

UAMS

COLLEGE OF PHARMACY

UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES

COLLEGE OF PHARMACY

ANNUAL REPORT
(July 1, 2009 – June 1, 2010)

**UAMS College of Pharmacy
Annual Report 2009-2010**

June 1, 2010

Vision Statement

Transforming healthcare throughout Arkansas and beyond

Mission Statement

The UAMS COP mission is to improve health of culturally diverse populations by

- Educating pharmacy leaders to address community health needs
- Advancing scientific discovery to produce innovations in healthcare
- Fostering progressive pharmacy practice through service to the profession

ACCOMPLISHMENTS

Student Excellence

Admission:

- The College of Pharmacy continues to have a strong applicant pool. Entering students admitted over the past three years have mean GPAs ≥ 3.60 and mean PCAT composite percentile ≥ 73 th percentile.
- Admitted students are primarily from Arkansas ($\geq 90\%$) and almost all counties in the state are represented.

Matriculation:

- Matriculation rate has averaged 92.2%, with 81.2% of students graduating on time.
- High Stakes Summative Examinations have been developed, tested, and implemented over the last two years:
 - Exam 1 given to rising P3s (Apr 10): pass rate 100%
 - Exam 2 given to P4s (Dec 09): pass rate 99.09%

Leadership:

- College has eleven student professional organizations.
- Unprecedented success during 2009 with three organizations receiving the national chapter of the year award.
 - American Pharmacists Association-Academy of Student Pharmacists
 - National Community Pharmacists Association
 - Kappa Epsilon

Graduates:

- The non-traditional PharmD program had its last graduates in 2009.
- NAPLEX: first-time pass rate of 98.91% (Class of 2009). Five year pass rate is 16th highest in country (out of 94 schools) for the period 2004-09.
- Traditional graduates have continued to increase as a result of the class expansion that started in 2004. In 2010 there were 105 May graduates and 2 August graduates are anticipated.

Placement:

- The majority of our graduates pursue community pharmacy practice upon graduation (3 year mean = 61.1%).
- Approximately 14% of the class of 2010 is pursuing postgraduate residency training. This is up from 4.7% in 2009 and 10.8% in 2008.
- Approximately 26% of the class of 2010 states a desire to own a pharmacy in the future.
- Approximately 90% of the class of 2010 have accepted positions in Arkansas at the time of graduation

- Average salary as reported at graduation each year- \$104,328 (2008), \$108,896 (2009), and \$113,977 (2010)

Service/Outreach

- Arkansas Poison Control and Drug Information Center (APCDIC)
 - The APCDIC responded to 38,400 phone calls (24,154 were poisoning exposures & 14,246 were non-emergent poison/drug information calls)
 - Of these emergency exposure calls, 13,399 involved children less than 6 years of age.
 - Some 19,353 calls came from private residences of which 16,485 (85.1%) were managed at home and 4,295 calls were from healthcare facilities. The remainder arose from various businesses, schools, and public areas.
 - Also during 2009, the center and its collaborative partners distributed approximately 180,000 pieces of educational material throughout the state.
 - The vast majority of APCDIC calls came from Arkansans with representation from every county in the state on a monthly basis.
- The Evidence-Based Prescription Drug (EBRx) program has seen growth in its services and now partners with RxResults (new enterprise developed through Bioventures incubator) to expand healthcare service provision to populations within and beyond Arkansas borders.
- Nuclear Education Online Program
 - Trained over 1000 nuclear medicine professionals and staff in FY2010
 - Expanded outside the US with physicians and pharmacists from Pakistan and Egypt enrolled this year
 - Completed two online continuing professional development programs supported by educational grants from Covidien
- Pipeline advancement – Efforts continue to expand opportunities for postgraduate residency training. New programs added include:
 - Residency / Master Degree in Public Health
 - White River Medical Center (Batesville, AR)
- Pivotal leadership contribution to expansion of Pharmacy Practice Act for Arkansas Pharmacists
 - Arkansas State Board of Pharmacy has asked the COP to provide continuing education and credentialing necessary for licensed pharmacists to take advantage of expansion of practice privileges.
 - Starting in 2011, new graduates will have completed coursework enabling them to be credentialed upon graduation.
- National leadership through appointment to the Board of Directors for the Accreditation Council for Pharmacy Education (Stephanie Gardner – 6 year term)

Faculty

- Leadership Changes:
 - Eric Schneider, PharmD, Associate Dean NW Campus
 - Renee DeHart, PharmD, Associate Dean Administrative Affairs
- Faculty growth: Over 37 new colleges of pharmacy have opened over the last ten years, making faculty recruitment and retention a constant challenge.
 - 2007-2008 +6 (8 additions & 2 losses)
 - 2008-2009 +2 (7 additions & 6 losses)
 - 2009-2010 +4 (10 additions & 6 losses)
- Research faculty recruitment efforts focused in targeted areas.
 - Pharmaceutical Evaluation & Policy (PEP)
 - Radiation Health
 - Pharmacogenomics

- NW Campus – Highly experienced capable group
 - Combined 82 years of experience as pharmacists with 1-2 years of residency experience
 - Five of six had faculty member experience when hired
- Provision of direct patient care by pharmacy practice faculty
 - 26 faculty members in the Department of Pharmacy Practice provide direct patient care
 - 11 faculty members work at UAMS in clinics or University Hospital
 - 3 faculty members practice at ACH
 - 8 faculty members practice at the AHECs
 - Other sites include the Central Arkansas Veterans Administration Hospital, St Bernards (Jonesboro), and Mercy Health System of NW Arkansas (Rogers)

Research/Innovation/Entrepreneurship

- Increase in grant productivity [Total Direct Cost: \$219,652 (2008), \$1,446,353 (2009), \$2,024,824 (2010)]
 - New federal funding by Drs. Grazyna Nowak, Associate Professor & Marjan Boerma, Assistant Professor
 - Hiring of Daohong Zhou, MD, and research team
 - Hiring of Elvin Price, PharmD, PhD
- Growth and development of new companies through BioVentures
 - RxResults
 - Omnibalm
 - Ezra Pharmaceuticals

Curricular Advancement

- Almost 100% use of online course management companion portion to coursework
- Completion of year 3 of 4 year didactic curricular revision process
- Hired Educational Technology Support Specialist (Victoria Miller)

Development

- 2009 – \$621,456 versus 2005 – \$134,499; on average gifts have increased by an average of 1.5 times each year with total gifts in 2009 of \$1,821,456 with an additional \$359,150 in pledges.
 - \$550,000 Arkansas State Board of Pharmacy (Rural Scholarship/Loan Program)
 - \$100,000 Office of Arkansas Attorney General (Alcohol & Drug Abuse Prevention Professorship)
 - \$500,000 Wal-Mart and \$50,000 Collier Drug (NW Regional Campus construction)
- Dean’s Chair endowment – 63 donors (\$1,000,000 in donations and pledges) in 2009
- Dean’s Society – 80 members
- Parent’s Club – 92 families
- Services provided through development office include twice yearly alumni magazine, alumni events, and support of student professionalism activities.

GOALS

Establish the NW Arkansas Regional Campus

- Leadership: Eric Schneider, PharmD, BCPS, Associate Dean
- Funding: The UAMS Northwest budget is funded largely through tobacco tax revenue and provides full or partial support for 3 faculty salaries. Additional funding for faculty is through co-funded positions (VA, Mercy Health System, & UAMS AHEC).
- Faculty: There are currently 5 faculty members in NW Arkansas providing direct patient care (AHEC Northwest Fayetteville, AHEC Northwest Springdale, Mercy Health System of NW Arkansas, Veterans Healthcare System of the Ozarks, Advanced community practice coordinator)
- Students: Eighteen senior students completed the majority of their Advanced Pharmacy Practice experiences in NW Arkansas (09-10). Seventeen students completed their P2 Institutional-Introductory Pharmacy Practice Experiences in the NW region (2010).
- Space: Renovation of the college of pharmacy space in the UAMS Northwest facility scheduled for completion December, 2010. This includes classroom and administrative space. A shared 6-room clinical skills center and a second 20-station computer laboratory are also included in this phase of the renovation.
- Accreditation: Focused self-study for the Northwest Campus program is in progress with a site visit by the Accreditation Council for Pharmacy Education (ACPE) scheduled for March 2011.

