharmacy; Orlando, FL, July 2012.

**Mitra, A**. Challenges in Formulations and Drug Delivery. 4<sup>th</sup> Ocular Diseases & Drug Discovery Conference, Las Vegas, NV, February 2012.

**Mitra, A**. Part I-Nanotechnology for drug delivery (AM) & Part II-Novel drug delivery approaches in ocular diseases (PM), NanoSciTech-2012, Panjab University, Chandigarh, INDIA, February 2012.

**Mitra, A**. Esterase Directed Prodrug Design for Antiviral Compounds, ARVO Conference, University of Colorado School of Pharmacy, (Vincent Lee's Birthday Symposium), Denver, CO, June 2012.

**Mitra, A**. Fundamentals of Ocular Drug Delivery, U.S. Pharmacopeia, Washington, DC, February 2012.

**Mitra, A.** Novel Pentablock Copolymers as a Nanotechnology Platform for Controlled Ocular Drug Delivery, Amgen, Thousand Oaks, CA, May 2012.

**Mitra, A.** Novel Strategies in Ocular Drug Delivery, ARVO 2012 Annual Meeting – Translational Research: See the Possibilities, Fort Lauderdale, FL, May 2012.

**Mitra, A.** Targeted Drug Delivery Through Cornea Via Transporters and Receptors, ISER 2012 - XX Biennial Meeting of the International Society for Eye Research, Berlin, Germany, July 2012.

**Mitra, A.** Transporter Guided Prodrug Design for the Eye, ARVO Conference, Drug and Gene Delivery to the Back of the Eye From Bench to Bedside, Denver, CO, June 2012.

Nguyen T, Englin E, Palecek W, **Wombwell E.** Review of literature related to the observation period following administration of naloxone and flumazenil. American Society of Health-System Pharmacists Midyear Clinical Meeting and Exhibition in Las Vegas, NV, December 2012.

**Obering C, Ruehter VL, DiDonato K, Garavalia L, Kuehl P, Ottis E, Stoner S.** (July, 2012). Outcomes from a Regional Resident Teaching Certificate Program. Poster presented at the AACP 113<sup>th</sup> Annual Meeting, Kissimmee, FL, July 2012. Am J Pharm Educ 2012; 76(5): Article 99 (abstract).

Okah FA, **Liu Y**, Cai J. Smoking during twin-gestation pregnancy: effect on birth weight discordance. Poster presentation of research. 2012 Pediatric Academic Societies' Annual Meeting. Boston, MA, April 2012.

Palecek W, Englin E, Nguyen T, **Wombwell E.** "Tetanus and pertussis vaccination: a longitudinal review of Tdap use and drug utilization evaluation." Presented at *the* American Society of Health-System Pharmacists Midyear Clinical Meeting and Exhibition in Las Vegas, NV, December 2012.

Patel A, Gaudana R, **Mitra A.** Hydrophobic Ion Pairing (HIP) Complexation: A Novel Approach for Developing Polymeric Nanoparticulate Formulation of Antibody Therapeutics, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Patel A, Hao Y, Sabates N, **Mitra A.** Development and Validation of an Indirect ELISA Method to Evaluate Stability and Permeability of Lucentis In Vitro, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Patel S, Mishra G, Tamboli V, **Mitra A.** Evaluation of Novel Pentablock Copolymers as a Platform for Controlled Ocular Delivery of Protein and Antibody, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

**Patterson ME, Pace HA, Fincham JE.** An Exploratory Analysis of Variables Influencing Near-Miss Error Reporting among Health-System Providers. Academy Health Annual Research Meeting (ARM), Orlando, FL, June 2012.

Ray A, Kabra V, Vaishya R, **Mitra A.** Modification of Adenoviral Nuclear Localization Signal for Efficient Nanoparticle Delivery in Retinoblastoma, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Renukuntla J, Boddu S, Tawfik A, **Mitra A**. Expression of Folate Receptor (FR-alpha) and Proton Coupled Folate Transporter (PCFT) on RPCEC and HCEC Cell Lines, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Rianon N, **Knell M**, Agbor-Bawa W, **Obering C**, **Rasu R**. Non-malignant pain management and NSAIDs use in older patients: US outpatient settings. Submitted for poster presentation at American Geriatric Society (AGS) Annual Meeting, Seattle, WA, May 2012.

Sam T, Carlson E, Doyle I, Gabardi S, **Hardinger K**, Knorr J, McDevitt L, Ueda K, Tichy E. Risk of CMV after r-ATG or IL2 antagonist induction and the impact of CMV-directed prophylaxis in low risk renal transplant recipients. 2012 Annual Meeting of the American College of Clinical Pharmacy, Hollywood, FL, October 2012.

Sam T, Carlson E, Doyle I, Gabardi S, **Hardinger K**, Knorr J, McDevitt L, Ueda K, Tichy E. Improving kidney transplant outcomes: evaluation of antiviral prophylaxis and risk factors for the prevention of cytomegalovirus disease in low risk kidney transplant recipients. American Transplant Congress, Boston, MA, June 2011. Am J Transplant 2012; 12 (Suppl 3), Abstract 1505.

**Sawkin MT**, **Caligiuri FJ**, Deppe SJ, **Obering CD**, **Phillips DC**. UMKC School of Pharmacy: Advancing Interprofessionalism through the curriculum, experiential sites and community service. UMKC School Poster Presented at AACP Annual Meeting, Kissimmee, FL, July 2012. Am J Pharm Educ 2012;76(5):130 (abstract).

Shah S, Patel A, Patel S, **Mitra A**. Novel Nanomicellar Clear Aqueous Formulations Containing Hydrophobic Drugs for the Treatment of Posterior Segment Ocular Diseases, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Singh B, **Bhat HK**. Superoxide dismutase 3 is induced by antioxidants, inhibits oxidative DNA damage and is associated with inhibition of estrogen-induced breast cancer Am. Assoc. Cancer Res. Annual Meeting, Chicago, IL, April 2012.

**Smith-AJ**. aPTT vs Anti-Xa Monitoring of Unfractionated Heparin pro aPTT. Platform Presentation at ASHP Mid-year Clinical Meeting, Las Vegas, NV, December 2012.