Goals:

- Expand experiential opportunities – goal to achieve a 25% overage in all experiences in order to maintain adequate experiences for all students in both the NW region and the entire state.
 - Housing limits our ability to place students in certain regions of the state resulting in fluctuations and/or underutilization depending on year and region of state
 - Need electives and additional core faculty in direct patient care areas (acute & ambulatory care) in the NW region to assure stability of APPEs
- Develop interprofessional coursework
- Successful ACPE site-visit and regional campus accreditation

Expand research enterprise

- Hire a PS Department Chair
- Increase indicators of scholarly activity (publications & grants)
- Expand Division of Radiation Health (DRH)
- Establish PhD in PEP

Develop faculty networks to produce teaching, practice, and research models that improve the health of Arkansans

- Work with Arkansas Pharmacists Association and Arkansas State Board of Pharmacy to increase scope of practice
- Develop mechanisms to support pharmacists in advancing their practice

Support the development of future preceptors and faculty

- Increase options for postgraduate work with the state
 - Rural partnerships for PGY1 experiences
 - Residency / Master Degrees
- Identify person to coordinate and facilitate career development throughout the curriculum

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ADMISSION DATA

Total Student Applications	2008	2009	2010
Total applicants	285	275	274
Underrepresented minority applicants	49	40	50
Considered Applicants			
Residents/Nonresidents	194/30	188/34	181/20
Underrepresented minority students	32	26	17
Female/Male	144/80	131/91	134/67
Average GPA	3.40	3.38	3.46
Average PCAT	67	63	66
Entering First-Year Student Pharmacists			
Residents/Nonresidents	115/5	117/3	111/11
Female/Male	80/40	71/49	84/38
Underrepresented minority students	12	9	7
Average GPA at time of application	3.60	3.60	3.66
Average PCAT	76	73	75
Most frequent colleges of origin	UCA	UCA	UA-F
	UA-F	UA-F	UCA
	UALR	UALR	ATU
	ATU	ATU	ASU
	ASU	ASU	UALR

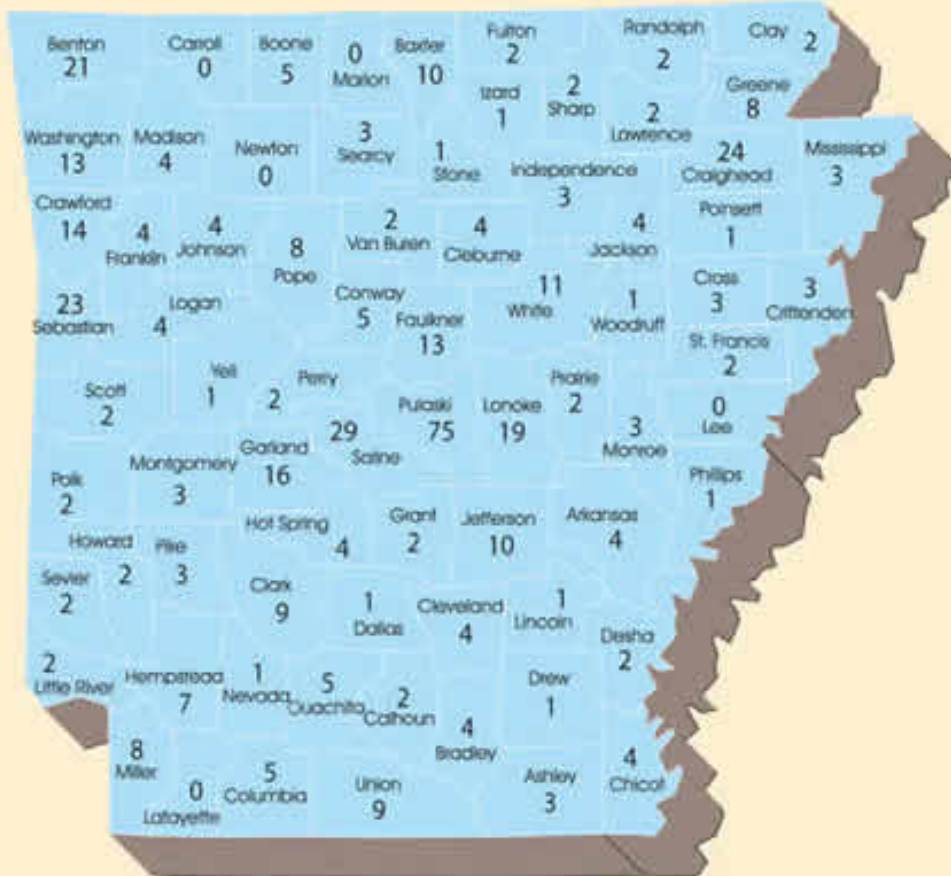
CURRENT STUDENT DEMOGRAPHICS

Demographic	Spring 2008	Spring 2009	Spring 2010*
Total students	424	459	475
Female	264	290	294
Male	160	169	181
African-American	26	28	29
Hispanic	4	2	3
Native American	<u>3</u>	<u>6</u>	<u>7</u>
URM	33	36	39
Asian	19	22	21
Caucasian	372	401	422

*2010 students can select more than one ethnicity

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Student Enrollment by County



MATRICULATION DATA – 20 YEARS

Entering Year	New Students	4 year grads	% 4 yr grads	5 year grads	6 year grads	7 year grads	Total Grads	% grads	DM	DM rate	W	W rate	Total non-grads	% non-grads
1989	78	59	75.6	8	4	0	71	91.0	4	5.1	3	3.8	7	9.0
1990	89	69	77.5	7	3	1	80	89.9	3	3.4	6	6.7	9	10.1
1991	75	62	82.7	9	2	0	73	97.3	2	2.7	0	0.0	2	2.7
1992	76	64	84.2	5	4	0	73	96.1	1	1.3	2	2.6	3	3.9
1993	78	60	76.9	9	3	0	72	92.3	3	3.8	3	3.8	6	7.7
1994	77	61	79.2	7	1	0	69	89.6	1	1.3	7	9.1	8	10.4
1995	77	58	75.3	7	2	0	67	87.0	3	3.9	7	9.1	10	13.0
1996	75	63	84.0	4	1	1	69	92.0	3	4.0	3	4.0	6	8.0
1997	80	65	81.3	8	0	0	73	91.3	3	3.8	4	5.0	7	8.8
1998	77	64	83.1	5	2	0	71	92.2	4	5.2	2	2.6	6	7.8
1999	81	65	80.2	10	0	0	75	92.6	2	2.5	4	4.9	6	7.4
2000	80	69	86.3	9	0	0	78	97.5	1	1.3	1	1.3	2	2.5
2001	81	68	84.0	5	0	1	74	91.4	4	4.9	3	3.7	7	8.6
2002	83	72	86.7	6	1	0	79	95.2	1	1.2	3	3.6	4	4.8
2003	85	74	87.1	2	0	1	77	90.6	4	4.7	3	3.5	7	8.2
2004	90	72	80.0	8	1	0	81	90.0	5	5.6	4	4.4	9	10.0
2005	105	83	79.0	11	1	2	97	92.4	5	4.8	3	2.9	8	7.6
2006	119	93	78.2	13	1	1	108	90.8	10	8.4	1	0.8	11	9.2
2007	121	99	81.8	15	3	0	117	96.7	2	1.7	2	1.7	4	3.3
2008	120	101	84.2	15	0	0	116	96.7	3	2.5	1	0.8	4	3.3
2009	120	109	90.8	10	0	0	119	99.2	0	0.0	1	0.8	1	0.8
		Mean	81.2*					92.2†		3.4†		4.3†		7.7†
		SD	3.7*					2.9†		1.5†		2.4†		2.9†
		Minimum	75.3*					87.0†		1.2†		0.0†		2.5†
		Maximum	87.1*					97.5†		5.6†		9.1†		13.0†

Data presented in gray still incomplete.

DM = dismissal (academic or administrative); W = withdrawal (voluntary or medical)

*Calculated from 1989-2006 data

†Calculated from 1989-2004 data

Students Receiving Pharm.D. Degree

Year	Number
2007-2008	114*
2008-2009	122*
2009-2010	107

*Includes non-traditional graduates

Professional Placement at Graduation

Position Environment	2008 (n=74)	2009 (n=85)	2010 (n=93)
Independent	6	12	8
Chain (e.g., USA Drug)	14	16	23
Mass Market (e.g., Wal-Mart)	18	20	20
Super Market (e.g., Kroger)	6	6	5
Community Total	44	54	56
Hospital Pharmacy (includes outpatient pharmacies in institutions, VA system)	18	23	15
Nuclear Pharmacy	3	2	1
Residency/Fellowship	8	4	15
Graduate School (e.g., MS or PhD program)	-	-	-
Sales	-	-	-
Home Health	-	-	4
Other	1	2	2

2010 Salary Survey Results

DRAFT 5/31/10

Summary

- Average salary for a pharmacist (excluding residency) position is \$113,977; an increase of \$5,081 (4.7% increase) from 2009.
- Approximately 89% have student loans, with an average amount of \$74,633

Table 1: Demographics (n=104)

Ages	No. Students (%)
18-21	0 (0%)
22-25 years old	43 (40%)
26-30 years old	46 (44%)
31-35 years old	12 (12%)
36 or greater	3 (3%)
Gender	
Male / Female	36 (35%) / 68 (65%)
Marital Status	
Single-no children	52 (50%)
Single, with children	1 (1%)
Married-no children	38 (37%)
Married-with children	13 (13%)
Plan to Own Pharmacy in Future	
Yes / No	27 (26%) / 77 (74%)