**Smith-AJ**, Conaway-D, **Patterson-M**. Heart Failure Patient Demographics at an Inner City Safety Net Hospital. Poster Presentation at ACCP Annual Meeting, Hollywood, FL, October 2012

**Sommi RW**, Cutler A. Challenges and Opportunities in Treating Schizophrenia. Product Theater Presentation. 2012 College of Psychiatric and Neurologic Pharmacists Annual Meeting, Tampa, Florida, April 2012.

**Sommi RW**, **Stoner S**. An Overview of Drug-Induced Movement Disorders. Invited Presentation. 2012 College of Psychiatric and Neurologic Pharmacists Annual Meeting, Tampa, Florida, April 2012.

**Sommi RW**, **Stoner S**. Clinical Assessment of Drug-Induced Movement Disorders. Invited Presentation. 2012 College of Psychiatric and Neurologic Pharmacists Annual Meeting, Tampa, Florida, April 2012.

**Stoner SC, Ruehter VL, Graham MR.** Development and Assessment of an Administrative Academic Pharmacy APPE Rotation. Poster presented at the American Association of Colleges of Pharmacy's Annual Meeting in Kissimmee, FL, July 2012.; AJPE 76 (5) Article 99 (abstract).

Tamboli V, Mishra G, **Mitra A.** Pentablock Copolymer Based Controlled Release Formulations for Timolol Delivery, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Vadlapatla R, Vadlapudi A, **Pal D, Mitra A.** Differential Expressions of Efflux and Influx Transporters in Hypoxia Induced Retinal Pigment Epithelial Cells, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Vadlapudi A, Earla R, Vadlapatla R, Sirimulla S, **Pal D, Mitra A.** Novel Biotinylated Lipid Prodrugs of Acyclovir for the Treatment of Herpetic Keratitis (HK): Transporter Recognition, Tissue Stability and Antiviral Activity, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Vaishya R, Gokulgandhi M, Bagui M, Minocha M, Patel S, **Mitra A.** Development and Characterization of a Novel Topical Polymeric Nanomicellar Formulation (size 25-30 nm) for Intermediate and Posterior Uveitis, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Vaishya R, Gokulgandhi M, Patel S, **Mitra A,** Khurana V. Development and Characterization of a Novel Polymeric Nanomicellar Formulation (Size 50-60 nm) for Intermediate and Posterior Uveitis, AAPS Annual Meeting and Exposition, Chicago, IL, October 2012.

Vetter KR, **DiDonato KL,** May JR, Hartwig DM, **Liu Y.** The Effect of a Medication Adherence or an Education Program on Health Outcomes of Hypertensive Patients in a Community Pharmacy Setting.

- Poster presented at the APhA 159<sup>th</sup> Annual Meeting 2012, New Orleans, LA
- J Am Pharm Assoc 2012; 52(2): 202 (abstract).
- Podium presentation of research at the 38th Annual Midwest Pharmacy Residents Conference, Omaha, NE. May 2012.

Vouthy K, Beckmon M, Chen C, **Mead TN, Schauner SM.** Student Pharmacists' Clinical and Educational Contributions to a Family Medicine Residency Program. Poster presentation at the American Society of Health System Pharmacists Midyear Clinical Meeting, Las Vegas, NV, December 2012.

Wang W, **Lee CH.** Review: Assessment of Intravascular Deposition of Endogenous Compounds Released from Nanoparticle Coated Stent, AAPS Annual meeting, Chicago, October 2012.

**Winans EA,** Davis H. Development and implementation of a pharmacist run continuity of care clinic - a descriptive project. Meeting of the College of Psychiatric and Neurologic Pharmacists, April/May 2012, Tampa, Florida.

**Wombwell E, Caligiuri F.** Zoonotic Illnesses Elective: Student Perceptions and Course Description.

- Presented at the AACP Annual Meeting, Pharmacy Education 2012 in Kissimmee, FL, July 2012
- Am J Pharm Educ. 2012; 76(5) [abstract]
- Poster Presented at ASHP Annual Meeting – 2012 Las Vegas, NV

**Wombwell, E.** Mind Maps, Graphics and the Tools to Diagram Your Vision. Roundtable Discussion at the AACP Annual Meeting, Kissimmee, FL, July 2012.

Wong K, **Nelson LA**, Elliot E, **Liu Y**, **Sommi RW**, **Winans E**. Utilization of antipsychotic therapeutic drug monitoring at a state psychiatric hospital. Presented at the 2012 Annual Meeting of the College of Psychiatric and Neurologic Pharmacists, Tampa, FL, April/May, 2012.

### **Patents**

N/A

### **Faculty on NIH Review Panels in 2012**

- Rafia Rasu: SBR Health Care Delivery and Methodology Section 2011-2013
- Other review panels:
  - Ashim Mitra: Small Business: Sensory Technologies Panel; NIH Teleconference; Washington DC panel; Silver Springs MD panel; San Francisco panel
  - Jack Fincham: study section member, Agency for Healthcare Research and Quality–Health Services Research and Value Panel

### **Awards**

- Mitra: AAPS Ocular Drug Delivery & Disposition Focus Group Graduate Student Poster 1st Place Award - Megha Barot
- Rasu – Award for research project: “Inappropriate Use of Drugs by Informal Healthcare Providers”. International collaboration with International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka, Bangladesh, February-April, 2012. (Role: Principal Investigator)

### **Editorial Boards**

- Bzowyckyj - Journal of Health-System Pharmacy Residents (JHPR)
- Fincham - Associate Editor, American Journal of Pharmaceutical Education; Annals of Pharmacotherapy, Editorial Board Member; Regional Editor for North America, International Journal of Pharmacy Practice; Editorial Board member, American Health and Drug Benefits
- Garavalia - Faculty Development Journal
- Hardinger - Conference Papers in Medicine; Dataset Papers in Medicine; Conference Papers in Immunology, World Journal of Transplantation
- Johnston - Journal of Pharmacy and Pharmacology; Journal of Ocular Biology, Diseases, and Informatics
- Lee - Advanced in Biomaterials (Hindawi Publishing Corp)
- Melchert – Cardiovascular Toxicology, Toxicology in Vitro, Regenerative Medicine Research
- Mitra - OA Drug Design & Delivery; Journal of Biotechnology & Biomaterials; Current Eye Research; European Journal of Drug Metabolism and Pharmacokinetics; Experimental Eye Research/Elsevier Editorial System; Pharmaceutical Research Editorial Advisory Board
- Wang - Neuroscience Journal; World Journal of Psychiatry



**Faculty as Elected officers in local, regional, and national pharmacy or health-related professional organizations**

- Bzowycyk - Secretary-Treasurer; Kappa Psi Pharmaceutical Fraternity - Kansas City Graduate Chapter
- Mitra - Selection Committee for American Association for Advancement of Science
- Smith - President-Elect Missouri Society of Health-Systems Pharmacists; Region IV Councilor The Rho Chi Pharmacy Honors Society; Past-President Greater Kansas City Society of Health-Systems
- Stoner - AACP Council of Sections Secretary; AACP Pharmacy Practice Section in the COS - Chair Elect

**Division of Pharmaceutical Science Faculty Mentors for Doctoral Students:**

- Cheng
  - Ashutosh Barve
  - Zhijin Chen
  - Wei Jin
  - Rubi Mahato
  - Bin Qin
  - Ravi Shankar Shuklar
  - Wanyi Tai
- Friedman
  - Nitin Jain
  - Piyush Jain
  - Ashish Kala
  - Dipu Karunakaran
  - Bhagyesh Sarode
- Gutheil
  - Sudheer Bobba
  - Sandeep Putty
  - Harika Vemula
- Lee
  - Gayathri Acharya
  - Namita Giri
  - BT Ohgars
  - Wuchen Wang
- Mitra
  - Vibhuti Agrahari
  - Megha Barot
  - Kishore Cholkar
  - Mitan Gokulgandhi
  - Sriram Gunda
  - Yi Hao
  - Varun Kharana
  - Nanda Mandava
  - Mukkul Minocha
  - Ashaben Patel

- Mitesh R. Patel
- Sulabh Patel
- Durga Paturi
- Animikh Ray
- Sujay Shah
- Ye Sheng
- Viral K. Tamboli
- Ramya K. Vadlapatla
- Aswani D. Vadlapudi
- Ravi Vaishya
- Zhiying Wang
- Xiaoyan Yang
- Mukherji
  - Chaithanya Ponnaluri
  - Swami Prakash
  - Divya Teja Vavilala
- Youan
  - Vivek Agrahari
  - Jianing Meng
  - Tao Zhang

**Division of Pharmacology & Toxicology Faculty Mentors for Doctoral Students:**

- Badr
  - Julia Reis
- Bhat
  - Answesha Chatterjee
  - Amruta Ronghe
- Igwe
  - Chengling Mo
  - Yan Zhang
- Iszard
  - Shruti Kamath
- Kearns
  - Stephanie Stancil
- A. Kumar
  - Lu Cao
  - Mohit Gangwani
  - Raeesa Gupte
  - Xiu Liu
  - Jean Philippe Rey
  - Ankit Shah
  - Kshitij Verma
  - James Weemhoff
- S.Kumar
  - Anusha Ande
  - Ken McFarlin
  - Jin Mengyao

**Goal III.C. Maintain state-of-the-art human resources, technology and instrumentation****Objective III.C.1. Eliminate redundancies in equipment purchase and promote shared usage and responsibility for technology and instrumentation within the school and across campus****Objective III.C.2. Develop and implement a plan for sustainability of current research equipment and establish purchase policies for equipment that include plans for sustainability****Measures of Success:**

- Number of full-time faculty
- Number licensed and with board certifications (percentage eligible)

2012	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	2		2			
Hispanic				1	1	2
White	6		6	12	22	35
Asian	9		9	1	1	2
Not Reported	1		1	1	1	2
Total	18		18	15	25	40
2011	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	3		3			
Hispanic					1	1
White	6		6	12	23	35
Asian	7		7	1	1	2
Not Reported					1	
Total	16		16	13	26	39
2010	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total
American Indian						
Black	3		3			
Hispanic					1	1
White	6		6	10	21	31
Asian	7		7	1	1	2
Not Reported						
Total	16		16	11	23	34
2009	Full Time Basic Science Faculty			Full Time Clinical Science Faculty		
	Male	Female	Total	Male	Female	Total

American Indian						
Black	3		3			
Hispanic					1	1
White	5		5	8	20	28
Asian	7		7	1	2	3
Not Reported						
Total	15		15	9	23	32

### **Faculty Certifications and Licensures**

- Division of Pharmacy Practice and Administration
  - 27 out of 40 faculty (68%) have board certifications; 36 out of the 40 faculty (90%) have active pharmacist licenses in one or more states
- Division of Pharmacology and Toxicology
  - two faculty members are registered pharmacists—Orisa Igwe (Louisiana inactive; Minnesota inactive; Ohio inactive) and Russell Melchert (Arkansas active; Oklahoma active)
- Division of Pharmaceutical Sciences
  - one faculty member is a registered pharmacist—Thomas Johnston (Kansas active; Minnesota inactive)
  - Mitra: State License for Bureau of Narcotics and Dangerous Drugs - Missouri Dept. of Health; Federal License for Controlled Substances/US Drug Enforcement Administration

**Strategic Initiative IV. Community Engagement: Engage external constituencies to promote and support the school and profession**

**Goal IV.A. Promote accomplishments of the faculty, staff, and students through appropriate outlets and constituencies in a timely manner**

**Objective IV.A.1. Develop and implement a multi-media marketing plan for the School of Pharmacy for local, regional, and national promotion of the work of the school**

**Measures of Success:**

- Number of distinct times external stakeholders received communication from school or notifications of events
  - Distinct print or electronic pieces developed (number and listing)
  - Dissemination of school information through school and university web sites, the *Postscript*, foundation newsletter, and other promotional materials
  - Recognition of faculty and student honors and accomplishments at division and school faculty meetings and other relevant venues
- 
- Communication from school or notification of events:
    - Communication via U.S. mail was sent once in 2011-2012: the *Postscript* annual report and newsletter.
    - Invitations or communications were sent via e-mail for the following pharmacy events and programs:
      - UMKC Alumni Awards luncheon
      - Pharmacy Foundation golf tournament
      - Springfield alumni wine reception
      - Kansas City alumni wine tasting event
      - Pharmacy alumni reunion weekend brochure
    - Alumni Association, Pharmacy Foundation and Dean's Advisory Council members also receive regular communications on their specific events such as student appreciation days, the wellness fair, the Health Sciences Research Summit, commencement, career fair, and the Pharmacy Foundation holiday party.
- 
- Distinct print or electronic pieces developed:
    - The *Postscript* annual report and newsletter was sent via U.S. mail to over 2,800 pharmacy alumni and 200 other friends of the school.
    - UMKC Alumni Awards luncheon: produced and mailed by main campus to all UMKC alumni