Table 2: Position Information

Accepted a position	
Yes / No	94 (90%) / 10 (10%)
Position requires moving to different city/state	
Yes / No	36 (38%) / 58 (62%)
Previous employment with employer (n=93)	
Yes, as intern	36 (39%)
Yes, during rotations	14 (15%)
No, have no working relationship	43 (45%)
Ranking of Position Opportunities (n=101)	
Excellent-found exact position wanted	11 (11%)
Good-satisfied with opportunities	20 (20%)
Fair-wish there were more opportunities	38 (38%)
Poor-few opportunities	27 (26%)
Very poor-trouble finding position	5 (5%)

Table 3: Salary Information by Position Environment

<i>Position Environment</i>	<i># Students n=93¹</i>	<i>Mean Salary Per Year</i>	<i>Salary Range</i>	<i>Mean Number of Hours Worked Per Week</i>
Independent	8	\$113,314 ²	\$110,000-\$120,640	38
Chain (e.g., USA Drug)	23	\$116,024	\$92,000 - \$125,840	40
Mass Market (e.g., Wal-Mart)	20	\$116,677 ²	\$111,200 - \$124,800	40
SuperMarket (e.g., Kroger)	5	\$121,064	\$115,000-\$125,000	41
Hospital Pharmacy (includes outpatient pharmacies in institutions, VA system)	15	\$106,000 ²	\$92,000 - \$122,720	38
Nuclear Pharmacy	1	-	-	
Residency/Fellowship	15	\$40,182	\$35,000 - \$50,000	45
Graduate School (e.g., MS or PhD program)	-	-	-	
Sales	-	-	-	-
Home Health	4	\$112,850	\$107,000-\$125,000	-
Other	2	106,600	-	-
For all students except those completing residencies	76	\$113,977	\$92,000- \$125,840	39

¹ One respondent did not provide a practice setting

² One respondent did not provide a salary

Table 4: Salary Information by Location in State*

<i>Location</i>	<i>Number of Students Locating in the Area (n=75)</i>	<i>Mean Salary Per Year</i>
Northwest AR (Fayetteville)	10	\$119,192
North Central AR (Mountain Home)	1	-
Northeast AR (Jonesboro)	5	\$114,408
West Central AR (Russellville)	2	-
Western Arkansas (Fort Smith)	4	\$113,930
Central AR (Little Rock)	38	\$111,056
East Central AR (Forrest City)	1	-
Southeast AR (Monticello area)	4	\$120,790
Southwest AR (Hope)	0	-
Out of State	10	\$117,140

*does not include residency positions

**Arkansas Poison Control and Drug Information Center
2009-2010 Annual Report**

The Arkansas Poison Control and Drug Information Center, a service unit of the UAMS College of Pharmacy is accessible toll-free to the citizens of Arkansas 24 hours a day 7 days a week statewide via the national number 800-222-1222 and nationwide via 800-376-4766.

Arkansas	County	County Totals	Percentage of Total Exposures
	Arkansas	181	0.77
	Ashley	175	0.74
	Baxter	394	1.67
	Benton	1,627	6.9
	Boone	373	1.58
	Bradley	89	0.38
	Calhoun	19	0.08
	Carroll	165	0.7
	Chicot	71	0.3
	Clark	173	0.73
	Clay	101	0.43
	Cleburne	225	0.95
	Cleveland	26	0.11
	Columbia	143	0.61
	Conway	162	0.69
	Craighead	840	3.56
	Crawford	324	1.37
	Crittenden	232	0.98
	Cross	143	0.61
	Dallas	55	0.23
	Desha	103	0.44
	Drew	138	0.59
	Faulkner	876	3.72
	Franklin	111	0.47
	Fulton	74	0.31
	Garland	900	3.82
	Grant	125	0.53
	Greene	479	2.03
	Hempstead	161	0.68
	Hot Spring	239	1.01
	Hot Springs	52	0.22
	Howard	116	0.49
	Independence	390	1.65
	Izard	92	0.39
	Jackson	121	0.51
	Jefferson	498	2.11
	Johnson	190	0.81

Appendix 2: Service Unit Report - COP – June 1, 2010

Arkansas	County	County Totals	Percentage of Total Exposures
	Lafayette	22	0.09
	Lawrence	174	0.74
	Lee	41	0.17
	Lincoln	71	0.3
	Little River	66	0.28
	Logan	175	0.74
	Lonoke	445	1.89
	Madison	55	0.23
	Marion	57	0.24
	Miller	162	0.69
	Mississippi	338	1.43
	Monroe	68	0.29
	Montgomery	51	0.22
	Nevada	43	0.18
	Newton	46	0.2
	Ouachita	158	0.67
	Perry	48	0.2
	Phillips	131	0.56
	Pike	85	0.36
	Poinsett	119	0.5
	Polk	231	0.98
	Pope	499	2.12
	Prairie	37	0.16
	Pulaski	3,953	16.76
	Randolph	135	0.57
	Saint Francis	201	0.58
	Saline	653	2.77
	Scott	98	0.42
	Searcy	51	0.22
	Sebastian	1,285	5.45
	Sevier	109	0.46
	Sharp	142	0.6
	Stone	98	0.42
	Union	272	1.15
	Van Buren	129	0.55
	Washington	1,451	6.15
	white	682	2.89
	Woodruff	23	0.1
	Yell	133	0.56
	Any county	311	1.3
		23034	97.37

**Evidence-Based Prescription Drug Program
2009-2010 Annual Report**

Client	Services Provided	Annual Revenue
Arkansas Medicaid	Assistance with Preferred Drug List Development, Prior Authorization Call Center	\$2,000,000
Arkansas State Employees	Pharmacy Benefit Consulting, Development of Preferred Drug List, Prior Authorization Call Center	\$300,000
Arkansas Municipal League	Pharmacy Benefit Consulting, Development of Preferred Drug List, Prior Authorization Call Center	\$96,000
Texas Municipal League	Pharmacy Benefit Consulting	\$60,000
Harps Food Stores	Pharmacy Benefit Consulting	\$2,400
Munro Shoe Company	Pharmacy Benefit Consulting, Development of Preferred Drug List, Prior Authorization Call Center	\$2,400
University of Arkansas Systems	Pharmacy Advisory Committee participant	\$33,500

Pharmaceutical Sciences Faculty

- Marjan Boerma, PhD:** Assistant Professor, Biological Sciences/Radiation Health
- Charles K. Born, BSPHarm, PhD:** Professor, Pharmacology/Physiology
- Philip Breen, BSPHarm, PhD:** Associate Professor, Pharmaceutics/Pharmacokinetics.
- Cesar M. Compadre, BSPHarm, PhD:** Professor, Medicinal Chemistry/Pharmacognosy
- Li Cui, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- E. Kim Fifer, BSPHarm, PhD:** Professor, Medicinal Chemistry
- Qiang Fu, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- Bill J. Gurley, BSPHarm, PhD:** Professor, Pharmaceutics/Pharmacokinetics
- Martin Hauer-Jensen, MD, PhD:** Professor, Surgery, Pathology, Biological Sciences/Radiation Health; Associate Dean for Research and Head of the Division of Radiation Health
- Howard Hendrickson, PhD:** Assistant Professor, Medicinal Chemistry/Pharmaceutical Chemistry
- Cherng-ju Kim, PhD:** Professor, Pharmaceutics
- Kim E. Light, PhD:** Professor, Pharmacology
- S. Jesse Liu, PhD:** Professor, Biological Sciences/Physiology.
- R. Lilia Lopez-Becerra, BSPHarm, PhD:** Associate Professor, Medicinal Chemistry
- Russell B. Melchert, BSPHarm, PhD:** Professor, Pharmacology; Department Chair
- Grazyna Nowak, PhD:** Associate Professor, Biological Sciences/Toxicology
- Snehalata Pawar, PhD:** Instructor, Biological Sciences/Radiation Health
- Dwight Pierce, PhD:** Associate Professor, Biological Sciences/Anatomy, Physiology
- ^Elvin T. Price, PharmD, PhD:** Assistant Professor, Pharmacology/Pharmacogenomics
- Junru Wang, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- *Daohong Zhou, MD:** Professor, Biological Sciences/Radiation Health

*Joined Faculty in March 2010

^Joined Faculty in September 2009

Division of Radiation Health Faculty

- Martin Hauer-Jensen, MD, PhD:** Professor and Head of the Division of Radiation Health Surgery, Pathology, Biological Sciences/Radiation Health; Associate Dean for Research.
- Marjan Boerma, PhD:** Assistant Professor, Biological Sciences/Radiation Health
- Li Cui, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- Qiang Fu, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- Snehalata Pawar, PhD:** Instructor, Biological Sciences/Radiation Health
- Junru Wang, MD, PhD:** Research Assistant Professor, Biological Sciences/Radiation Health
- *Daohong Zhou, MD:** Professor, Biological Sciences/Radiation Health

*Joined faculty in March, 2010

Research Staff & Students

Diana Bakajsova: Research Assistant, Dr. Nowak

Sarita Garg, PhD: Research Associate, Dr. Hauer-Jensen

Prem Gupta, PhD: Postdoctoral Fellow, Dr. Hendrickson

Marty Hubbard: Research Assistant, Dr. Gurley

Ashwini Kulkarni: Research Assistant, Dr. Hauer-Jensen

Kerrey Roberto: Research Assistant, Dr. Melchert

Charla Wiley: Research Technologist, Dr. Price

Chaitanya Chimalakonda: Graduate Student (PhD Candidate), Dr. Hendrickson

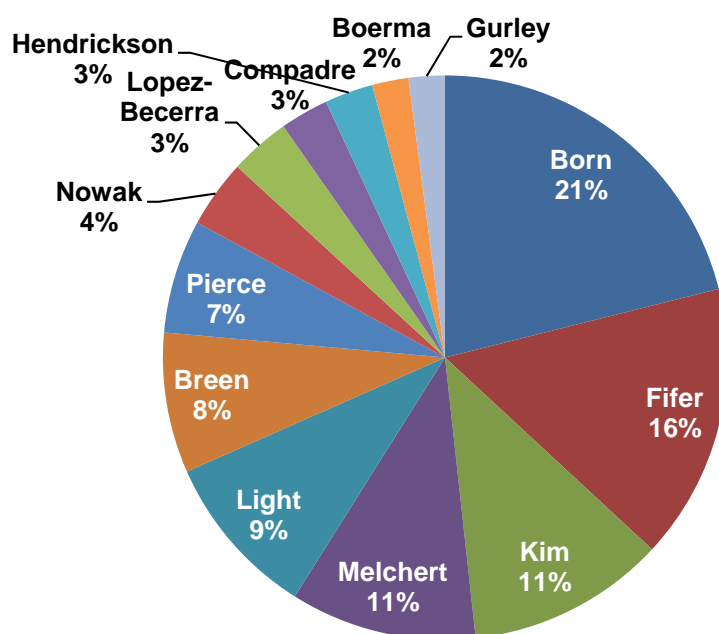
Teaching Effort: Professional Curriculum

2009-2010 Curriculum

<i>PharmD Core Curriculum Courses</i>	<i>Contact Hours</i>
PhSci 3115 Anatomy/Physiology/Pathophysiology I	75
PhSci 3414 Pharmaceutics I (with Lab)	57
PhSci 3214 Biological and Cellular Chemistry	55
PhPr 3423 Career Orientation and Communications	12
PhSci 3434 Pharmaceutics II (with Lab)	45
PhSci 3225 Principals of Drug Actions	76
PhSci 3124 Anatomy/Physiology/Pathophysiology II	59
PhSci 4254 Medicinal and Natural Products Chemistry	57
PhSci 4124 Pharmacology I	59
PhSci 4423 Molecular Biology & Biotechnology	42
PhSci 4445 Pharmacokinetics	60
PhSci 4134 Pharmacology II	55
PhSci 5623 Pharmaceutical Biotechnology	37
PhSci 5142 Chemical Addiction	32
Total	721

*Based on faculty reported lecture hours

2009-2010 Distribution of Faculty Teaching Effort in the Core PharmD Curriculum



2009-2010 Faculty Teaching Effort in the Elective PharmD Curriculum

PharmD Elective Courses	Instructor	Contact Hours
PhPr 5852 Spanish for Pharmacists - Fall	Lopez-Becerra	32
PhPr 5852 Spanish for Pharmacists - Spr	Lopez-Becerra	32
Special Problems Elective	Light	32

*Based on faculty reported lecture hours

Teaching Effort: Graduate School & Other UAMS Programs

Graduate School Courses & Mentoring	Instructor	Contact Hours
INTX 5113/5123 Molecular & Translational Toxicology	Boerma	1.5
INTX 5113/5123 Molecular & Translational Toxicology	Melchert	3
INTX 5113 Molecular & Translational Toxicology	Light	1.5
INTX 6653 Clinical Toxicology	Light	1.5
PCOL 500V Medical Pharmacology for Graduate Students	Melchert	7
PHSC 5173 Advanced Biopharmaceutics & Pharmacokinetics	Breen	4.5
PCOL 5033 General Principles of Pharmacology	Fifer	3
PCOL 5313 Experimental Pharmacology & Toxicology	Light	1.5
NUSC 5804 Adult Acute Care Nursing	Light	1.5
Major Advisor: Chaitanya Chimalakonda (PhD Candidate)	Hendrickson	∞

*Based on faculty reported lecture hours

Research Effort: Publications

2009 Journal Articles

1. Richter GT, Bowen T III, **Boerma M**, Fan CY, **Hauer-Jensen M**, Vural E. Impact of vascular endothelial growth factor on skin draft survival in irradiated rats. *Arch Facial Plast Surg* 2009 Mar-Apr;11(2):110-3.
2. Berbee M, **Fu Q**, **Boerma M**, **Wang J**, Kumar KS, Hauer-Jensen M. Gamma-tocotrienol ameliorates intestinal radiation injury and reduces vascular oxidative stress after total body irradiation by an HMG-CoA reductase-dependent mechanism. *Radiat Res* 2009;171:596-605.
3. **Fu Q**, Berbee M, **Boerma M**, **Wang J**, Schmid HA, **Hauer-Jensen M**. The somatostatin analog SOM230 (pasireotide) ameliorates injury of the intestinal mucosa and increases survival after total body irradiation by inhibiting exocrine pancreatic secretion. *Radiat Res* 2009;171:698-707.
4. Owings RA, **Boerma M**, **Wang J**, Berbee M, Laderoute KR, Soderberg LS, Vural E, **Hauer-Jensen M**. Selective Deficiency of HIF-1 α in myeloid cells influences secondary intention wound healing in mouse skin. *In Vivo* 2009;23:879-84.
5. “*Basic Pharmacokinetics*” by Sunil Jambhekar and **Philip Breen**, 407 pages, published by Pharmaceutical Press, London, May 2009. (TEXTBOOK)
6. Vadlapatla, Rajesh; **Fifer, E. Kim**; Alexander, Kenneth S.; **Kim, Chong-ju**. Drug-Organic Electrolyte Complexes as Controlled Release Systems. *Drug Development and Industrial Pharmacy* 2009;35(1):1-11.
7. Gupta P, **Gurley BJ**, Hubbard MA, **Hendrickson H**. Validation of a liquid chromatography-tandem mass spectrometric assay for the quantitative determination of hydrastine and berberine in human serum. *Journal of Pharmaceutical & Biomedical Analysis*, 2009; 49:1021-1026.
8. Sarah J. White, Elizabeth M. Laurenzana, W. Brooks Gentry, **Howard P. Hendrickson**, D. Keith Williams, Keith W. Ward, and S. Michael Owens. Vulnerability to (+)-Methamphetamine Effects and the Relationship to Drug Disposition in Pregnant Rats during Chronic Infusion. *Toxicological Sciences*, 2009 111, 27-36.
9. **C. J. Kim**, “A New Process Producing Biodegradable Microspheres of Peptide Drugs: Suspension-Encapsulation”, *Drug Del. Tech.*, 9(5), 56-60 (2009).
10. B. Y. Kang, Y. You, S. Bandyopadhyay, N. Agrawal, **R. B. Melchert**, A. G. Basnakian, Y. Liu, and P. L. Hermonat. Cervical cancer isolate PT3, super-permissive for adeno-associated virus replication, over-expresses DNA polymerase, PCNA, RFC and RPA. *BMC Microbiol.* 9:79,2009.
11. **Pierce, D.R.**, A. Hayar, C.A. Wiley, and **K.E. Light**. Rat cerebellar Purkinje cells that survive postnatal ethanol exposure are altered morphologically and physiologically. *Alcoholism: Clin. Exp. Res.* 33:168A (2009).
12. Foster K, Wang Y, **Zhou D**, Wright C. Dependence on PI3K/Akt signaling for malignant rhabdoid tumor cell survival. *Cancer Chemother Pharmacol* 2009 Apr;63(5):783-91. Epub 2008 Jul 19.
13. Valuckaite V, Zaborina O, Long J, **Hauer-Jensen M**, **Wang J**, Holbrook C, Zaborin A, Drabik K, Katdare M, Mauceri H, Weichselbaum R, Fireston MA, Lee KY, Chang EB, Matthews J, Alverdy JC. Oral PEG 15-20 protects the intestine against radiation: role of lipid rafts. *Am J Physiol Gastrointest Liver Physiol* 2009 Dec;297(6):G1041-52, Epub 2009 Oct 15.
14. Ghosh SP, Kalkarni S, Hieber K, Toles R, Romanyukha L, Kao TC, **Hauer-Jense M**, Kumar KS. Gamma-tocotrienol, a tocol antioxidant as a potent radioprotector. *Int J Radiat Biol* 2009 Jul;85(7):598-606.
15. Milovanova TN, Bhopale VM, Sorokina EM, Moore JS, Hunt TK, **Hauer-Jensen M**, Velazquez OC, Thom SR. Hyperbaric oxygen stimulates vasculogenic stem cell growth and differentiation in vitro. *J Appl Physiol* 2009 Feb;106(2):711-28. Epub 2008 Nov 20.
16. **Hauer-Jensen M**, Bursac Z, Read RC. Is herniosis the single etiology of Saint’s triad? *Hernia* 2009 Feb;13(1):29-34. Epub 2008 Aug 13.