- Pharmacy Foundation golf tournament: the player brochure was sent via e-mail to over 1,300 people—all pharmacy alumni, past players, constituent group members, and pharmacy faculty and staff
- Kansas City alumni wine tasting event: 1,546 pieces sent via e-mail
- Pharmacy alumni reunion weekend brochure: 1,528 sent via e-mail to board members and friends of the School of Pharmacy
- Springfield alumni reception: 180 invitations sent via e-mail
- Tiger-Roo Tailgate: sent via e-mail to 918 alumni



- The school employs a full-time staff member in the position of coordinator of communication and promotions, who serves as the resource and contact for news and information for the campus public relations department and the school as a whole. The coordinator is responsible for the dissemination of school news to campus public relations, social media, web site and appropriate news outlets and/or organizations. He also maintains the School of Pharmacy's web page and Facebook site. A web page designer was contracted to create a new web site for the school, and it was launched in January 2010. He remains on contract to assist with updates and development of new web pages as needed. An updated, remodeled design of the web site is currently being built and expected to launch in spring 2013.
- The school's web site has a page dedicated to news releases related to students, faculty, staff, alumni, awards, and upcoming events (<http://pharmacy.umkc.edu/news/>). The page includes a link for online submission of news items.
- School of Pharmacy news releases also appear on the web page of the UMKC office of public relations (<http://www.umkc.edu/news/>) and "UMatters," the web page for UMKC faculty and staff news (<http://info.umkc.edu/umatters/>).
- The UMKC Advancement division produces a monthly e-blast newsletter known as *eRoos* with all known alumni related information from across the campus. This newsletter is sent to all UMKC alumni with a known e-mail account.

### **Alumni**

- The UMKC Alumni Association includes news about alumni on their web page (<http://www.umkcalumni.com>) under "Roos in the News," and "Class Notes," and in their printed magazine *Perspectives* and *eRoos*, the online alumni newsletter.
- The School of Pharmacy's director of alumni and constituent relations creates the *Postscript* magazine, a yearly annual report and newsletter that is mailed to approximately 2,800 pharmacy

alumni and 200 other friends of the school. In addition to feature articles on students, faculty and alumni, the publication includes news from students, faculty, staff and alumni, and listings of faculty activities in the areas of service, awards, honors, presentations, contracts and grants. The faculty activities are compiled from their annual activity reports, personal submissions, and contacts made by the alumni director and the communications coordinator. The *Postscript* received the District VI Gold Institutional Award for Excellence in Communications at the 2012 conference of the Council for Advancement and Support of Education (CASE), the professional organization that helps direct and support alumni, fundraising and communications pieces for colleges and universities nationwide. The *Postscript* also received the organization's bronze award in 2008, gold award in 2009, and silver award in 2011.

- The director of alumni and constituent relations sends e-mail announcements of news, awards and events to members of the Pharmacy Foundation and Pharmacy Alumni Association, and distributes written reports at meetings of the foundation, alumni association, and Dean's Advisory Council.

### **School**

- At the monthly School of Pharmacy faculty meetings, the dean announces the names of faculty and students who have received awards, grant funding, and promotions. Written reports from the student organizations and the Alumni Association/Pharmacy Foundation are collected and distributed to the faculty via e-mail prior to the meetings. The Division of Pharmacy Practice and Administration includes announcements of faculty accomplishments and student achievements at their division meetings. The dean also sends e-mail announcements of faculty, staff and students awards and accomplishments to the entire School of Pharmacy, and when appropriate, the director of alumni and constituent relations forwards them to members of the Pharmacy Foundation and Pharmacy Alumni Association.
- The school's web site has a "Faculty Research Interests" page, which includes a list of each faculty member's research interests and a link to his or her personal web page. The page has a keyword search feature, which aids viewers in locating experts on different topics.
- Each spring, the school announces the recipients of the Teacher of the Year awards. For these awards, students in each professional class, years one through four, are given the opportunity to select one of the teachers who taught their class in a required course during the academic year. They are asked to judge each teacher based on his/her teaching ability and approach inside and outside the classroom, and his/her impact on the students' future careers. The anonymous balloting is conducted via Blackboard surveys. A first-place winner and runner-up are announced for each class, and they are invited to be honored by faculty, staff, students and alumni at the school's Achievers of Excellence celebration the following fall. Their names are printed in the awards program, their names are announced by the dean, and they each receive an award certificate.
- In the School of Pharmacy, all faculty and staff are asked to nominate staff members for the campus staff awards, and the top two in each category voted on by faculty and staff. This final vote bestows the award to the individual on behalf of the School of Pharmacy; this individual is then forwarded to the campus committee as the school's nominee for the campus award. The award winners each

receive a plaque and their names are added to a plaque in the second-floor hallway of the Health Sciences Building.

## Students

- School of Pharmacy scholarship winners are recognized at the Achievers of Excellence awards program each fall. After a reception for students and their families, scholarship donors, faculty, staff and alumni, the awards ceremony includes remarks from the dean, announcements of new scholarships, and guest speakers from alumni, current students, and the Pharmacy Foundation, which sponsors the program. Each student has his or her photograph taken, with the scholarship donor if possible, and copies are sent to the donors. A brief biography submitted by each scholarship recipient is printed in the awards program. Over 250 people attended the event in October 2012.
- Each spring, award recipients in the doctor of pharmacy graduating class are recognized as they are hooded at the commencement ceremony. Awards are given for superior academic achievement, leadership, and service. Sponsors of the awards are invited to attend the ceremony and be recognized. The Rho Chi honor society also recognizes a teacher of the year.