2010 Journal Articles

1. Wang Y, Liu L, Pazhanisamy SK, Li H, Meng A, **Zhou D**. Total body irradiation causes residual bone marrow injury by induction of persistent oxidative stress in murine hematopoietic stem cells. *Free Radic Biol Med* 2010 Jan 15;48(2):348-56. Epub 2009 Dec 2.
2. **Gurley BJ**. Clinical pharmacology and dietary supplements: an evolving relationship. *Clinical Pharmacology & Therapeutics* 2010;87(2):235-8 Epub 2009 Nov 25 (Feb)
3. Darby SC, Cutter DJ, **Boerma M**, Constine LS, Fajardo LF, Kodama K, Mabuchi K, Marks LB, Mettler FA, Pierce LJ, Trott KR, Yeh ET, Shore RE. Radiation-related heart disease: current knowledge and future prospects. *Int J Radiat Oncol Biol Phys* 2010;76(3):656-65. (Mar)
4. Kodell RL, Lensing SY, Landers RD, Kumar KS, **Hauer-Jensen M**. Determination of sample sizes for demonstrating efficacy of radiation countermeasures. *Biometrics* 2010;66(1):239-48 Epub 2009 May 7 (Mar)
5. Garg S, **Boerma M**, **Wang J**, **Fu Q**, Loose DS, Kumar KS, **Hauer-Jensen M**. Influence of sublethal total body irradiation on immune cell populations in the intestinal mucosa. *Radiat Res* 2010;173(4):469-78. (Apr)
6. Williams JP, Brown SL, Georges GE, **Hauer-Jensen M**, Hill RP, Huser AK, Kirsch DG, Macvittie TJ, Mason KA, Medhora MM, Moulder JE, Okunieff P, Otterson MF, Robbins ME, Smathers JB, McBride WH. *Radiat Res* 2010 173(4):557-78 (Apr)
7. Andreyev HJ, Wotherspoon A, Denham JW, **Hauer-Jensen M**. Defining pelvic-radiation disease for the survivorship era. *Lancet Oncol* 2010;11(4):310-2 Epub 2010 Feb 8 (Apr)
8. **Cui L**, **Pierce D**, **Light KE**, **Melchert RB**, **Fu Q**, Kumar KS, **Hauer-Jensen M**. Sublethal total body irradiation leads to early cerebellar damage and oxidative stress. *Curr Neurovasc Res* 2010;7(2):125-35 (May)
9. **Pawar SA**, Sarkar TR, Balamurugan K, Sharan S, **Wang J**, Zhang Y, Dowdy SF, Haung AM, Sterneck E. C/EBP{delta} targets cyclin D1 for proteasome-mediated degradation via induction of CDC27/APC3 expression. *Proc Natl Acad Sci* 2010;107(20):9210-5. Epub 2010 May 3 (May)

Research Effort: Grant and Contract Activity

2009-2010 Grant Submissions (Principal Investigator)

<i>Principal Investigator</i>	<i>Grant Agency</i>	<i>Submit Date</i>
Martin Hauer-Jensen, M.D., Ph.D.	DTRA	10/1/2009
Marjan Boerma, Ph.D.	ACS	10/5/2009†
Martin Hauer-Jensen, M.D., Ph.D.	NIH-U19	11/2/2009
Marjan Boerma, Ph.D.	NIH-R01	11/20/2009†
Bill J. Gurley, Ph.D.	NIH-PPG	12/3/2009
S. Jesse Liu, Ph.D.	ABI	12/4/2009
S. Jesse Liu, Ph.D.	ABI-equipment	12/4/2009
Daohong Zhou, Ph.D.	NIH-PPG	12/7/2009
Martin Hauer-Jensen, M.D., Ph.D.	DTRA	12/14/2009
S. Jesse Liu, Ph.D.	AHA	1/12/2010
Martin Hauer-Jensen, M.D., Ph.D.	NIH-R37	1/21/2009
Martin Hauer-Jensen, M.D., Ph.D.	DHHS BARDA	2/26/2010
Daohong Zhou, Ph.D.	NIH-NCI-R01a	4/2/2010
Daohong Zhou, Ph.D.	NIH-NCI-R01b	4/5/2010
Daohong Zhou, Ph.D.	NIH-NIAID	4/16/2010
Daohong Zhou, Ph.D.	NIH-NIAIDb	5/7/2010

*Includes both new grant proposals and competing and non-competing renewals

†Funding notification pending at the time of this report

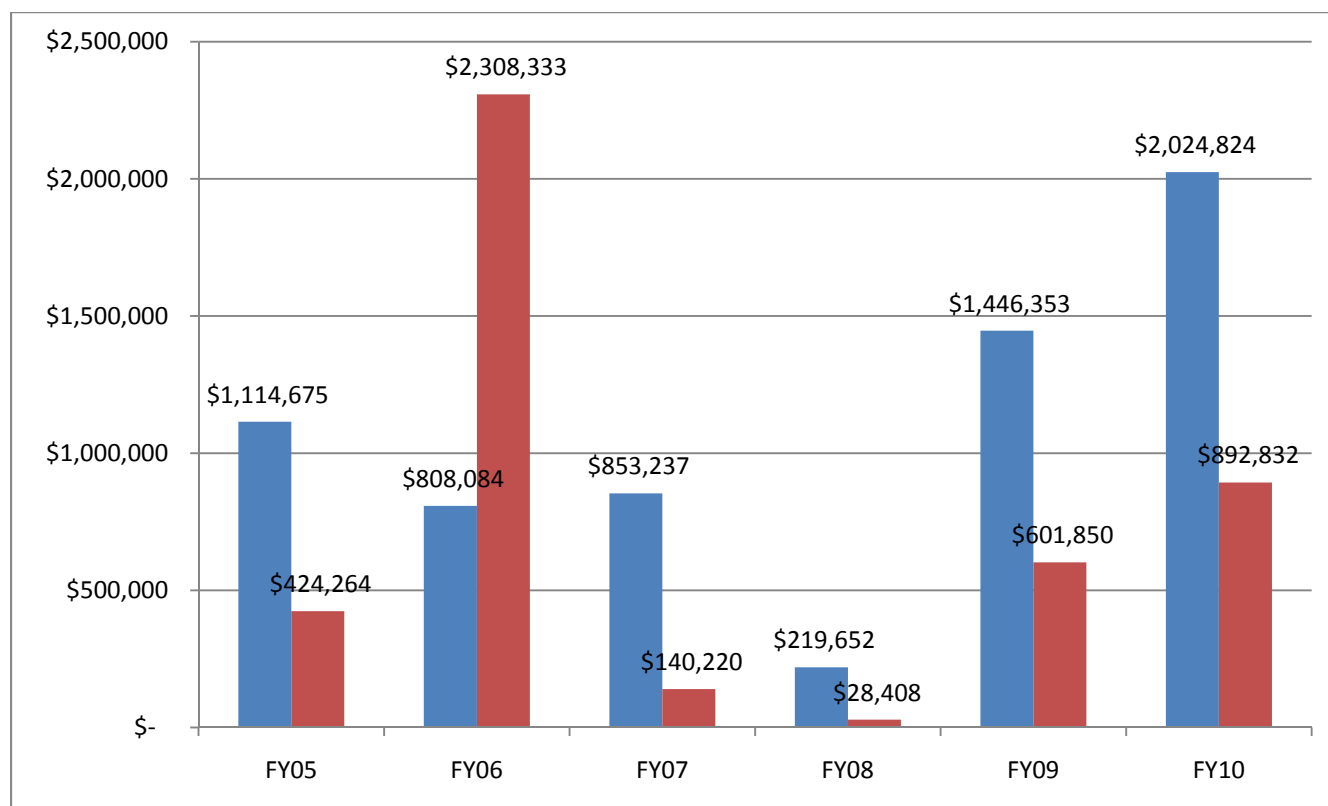
2009-2010 Active Grants (Principal Investigator)