- At the end of each semester, the names of full-time doctor of pharmacy students whose term grade point average is 3.5 or higher are placed on the dean's list. To be eligible for the dean's list, baccalaureate pharmacy students must rank in the upper 10 percent of their class for the term specified. When possible, the UMKC public relations office sends news releases to the students' hometown newspapers.
- The UMKC Women's Council presents their annual Graduate Assistance Awards at a luncheon in the spring. Ph.D. and doctor of pharmacy students are among the women recognized for their research projects. In spring 2012, ten Ph.D. students received awards.
- At the UMKC Bloch School's annual Regnier Family Foundations/Bank of Blue Valley Venture Creation Challenge, three doctor of pharmacy students received an Award with Distinction for their project, PharXm Natural Supplements.
- The students in APhA-ASP produce a monthly newsletter, *The Script*, that features student profiles, student organization updates, articles by students, and a column by the dean. The newsletter is distributed via e-mail to School of Pharmacy students, faculty and staff, and posted on the "Current Students" page of the school's web site.
- The three divisions each have glass display cases in their hallways, where they post information on faculty and student activities and accomplishments.



**Goal IV.B. Sustain strong collaboration with community organizations and health care providers to impact the well-being of patients**

**Measures of Success:**

- IPPE and APPE placements across the community and state
- Preceptor volunteer hours
- Awards and other evidence of outstanding community engagement
- Faculty placements and service in practice sites across the community and state

**Doctor of Pharmacy Student Rotations**

- APPE rotations:
  - 2008-2009
    - 71 students
    - 167 preceptors
    - 568 rotations
  - 2009-2010
    - 112 students
    - 206 preceptors
    - 896 rotations
  - 2010-2011
    - 121 students
    - 251 preceptors
    - 905 rotations
  - 2011-2012
    - 107 students
    - 340 preceptors
    - 856 rotations



- IPPE rotations:
  - 2009
    - 113 students
    - 64 preceptors
    - 226 rotations
  - 2010
    - 109 students
    - 138 preceptors
    - 331 rotations
  - 2011
    - 124 students
    - 136 preceptors
    - 381 rotations
  - 2012

- 128 students
  - 232 preceptors
  - 384 rotations
- From the 2009-2010 report: (sites are across the country)
    - IPPE Community, 2009: 44 sites, 56 preceptors, 112 students
    - IPPE General Medicine I: 13 sites, 21 preceptors, 113 students
    - APPE Advanced Community: 24 sites, 33 preceptors, 111 students
    - APPE Health Systems: 30 sites, 39 preceptors, 111 students
    - APPE General Medicine II: 14 sites, 23 preceptors, 111 students
    - APPE General Medicine III-IV: 37 sites, 82 preceptors, 222 students
    - APPE Electives I-II-III: 101 sites, 141 preceptors, 333 students
  - From the 2011-2012 report: (sites are across the country)
    - IPPE Community, 2011: 66 sites, 67 preceptors, 125 students
    - IPPE General Medicine I: 14 sites, 25 preceptors, 125 students
    - APPE Advanced Community: 26 sites, 24 preceptors, 107 students
    - APPE Health Systems: 42 sites, 54 preceptors, 107 students
    - APPE General Medicine II: 11 sites, 20 preceptors, 107 students
    - APPE General Medicine III-IV: 49 sites, 130 preceptors, 214 students
    - APPE Electives I-II-III: 190 sites, 283 preceptors, 321 students
  - Volunteer hours provided by preceptors (as reported to alumni office):
    - July 1, 2008–June 30, 2009: 66,881.5
    - July 1, 2009–June 30, 2010: 108,480
    - July 1, 2010–June 30, 2011: 118,080
    - July 1, 2011–June 30, 2012: 100,400
  - Three students completed a month-long rotation in Nicaragua in April 2012.
  - A rotation in Honduras was planned for July; however, it was cancelled when the U.S. Department of State issued a travel warning about the security situation in Honduras.

### **Academic Service Learning**

- Academic Service Learning is a professional elective course in which students are assigned to either the Jackson County Free Health Clinic in Kansas City or the MedZou community health clinic in Columbia. The primary focus is on health education. Students participate in direct patient care activities and are supervised by licensed pharmacists. In 2012, 9 students participated at the MedZou Clinic.
- The Jackson County Free Health Clinic received in-kind medications donations from pharmaceutical companies that resulted in \$1,528,896 – a direct savings to patients.



### **Awards**

At the 2012 annual meeting of the American Pharmacists Association, the UMKC chapter of APhA-ASP received the Chapter of the Year Award, out of 127 schools and colleges of pharmacy. Other recognitions included:

- The chapter was one of the top five schools in the nation to be recognized for professional advocacy, for its efforts in the “Winter is Cold, but Advocacy is Hot” campaign.
- The chapter was awarded the Region 6 Operation Immunization Award for the reporting period of January 2011 to May 2011.
- The School of Pharmacy received the 2012 APhA

Immunization Champion Award in the category of “Partnerships with Other Healthcare Providers and Public Health.”

- “Most Outstanding Student Organization of the Year Award” received at the Apple Polishers Banquet.

Kappa Psi was awarded the “Most Active Community Service” performed by an SGA organization at the SGA Awards Banquet.

### **Residencies**

The school offered seven practice-based residencies in 2011-2012:

- three PGY-1 community pharmacy residencies, in affiliation with Balls Food Stores, Red Cross Pharmacy, and Walgreens Pharmacy
- a PGY-1 residency in public health, at the Kansas City Free Health Clinic
- a drug information specialty residency, at the UMKC Drug Information Center
- two PGY-2 psychiatric pharmacy residencies, at the Center for Behavioral Medicine

### **Faculty**

Twenty-five clinical faculty are located in 15 practice sites in the Kansas City metropolitan area and Columbia. These numbers will increase with the addition of the Springfield site in 2014.

### **Student Organizations**

- Student Activities:
  - APhA-ASP: At patient care projects including university health fairs, state fairs, and farmers markets and fall festivals, students have screened for diabetes, hypertension, cholesterol, heartburn and risk of falls, and provided immunizations. Students on each campus also worked with local law enforcement and environmental agencies on "National Take Back Day" to safely dispose of expired and unused medications.
  - APhA-ASP members participated in the AIDs Walk.
  - APhA-ASP members competed and attended the Rx Factor to support Kappa Epsilon.