<i>Principal Investigator</i>	<i>Agency</i>	<i>Active Dates</i>	<i>Direct Costs</i>	<i>Indirect Costs</i>
Martin Hauer-Jensen, M.D., Ph.D.	NIH-NIAID-U19	8/31/05-7/31/10	\$144,299	\$60,606
Martin Hauer-Jensen, M.D., Ph.D.	DTRA	08/15/07-06/30/10	\$266,207	\$119,793
Martin Hauer-Jensen, M.D., Ph.D.	DTRA	11/01/09-10/30/12	\$197,241	\$88,758
Martin Hauer-Jensen, M.D., Ph.D.	NIH-NCI-R37	4/01/08-3/31/13	\$196,088	\$88,240
Martin Hauer-Jensen, M.D., Ph.D.	DTRA	1/26/07-1/25/10	\$259,526	\$109,001
Martin Hauer-Jensen, M.D., Ph.D.	NIH-NIAID-R01	07/01/00-04/30/10	\$207,506	\$87,153
Dwight Pierce, Ph.D.	NIH-NIAAA-R03	04/01/08-03/31/10	\$50,000	\$22,500
Grazyna Nowak, Ph.D.	NIH-NIDDK-R01	09/01/09-08/31/14	\$220,797	\$99,359
Daohong Zhou, Ph.D.	NIH-NCI-R01a	03/01/10-01/31/12	\$140,967	\$63,435
Daohong Zhou, Ph.D.	NIH-NCI-R01b	07/01/07-03/31/12	\$72,000	\$32,400
Daohong Zhou, Ph.D.	NIH-NIAID	09/05/08-08/31/13	\$253,262	\$113,968
Daohong Zhou, Ph.D.	NIH-NIAIDs	03/01/10-09/30/10	\$16,931	\$7,619
TOTAL			\$2,024,824	\$892,832

2009-2010 Active Grants (Co-Investigator)

Co-Investigator	Principal Investigator	Effort (%)	Grant Agency
Marjan Boerma, Ph.D.	Sandy Burnett, M.D.	30	NIH
Marjan Boerma, Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	40	DTRA
Li Cui, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	100	DTRA
Qiang Fu, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	30	DTRA
Qiang Fu, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	30	DTRA
Qiang Fu, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	40	NIH
Martin Hauer-Jensen, M.D., Ph.D.	Marjan Boerma, Ph.D.	5	LAF
Howard Hendrickson, Ph.D.	Paul Prather, Ph.D.	10	NIH
Howard Hendrickson, Ph.D.	Michael Owens, Ph.D.	25	NIH
Howard Hendrickson, Ph.D.	Michael Owens, Ph.D.	10	NIH
Kim E. Light, Ph.D.	Dwight Pierce, Ph.D.	5	NIH
Russell B. Melchert, Ph.D.	Nancy Rusch, Ph.D.	5	NIH
Russell B. Melchert, Ph.D.	Nancy Rusch, Ph.D.	5	NIH
Russell B. Melchert, Ph.D.	Philip Palade, Ph.D.	5	NIH
Grazyna Nowak, Ph.D.	Didier Portilla, M.D.	4.5	NIH
Grazyna Nowak, Ph.D.	Jack Hinson, Ph.D.	4.5	NIH
Junru Wang, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	30	NIH
Junru Wang, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	30	NIH
Junru Wang, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	10	NIH
Junru Wang, M.D., Ph.D.	Sandy Burnett, M.D.	10	NIH
Junru Wang, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	10	DTRA
Junru Wang, M.D., Ph.D.	Martin Hauer-Jensen, M.D., Ph.D.	10	DTRA

DTRA = Defense Threat Reduction Agency; LAF = Lance Armstrong Foundation



Pharmacy Practice Faculty

Professors

Stephanie F. Gardner, BS (Pharmacy), PharmD, EdD
Paul O. Gubbins, PharmD (**CHAIR**)
Nicki Hilliard, BS (Pharmacy), PharmD
Bradley C. Martin, PharmD, PhD (**PEP – Division Head**)
Cindy D. Stowe, BS (Pharmacy), PharmD
Jonathan J. Wolfe, BS (Pharmacy), PhD

Associate Professors

Lois Coulter, BS (Pharmacy), PharmD
Dosha Cummins, BS (Pharmacy), PharmD
Dwight Davis, BS (Pharmacy), PharmD
Renee M. DeHart, PharmD (**7/1/09 hire date**)
Eddie Dunn, BS (Pharmacy), PharmD
Howell Foster, BS (Pharmacy), PharmD
J. Thomas Frank, BS (Pharmacy), PharmD
Amy Franks, PharmD
John David (J.D.) Gannaway, BS (Pharmacy), PharmD
Jan Hastings, BS (Pharmacy), PharmD
Lisa Hutchison, BS (Pharmacy), PharmD, MPH
Jill T. Johnson, PharmD
Denise Ragland, PharmD
Eric Schneider, BS (Pharmacy), PharmD
Daniel C. Spadaro, BS (Pharmacy), PharmD
Ross E. Vanderbush, BS (Pharmacy), PharmD (**12/31/09 date of retirement**)
T. Scott Warmack, PharmD

Assistant Professors

Melanie Claborn, PharmD
Marsha Crader, PharmD
M.E. "Trey" Crumby III, PharmD (**8/31/09 date left academia**)
Mark Estes, PharmD
Schwanda Flowers, PharmD
Sarah Frank, PharmD (**12/31/09 date relocated for spouse**)
Seth Heldenbrand, PharmD
Mark Helm, BBA, MBA, MD (**12/31/09 date left academia**)
Ed Hesterlee, BS (Pharmacy), PharmD
Jonell Hudson, PharmD (**9/1/09 hire date**)
Scott Kaufman, PharmD (**8/19/09 hire date**)
Dao Le, PharmD
Chenghui Li, MA, PhD (**PEP**)
Holly D. Maples, PharmD
Keith McCain, PharmD
Kendrea Muldrew, PharmD
Sherry A. Myatt, PharmD
Kathryn Neill, PharmD
Brenna Neumann, PharmD (**3/1/10 hire date**)

Catherine O'Brien, PharmD
Anne Pace, PharmD
Nalin Payakachat, PhD (PEP)
Darren O'Quinn, BS (Pharmacy), JD
Melanie Reinhardt, BS (Pharmacy), PharmD
Qayyim Said, MA, PhD (PEP)
Michael Shepherd, PharmD (10/1/09 hire date; 4/30/10 date left academia)
Ashley Stinnett, PharmD (7/1/09 hire date)
Jeremy Thomas, PharmD (7/1/09 hire date)
Eli Vinson, PharmD
John Vinson, PharmD

Instructor

Martha Carle, BSE, MSE, MPH

Residents & Graduate Students

Mir M Ali: PEP Graduate Student (start date: August 2009), Dr. Bradley Martin
Sharvari Bhurke: PEP Graduate Student (start date: August 2008), Dr. Bradley Martin
Ashley Stubblefield Crumby, PharmD: Resident, UAMS/ACH, Dr. Holly Maples
Mugdha Gokhale: PEP Graduate Student (start date: May 2008), Dr. Bradley Martin
Erin Beth Hays, PharmD: Resident, White River Medical Center, Dr. Maggie Miller
Arpit Kashyap: PEP Graduate Student (start date: August 2009), Dr. Bradley Martin
Andrew King: PEP Graduate Student (start date: August 2009), Dr. Bradley Martin
Leslie Mooney, PharmD: Resident UAMS & COPH graduate student, Dr. Amy Franks
Starr McLain, PharmD: Resident, UAMS/ACH, Dr. Holly Maples
Adam Pate, PharmD: Resident, UAMS, Dr. Mike Parr
Kristen Pate, PharmD: Resident, UAMS, Dr. Mike Parr
Pravinkumar Patil: PEP Graduate Student (start date: August 2008), Dr. Bradley Martin
Lindsey Turnbow, PharmD: Resident, UAMS, Dr. Mike Parr

Teaching Effort: Professional Curriculum

2009-2010 Curriculum

Courses	Contact Hours
PhPr 3412 US Health Care System for Pharmacists	30
PhPr 3422 Career Orientation & Communications (sm grps)	30
PhSc 3402 Pharmaceutical Calculations	30
PhPr 3612 Drug Information	30
PhPr 3511 Nuclear Pharmacy	15
PhPr 4423 Dispensing (lab)	90
PhPr 4692 Nonprescription Drugs	30
PhSc 4642 Clinical Pharmacokinetics	15
PhPr 4625 Therapeutics I (recitation)	101
PhPr 5635 Therapeutics II (recitation)	101
PhPr 5632 Pharmacy Law & Ethics	30
PhPr 5643 Evidence Based Medicine & Pharmacoeconomics	45
PhPr 5645 Therapeutics III	75
PhPr 5734 Pharmacy Management	60
PhPr 5654 Patient Assessment & Application (online & lab)	71
PhPr XXXX Electives – 8 credit hours	
Face-to-face 12	360
Online 5	150
Total	1263

*Based on faculty reported lecture hours

Research Effort: Publications

2009 Journal Articles

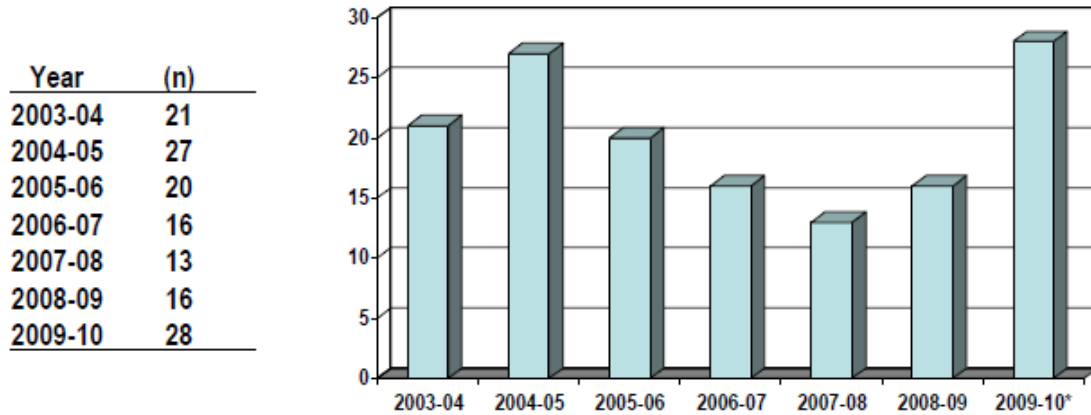
1. **Martin BC**, Wiley-Exley EK, Richards S, Domino ME, Carey TS, Sleath BL. A new measure of adherence – the daily possession ratio (dpr): comparison with the medication possession ration (mpr) in the present of medication switching and therapeutic duplication. Ann Pharmacother 2009;43(1):36-44. (Jan)
2. **Martin BC**, Church TS, Bonnell R, Ben-Joseph R, Ted Borgstadt, B.S. The Impact of Overweight and Obesity on the Direct Medical Costs of Truck Drivers. Journal of Occupational and Environmental Medicine, 2009;51(2):180-184. (feb)
3. **Crumby T**, Rinehardt E, Carby MC, Kuhl D, Talati AJ. "Evaluation of Vancomycin First Dose Kinetics for Therapy Guidance in the Neonatal Intensive Care Unit. Am J Health Syst Pharm 2009;66:149-53.(feb)
4. **Ragland D, West D**. Pharmacy students' knowledge, attitudes, and behaviors regarding emergency contraception. A J Pharm Edu 2009;73(2):article 26. (Mar-Apr)
5. **Muldrew KM, Franks AM**. Succinobucol: review of the metabolic antiplatelet and cardiovascular effects. Expert Opin Inverstig Drugs 2009;18(4):531-9. (Apr)
6. **Crader M**, Borkowski J. Nebulized Albuterol versus Levalbuterol in Pediatric and Adult Patients: A Review. Formulary 2009;44:108-118. (Apr)
7. Smith KM, Scott DR, Barner JC, **DeHart RM**, Scott JD, Martin SJ. Interprofessional Education in Six US Colleges of Pharmacy. Am J Pharm Educ 2009;73:Article 61 (Jul.)
8. Karve S, Cleves MA, **Helm M**, Hudson TJ, West DS, **Martin BC**. Good and poor adherence: optimal cut-point for adherence measures using administrative claims data.. Curr Med Res Opin 2009; 25: 2303-10. (Jul)
9. **Thomas JT**, Zingone MM, Smith J, George CM. Feasibility of contracting for medication therapy management services in a physician's office. Am J Health Syst Pharm 2009;66 1390-1393. (Aug)
10. Mooney LA, **Franks AM**. Evaluation of community health screening participants' knowledge of cardiovascular risk factors. J Am Pharm Assoc 2009; 49(4):529-37 (Jul-Aug)
11. **Payakachat N**, Murawski MM, Summers KH. Health utility and economic analysis: theoretical and practical issues. Expert Rev Pharmacoecons & Outcomes Res 2009;9:289-92. (Aug)
12. **Cummins DF**, Wood RL. Simvastatin- and Fluvastatin-Associated Nightmares. J Pharm Pract 2009;22:421-25.(Aug)
13. **Cummins D**, Mackey M, Baker E. Recovery time in a case of gemfibrozil and simvastatin-associated rhabdomyolysis. South Med J 2009;102:858-60. (Aug)
14. Karve S, Cleves MA, **Helm M**, Hudson TJ, West DS, **Martin BC**. Prospective validation of eight different adherence measures for use with administrative claims data among patients with schizophrenia. Value Health 2009; 12(6):989-995. (Sep)
15. **Gubbins PO**, Amsden JR, McConnell SA Anaissie EJ. The pharmacokinetics and buccal mucosal concentrations of a 15 mg/kg total dose of liposomal amphotericin B either as a single (15mg/kg) dose, weekly dose (7.5mg/kg), or a daily dose (1mg/kg) in hematopoietic stem cell transplant patients. Antimicrob Agents Chemother 2009;53:3664-74.(Sep)
16. **Payakachat N**, Summers KH, Pleil AM, Murawski MM, Thomas J 3rd, Jennings K, Anderson JG. Predicting EQ-5D utility scores from the 25-item National Eye Institute Vision Function Questionnaire (NEI-VFQ 25) in patients with age-related macular degeneration. Qual Life Res 2009;18:801-13. (Sep)
17. Cox E, **Martin BC**, Van Staa T, Edeltraut G, Siebert U, Johnson ML. Good Research Practices for Comparative Effectiveness Research: Approaches to Mitigate Bias and Confounding in the Design of Non-Randomized Studies of Treatment Effects Using Secondary Data Sources. Value in Health. 2009;12:1053-61. (Sep)
18. Johnson ML, Crown W, **Martin BC**, Dormuth CR, Siebert U. Good Research Practices for Comparative Effectiveness Research: Analytic Methods to Improve Causal Inference from Non-Randomized Studies of Treatment Effects Using Secondary Data Sources. Value in Health. 2009;12:1062-73. (Sep)
19. **Said Q**, Marx CM, Schwartz JS, Ben-Joseph R, Brixner DI. Impact of body mass index on the incidence of cardiometabolic risk factors in ambulatory care setting over 5 years or more. Value in Health 2009;13(2):265-71. (Oct)

20. MacPherson DW, Gushulak BD, Baine WB, Bala S, **Gubbins PO**, Holtom P, Segarra-Newnham M. Population mobility, globalization, and antimicrobial drug resistance. Emerging Infect Dis 2009;15:1727-32. (Nov)
21. Brooks TC, Burlingame M, Rickman H, **Claborn M**, Shaverd L, et al. Travoprost: A Prostaglandin analogue for the treatment of glaucoma. Formulary 2009; 44:322-328. (Nov)
22. **Warmack TS, Estes MA, Heldenbrand S, Franks AM**, β -adrenergic antagonists in hypertension: A review of the evidence. Annals of Pharmacotherapy 2009;43:2031-43. (Dec)
23. **Cummins D**. Interpreting urine drug tests, J Ark Med Soc 2009, 106(6): 161-162. (Dec)

2010 Journal Articles

1. Hartwig M, **Cummins D, Frank T.**, et al. Medication reconciliation in transitions: The MERIT Program. The Arkansas Family Physician 2010;Volume 13,:12-14. (Jan)
2. Edlund MJ, **Martin BC**, Devries A, Fan MY, Braden JB, Sullivan MD Trends in use of opioids for chronic noncancer pain among individuals with mental health and substance use disorders: the TROUP study. Clin J Pain 2010;26:1-8. (Jan)
3. McFarland MS, Knight TN, Brown A, **Thomas J**. The continuation of oral medications with the initiation of insulin therapy in type 2 diabetes: a review of the evidence. South Med J 2010; 103:58-65. (Jan)
4. Eiland LS, **Flowers SK**, Andurkar SV, O'Brocta R, Prabhu S, Medon PJ. A comparative study of student and faculty perspectives regarding career opportunities in pharmacy academia. Curr Pharmacy Teaching Learning 2010;3:39–51. (Jan)
5. Pathak P, West D, **Martin BC, Helm ME**, Henderson C. Evidence-based use of second-generation antipsychotics in a state Medicaid pediatric population, 2001-2005. Psychiatr Serv 2010;61:123-9. (Feb)
6. **Gubbins PO, Heldenbrand S**. Clinically relevant drug interactions of current antifungal agents. Mycoses 2010;53:95-113. (Mar)
7. **Ragland D, Payakachat N**, Hays EB, Banken J, Dajani NK, Ott RE. Depression and diabetes: Establishing the pharmacist's role in detecting comorbidity in pregnant women" JAPhA 2010;50:195-199. (Mar-Apr)
8. **O'Brien CE**, Anderson PJ, **Stowe CD**. Use of the chloride channel activator lubiprostone for constipation in adults with cystic fibrosis: A case series. Ann Pharmacother 2010;44:577-81. (Mar)
9. McCoy EK, **Thomas JL**, Sowell RS, George C, Finch CK, Tolley EA, Self TH. An Evaluation of Peak Expiratory Flow Monitoring: A Comparison of Sitting Versus Standing Measurements J Am Fam Med 2010;23:166-70 (Apr)
10. **Flowers SK, Vanderbush RE, Hastings JK**. Web-based Multimedia Vignettes in Advanced Community Pharmacy Practice Experiences. Am J Pharm Ed 2010;74:Article 39. (Apr)
11. **Hutchison LC**. Pharmacist Approach to geriatrics. Am J Lifestyle Med 2010; 4: 267-274. (May-Jun)
12. **Pace AC, Flowers SK, Hastings JK**. Community Pharmacists' Opinions on Immunizations. J Pharm Pract 2010; pub ahead of print