- AMCP: Students are working with the Kansas City Antibiotic Resistance Task Force to educate the community about antibiotic resistance.
- Kappa Epsilon sponsored a blood drive for the Community Blood Center.
- Kappa Epsilon participates in the medical assistance program at the Shared Care Free Clinic of Jackson County.
- Kappa Epsilon members held 7 Poison Prevention Presentation at area schools. Approximately 120 children were educated on the dangers of household chemicals. A Poison Prevention Board was on display at two different sites to help educate parents about household chemicals.
- Kappa Epsilon members organized a Relay For Life team in May.
- Kappa Psi members held their 11<sup>th</sup> annual Volley For Charity tournament with proceed shared between the American Cancer Society and a fellow classmate who is currently battling cancer.
- Kappa Psi hosted a spring formal social event and recognized senior members with a small social in May.
- In Columbia, students assist at MedZou, a student-operated community medical clinic that provides free primary health care.
- Public Health Organization continued volunteering at the Sojourner Clinic, a free health clinic conducted at Unity Temple by students from the UMKC School of Medicine in downtown Kansas City.
- PHO students made hygiene kits for women's shelter at the Grand Avenue Temple.



## Healthy for Life Summary Information

\*"Mixed" events had both flu shots administered as well as biometric screenings.

\*Collective data is reported for all events. Events were manned by pharmacy students and other health profession student volunteers/interns.

+ Data reported is specific to pharmacy and not collective data.

\*SOP Immunization protocol was established in 2011.

Healthy For Life Summary Information	2010-2011		2011-2012		2012-2013	
	KC	MU	KC	MU	KC	MU
Flu Shots Administered			431	322	515	652
Biometric Screenings & Education			353	570	377	202
<b>Event Participation</b>						
Students	109		124		128	
Faculty	12		14		14	

#### **Goal IV.C. Increase the financial support from external constituents**

##### **Objective IV.C.1. Establish endowed chairs**

##### **Objective IV.C.2. Increase the number and size of scholarships and gifts to the school**

#### **Measures of Success:**

- Funding of four new endowed chairs
- Number of new scholarships added each year with an annual increase in overall scholarship dollars each year
- Dollars raised by school per year
- Total number of donors (including organizations) each year

#### **Fundraising Numbers**

The campus advancement office reports fundraising data on a fiscal year basis. For fiscal year 2012 (July 1, 2011–June 30, 2012) the School of Pharmacy was recorded as raising \$181,102.07 from 398 donors.

#### **Endowed Chairs**

The School of Pharmacy's capital campaign goal and project list, effective December 1, 2009, includes funds for four endowed positions. The fundraising efforts are ongoing. The goals are to raise:

- Division of Pharmacology and Toxicology
  - \$1.5 million of private funds for an endowed chair in Geriatric Pharmacology (priority level—immediate)
    - In 2010, a donor pledged a planned estate gift of \$2.7 million for an endowed chair in geriatric pharmacotherapy
  - \$750,000-\$1.5 million for an endowed chair or professorship (priority level—future)
- Division of Pharmaceutical Sciences
  - \$750,000-\$1.5 million for an endowed chair for an endowed chair in Drug Design and Delivery (priority level—future)
- Division of Pharmacy Practice and Administration
  - \$750,000-\$1.5 million for an endowed chair or professorship (priority level—future)

#### **Scholarships**

The capital campaign goal and project list includes scholarship support, with goals to raise:

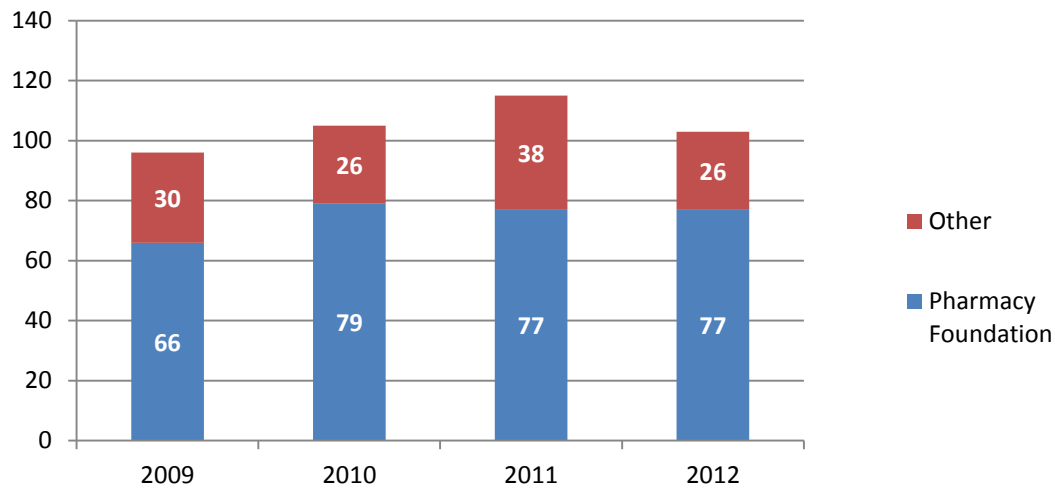
- \$500,000 of private funds for the creation of new scholarships specifically for the doctor of pharmacy program and students at the Springfield site (priority level—immediate)
  - To date, no funds have been raised toward this goal

- Pharmacy Foundation
  - \$500,000 of private funds for the creation of new scholarships to support the doctor of pharmacy program (priority level—ongoing, both immediate and future)
    - This goal has been reached, with over \$600,000 raised in 2009-2012
  - \$100,000 of private funds for the creation of new scholarships for the support of students in the school's Ph.D. programs (priority level—immediate)
    - To date, no funds have been raised toward this goal
  - \$1 million of private funds for an endowment to provide emergency loans and support for pharmacy students (priority level—immediate)
  
- In 2010, a donor pledged a planned estate gift of \$300,000 to endow a student emergency fund, which will provide short-term loans to students who need assistance in meeting an urgent personal financial need.

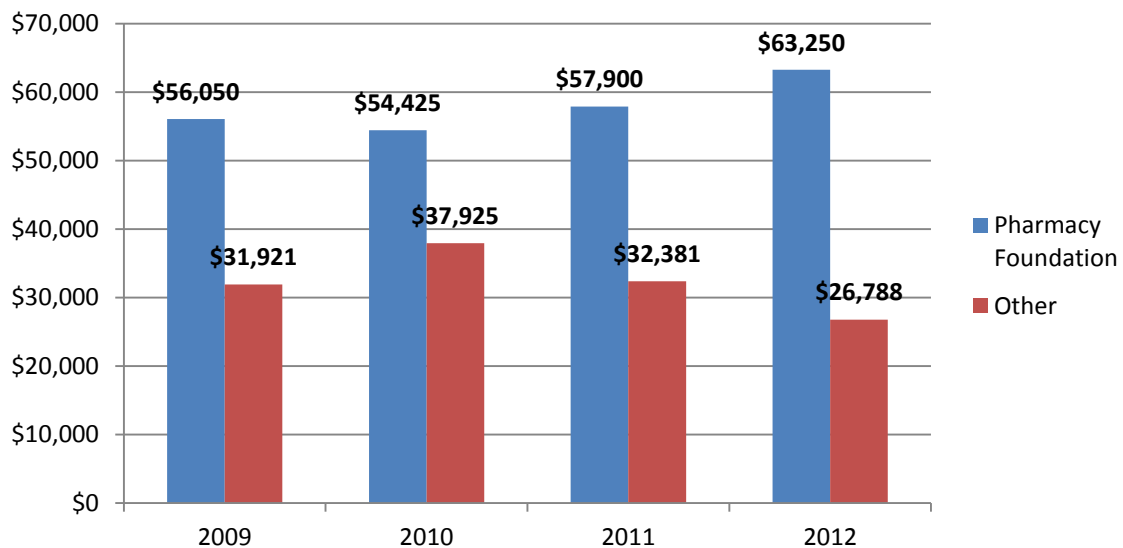
Progress:

- Pharmacy Foundation
  - New scholarships:
    - Fall 2009: three new annual scholarships
    - Fall 2010: four new endowed scholarships; four new annual scholarships
    - Fall 2011: two new endowed scholarships; six new annual scholarships
    - Fall 2012: one new endowed scholarship; one new annual scholarship
  
- Scholarships awarded:
  - In fall 2012, the Scholarship and Awards Committee considered a total of 147 scholarship applications, and awarded 88 scholarships totaling over \$80,000.
  - A graduate student scholarship of \$1,000 was awarded to a recipient selected by the scholarship's donor.
  - The Kappa Psi Pharmaceutical Fraternity awarded two scholarships totaling \$500.
  - For 2012-2013, the Office of Student Affairs awarded three minority student scholarships to six first-year students; a total of 12 scholarships totaling \$8,538.

Numbers of scholarships awarded:



Amounts awarded for fall scholarships:



Scholarships awarded 2009-2012:

- Pharmacy Foundation scholarships:
  - Grace Hoelzel Albano, M.D., R.Ph.
  - Fred Angle
  - Baptist-Trinity Lutheran Legacy Foundation
  - Wright V. & Gladys A. Bartholomew
  - Mary and Francis "Bud" Bisceglia Memorial
  - Dennis R. Bond, R.Ph.
  - Lewis Bratt

- Donald R. Brown, R.Ph.
- Burch and Sabo
- Dr. Isaac Butler "Not Can, But How"
- Century Club Clinical
- Century Club Hospital
- Class of 1975
- Class of 1982
- Class of 2011
- D & H Prescription Drug Store
- Adele and Glenn Eberhart
- Leslie Eisenbrandt
- Erickson Family
- Mary and Tim Euler Student Mentor Award
- Fendler Family
- Greater Kansas City Society of Health-System Pharmacists Book
- Spencer S. Glenn Memorial
- Glenski Family
- Good Neighbor Pharmacy Community
- Travis and Maqual Graham
- Donald W. Grove, Sr., R.Ph.
- George Guastello
- Harvey H. Haynes
- Judith Hemberger Graduate
- Bruce J. "Bud" Huber Memorial
- Richard D. Johnson Graduate Pharmaceutical Sciences
- Kappa Epsilon Community Services
- Kavanaugh Charitable Trust
- Robert C. Lanman Graduate Pharmacology
- Lindman-Gershman
- Monica E. Manasseh
- Mitzi McGee Memorial
- Wes McIntire
- J. Leo McMahon
- Joe McNerney Pharmacy Leadership
- Stephanie and Russell Melchert
- Missouri Pharmacy Foundation
- Tim Mitchell Medical
- Timothy G. Mitchell
- Mid-Missouri Society of Health-System Pharmacists
- National Association of Chain Drug Stores
- Jim Newman Memorial
- Kit Ngoc Nguyen, Pharm.D.
- Noel O. Nuessle, Ph.D.
- RAN Institute
- NCPA/William E. Osborn, R.Ph.
- Optum Rx (Prescription Solutions)
- PBA Health/TrueCare Pharmacy
- Pharmacists Mutual



- Robert W. Piepho, Ph.D.
  - Plattsburg Clinic Pharmacy
  - Powers Family
  - Red Cross Pharmacy
  - Thomas D. Ross Memorial Graduate
  - Toni Sena Memorial
  - Joseph G. Shalinsky
  - Leo Shalinsky
  - William & Carole Sitland
  - Andrea and Dale Smith, R.Ph.
  - Smock Family
  - Spalitto Pharmacy
  - Anthony J. Spalitto, Sr.
  - Bruce and Shirley Stocker
  - David A. Strauch, R.Ph.
  - Harry N. Tishk
  - Fred Tonnies
  - Kathleen Tonnies
  - Phyllis Vaughn
  - Mathew W. "Bill" Wilson
  - Marcus and Missy Wilson Family
  - Lawrence G. Windmoeller/Mid-Missouri Society of Health-System Pharmacists
  - Robert L. Wolf, R.Ph. Memorial
- Other School of Pharmacy scholarships:
    - CVS/Pharmacy Community
    - Lewis D. DeClerck Memorial
    - Kilgore's Medical Pharmacy
    - Rocky and Laurie Levell
    - Alexander & Mary Margolis & Bernard A. Margolis Perpetual Memorial
    - Nyberg Pharmacy Independent Pharmacy
    - Stanley M. Reinhaus Family Foundation
    - Morris R. Shlensky
    - Evelyn Suffecool
    - Suffecool Plank
    - Walgreen Diversity
    - Wal-Mart

**Goal IV.D. Broaden alumni engagement in school events, planning, and educational endeavors**

**Objective IV.D.1. Establish, sustain, and document regular channels of communication between alumni and the School of Pharmacy**

**Objective IV.D.2. Provide and document regular opportunities for alumni to connect with current students through involvement with student organizations and other student activities (e.g. invite alumni to provide guest lectures in courses, serve on school committees, serve as preceptors, participate in school planning activities, etc.)**

**Objective IV.D.3. Recruit recent graduates to regularly participate in alumni events**

**Measures of Success:**

- Total number of alumni (number updated each year)
- University rank for alumni engagement
- Percentage of alumni who participate in school and university events
- Number of actively involved alumni in alumni association events and breadth of participation across alumni
- Percentage of alumni current e-mail addresses obtained
- Number of alumni preceptors (at least one student per year)
- Regular channels of communication are sustained
- Alumni participation on school committees and in school events

- Alumni numbers:
  - As of April 2013, the campus advancement office records show that the School of Pharmacy has 3,354 presumed living alumni members, and 2,841 of them have a mailable address.
  - There are currently 1,750 known pharmacy alumni e-mail addresses on file (52.1% of the alumni with mailable addresses).
- University rank for alumni engagement:
  - The School of Pharmacy has ranked number one on campus for alumni donor participation in fiscal years 2008-2012. Alumni donor participation percentages have been tracked since fiscal year 2006.
  - The school has ranked number one for volunteer engagement for the past six fiscal years (FY07-FY12), contributing 51% of all volunteer service hours recorded by the entire UMKC campus in 2011-12. Volunteer engagement has been tracked on this campus since fiscal year 2007.
- Number of alumni preceptors:
  - 464 pharmacy professionals are on the 2011-2012 list of preceptors for the Division of Pharmacy Practice and Administration, and a large percentage of them are alumni.
    - in 2008-2009, the school reported that preceptors provided 66,881.5 volunteer hours
    - in 2009-2010, the school reported that preceptors provided 108,480 volunteer hours
    - in 2010-2011, the school reported that preceptors provided 118,080 volunteer hours
    - in 2011-2012, the school reported that preceptors provided 100,400 volunteer hours

- Channels of communication:
  - The School of Pharmacy’s director of advancement creates the *Postscript* magazine, a yearly annual report and newsletter that is mailed to approximately 2,800 pharmacy alumni and 200 other friends of the school. In addition to feature articles on students, faculty and alumni, the publication includes news from students, faculty, staff and alumni, and listings of faculty activities in the areas of service, awards, honors, presentations, contracts and grants.
  - The director of advancement sends e-mail announcements of news, awards and events to members of the Pharmacy Foundation and Pharmacy Alumni Association, and distributes written reports at meetings of the foundation, alumni association, and Dean’s Advisory Council.
  - Alumni and students participate on the school’s Facebook pages, and several alumni classes have their own pages.
  - The school’s web site features a regularly updated news section that offers the school’s alumni and constituents a convenient way to receive updates on the activities and achievements of the school. The site also features a calendar where alumni and constituents can find out about upcoming events at the school.

- Alumni participation on school committees and in school events:

- Alumni service on school committees
  - in 2009-2010, four alumni served on: Admissions and Academic Requirements (1); Curriculum (1); Scholarship and Financial Aid (2)
  - in 2010-2011, eight alumni served on: Admissions and Academic Requirements (1); Curriculum (1); Scholarship and Financial Aid (1); Future Trends Task Force (5)
  - in 2011-2012, six alumni served on: Admissions and Academic Requirements (1); Curriculum (1); Scholarship and Financial Aid (2); Task Force on Diversity (1); Research Advisory Council (1)
  - in 2012-2013, three alumni served on: Admissions (1); Curriculum (1); Task Force on Diversity (1)



- Dean’s Advisory Council: 29 of the 34 members of the Dean’s Advisory Council are School of Pharmacy alumni. The council invited students to their spring and fall 2012 meetings, to meet one-on-one with the members.
- Pharmacy Foundation: 25 of the 32 members of the Pharmacy Foundation Board of Directors are School of Pharmacy alumni. Board members have opportunities to interact with students at the annual golf tournament, the Achievers of Excellence program, and other school activities.
- Pharmacy Alumni Association: 14 alumni serve on the Pharmacy Alumni Association.
- The School of Pharmacy’s 2012 UMKC Alumni Award honorees participated in an open forum, Q&A panel presentation for pharmacy students at the Health Sciences Building following the campus awards luncheon on April 26. The program was followed with a reception in the Health Sciences Building.

- In January, Alumni Association board members assisted pharmacy students with signing thank-you cards to all donors to the School of Pharmacy from fall 2011.
- In November, the Pharmacy Alumni Association hosted the second annual “Tiger-Roo Tailgate” event in Columbia prior to the MU vs. Syracuse football game. Over 70 people participated in the event to celebrate the school’s alumni, students, faculty, staff and friends affiliated with the pharmacy program on the Columbia campus.
- Several alumni serve as guest speakers in pharmacy courses such as Professional Skills Development and Grand Rounds.
- APhA-ASP invites alumni to speak at some of their events, and supervise them at health screenings.
- Alumni attend Kappa Psi’s annual Volley for Charity event, and Kappa Epsilon’s Bowling for Breast Cancer fundraiser.
- In addition to preceptors, the school reported the following volunteer hours for events and meetings of the Pharmacy Alumni Association, Pharmacy Foundation, and Dean’s Advisory Council:
  - 2008-2009: 192 hours
  - 2009-2010: 176 hours
  - 2010-2011: 377 hours
  - 2011-2012: 150 hours
- The Pharmacy Alumni Association sponsors annual student appreciation days in both Kansas City and Columbia.
- In 2012-13, 22 alumni participated in interviewing applicants to the doctor of pharmacy program.
- Pharmacy alumni serve as speakers each year at the Achievers of Excellence program.
- In spring 2009, 2010, 2011 and 2012, alumni served as the keynote speakers for the School of Pharmacy commencement ceremonies, and a representative from the Pharmacy Alumni Association also speaks each year.

#### **Recruit Recent Graduates to Regularly Participate in Alumni Events**

- Membership in both the UMKC Alumni Association and the Pharmacy Alumni Association is automatic, and members have not been charged dues since 2007.
- All alumni with current contact information are invited to participate in activities such as the annual Pharmacy Foundation golf tournament, the annual alumni wine tasting event, and the annual alumni reunion weekend (events include a Friday night social, Saturday continuing education classes, and Saturday night alumni awards dinner).
- A reception for alumni in the Springfield area was held in July.

School of Pharmacy  
Health Sciences Building  
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