**Department of Pharmacy Practice
Peer Reviewed Publications
July, 2003-May 2010**



*As of May 21, 2010

Research Effort: Grant and Contract Activity

2009-2010 Grant Submissions (Principal Investigator)

Principal Investigator	Grant Agency	Submit Date
O'Brien, C	CUMG	9/1/2009
Li, C	AR Center for Health Disparities	9/2/2009
Ragland, D	ASHP Foundation	10/21/2009
Payakachat, N	CCTR	11/9/2009
Payakachat, N	UAMS/ABI	12/4/2009

2009-2010 New Awards & Continuing Support

Faculty	Role	Award Type	New/ Continuation	Sponsor/Funding Agency	Funding Supports
Cummins, D	Program Director	Grant	New	MERIT	Program
Flowers, S Pace, A	Co-Director Co-Director	Demonstration Project	Continuation	Wal-Mart Corporation	Program
Foster, H	Program Director	Grant	Continuation	HRSA Poison Control Stabilization Grant	Program
Frank, T.	Co-Director	Grant	Continuation	MERIT Project - AHEC Central	Program
Frank, T.	Co-Director	Grant	Continuation	MCAP Project - Arkansas Minority Health Commission	Program
Hastings, J	Consultant	Contract	Continuation	University of Arkansas Systems	Time & Effort
Helm, M Martin, BC Vanderbush, R	PI Co-Investigator Co-Investigator	Grant	Continuation	Attorney General's Grant	Time & Effort
Hilliard, N	Program Director	Contract	Continuation	Covidien (DOT Training)	Program
Heldenbrand, S	Consultant	Contract	Continuation	Arkansas Medicaid	Time & Effort
Hutchison, L	Consultant	Demonstration Project	Continuation	Arkansas Department of Human Services Division of Aging and Adult Services	Other
Hutchison, L	Consultant	Grant	Continuation	National Institute on Aging	Other
Hutchison, L	Coordinator	Grant	Continuation	Boehringer Ingelheim	Other
Hutchison, L	Consultant	Contract	Continuation	Arkansas Medicaid	Time & Effort
Johnson, J	Consultant	Contract	Continuation	University of Arkansas Systems	Time & Effort
Johnson, J	Consultant	Contract	Continuation	Arkansas State Employees EBD	Time & Effort
Johnson, J	Consultant	Contract	Continuation	Arkansas Medicaid	Time & Effort
Li, C	Consultant	Grant	Continuation	National Institute of Health	Time & Effort
Li, C	PI	Grant	Continuation	UAMS Medical Research Endowment	Grant
Li, C	PI	Grant	Continuation	Robert Wood Johnson Foundation - Substance Abuse Policy Research Program	Time & Effort
Maples, H	Co-Director	Contract	Continuation	Arkansas Children's Hospital	Time & Effort
Martin, B	Co-I	Grant	Continuation	NIDA	Time & Effort
Martin, B	Co-I	Grant	Continuation	VA HSR&D	Time & Effort
Martin, B	Co-Director	Grant	New	Arkansas Center for Clinical and Translational Research Award #: 1 UL1RR029884 Health Services Research Component	Time & Effort

Appendix 4: Pharmacy Practice Report - COP – June 1, 2010

Faculty	Role	Award Type	New/ Continuation	Sponsor/Funding Agency	Funding Supports
O'Brien, C	PI	Grant	New	CUMG	Grant
O'Brien, C Stowe, C	PI Co-I	Grant	Continuation	Takeda and Sucampo Pharmaceuticals	Time & Effort
Payakachat, N	Co-I	Grant	Continuation	NIH-R01 (MH089466-01)	Time & Effort
Payakachat, N	PI	Grant	New	UAMS Medical Research Endowment	Grant
Ragland, D	Consultant	Demonstration Project	Continuation	Office for the Advancement of Telehealth, HRSA, DHHS	Time & Effort
Ragland, D	Consultant	Contract	Continuation	ANGELS - UAMS OB/GYN Dept/ DHS	Time & Effort
Said, Q Li, C Hastings, J	PI Co-investigator Co-investigator	Grant	Continuation	Tailored Biobehavioral Intervention Research Center	Grant
Said, Q Martin, B	PI Co-investigator	Grant	New	NIH, NCMHD & Arkansas Center for Health Disparities	Time & Effort

2009-2010 Clinical Service Commitments

Faculty	Service	Pt Care (Mo/Yr)	Comments
Denise Ragland	UAMS Anticoagulation Clinic, Out Patient Center	11	Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed). Clinic bills the facility fee and the revenue recouped provides supplies
	University Women's Clinic , Pulaski County Central Health Unit		Interdisciplinary Clinic - Provides management of patients with diabetes, depression screening and contraception counseling.
	Type 2 Diabetes Adolescent Clinic, Arkansas Children's Hospital Circle of Friends Clinic		Services include medication hx, patient medication counseling, drug recommendations, and chart reviews
	University Women's Health Clinic, Freeway Medical Center		Services include diabetes education and phone follow-up as needed to the high-risk prenatal patients and assist Dr Nafisa Dajani with the patients' diabetes treatment plans.
Jill Johnson	University Hospital Team 3a	6	
Amy Franks	UAMS Medical Center, Internal Medicine Team 1 (Cardiology Inpatient)	7	
	UAMS Ambulatory Blood Pressure Monitoring Service	As needed	
Seth Heldenbrand	UAMS Solid Organ Transplant Service (Transplant Surgery Team & Team 4)	11	As per CMS requirements provides clinical pharmacy services to UAMS Transplant program that performs ≈35 liver & 80 kidney transplants/yr.
	Post Transplant Clinics (Liver & Kidney)		The liver clinics sees ≈ 20 patients (75% require pharmacy service); the renal clinic sees 80/mo, (50% require pharmacy services)
	UAMS Anticoagulation Clinic, Out Patient Center	0.2	Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed).
Jeremy Thomas	UAMS Medicine Clinic	10	Services include medication use review to optimize pharmacotherapy regimens for high risk patients
	UAMS Anticoagulation Clinic, Out Patient Center		Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed). Clinic bills the facility fee and the revenue recouped provides supplies
	Diabetes Education Clinic ^a		Services include targeted educational interventions as well as general survival skills people with diabetes.
Anne Pace	Co-Coordinator Community APPE	0.2	Primary Effort is to co-coordinates Community Experiential Practice. Clinical service is in this Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed). Clinic bills the facility fee and the revenue recouped provides supplies
	UAMS Anticoagulation Clinic, Out Patient Center		

^aCurrently trying to establish a diabetes education class to be offered in conjunction with the diabetes educators of the Endocrinology Clinic. This will be a billable service.

Faculty	Service	Pt Care (Mo/Yr)	Comments
Lisa Hutchison	Team V Donald W. Reynolds Institute on Aging	8	Primary Responsibility
	ADH Div.of Aging & Adult Services - Money Follows the Person Demonstration Project	As needed	Pharmacist consultant, responsible for twice yearly medication review of demonstration project's adult participants
Ashley Stinnett	University Hospital, MICU	11	
	UAMS Anticoagulation Clinic, Out Patient Center	1	Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed). Clinic bills the facility fee and the revenue recouped provides supplies
Keith McCain	Arkansas Poison Poison Control Center	12	Provides coverage for standard (M-F, 8a-5p) and non-standard shift hours (holiday, weekend, overnight, evening, early morning). In 2009, provided coverage for 370 non-standard shift hour equivalents and was the specialist of record for 2,822 cases reported to the Center. For comparison the number of cases handled by a non-academic, full time specialist ranged from a low of 2,989 to a high of 6,435.
Howell Foster	Director of the Arkansas Poison Control Center (APCC)	12	Oversaw management of 38,400 calls (2009), of which 63% were emergent poisonings, the vast majority requiring clinical input by the APCC. Also in 2009, the APCC distributed approx 180,000 pieces of educational material throughout the state.
	Call Center Director EBRX		EBRX Call Center handled approx. 48,000 calls requiring clinical input from the staff
Mark Estes	Arkansas Drug Information Center (ADIC)	N/A	Primary effort –co-Director, ADIC. Clinical service is in this Pharmacy based clinic for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed).
	UAMS Anticoagulation Clinic, Out Patient Center	0.2	
Scott Warmack	Firm A (Medicine Service), CAVHS	12	
	Anticoagulation Clinic, Department of Family and Community Medicine (DFCM)	3.2	Pharmacy Based Clinic in the DFCM Center for managing warfarin therapy (i.e. patient interviews, point-of-care INR evaluation, dosage adjustment and follow-up as needed). Averages 60 patient visits/mo with quarterly earnings averaging \$1,669
Catherine O'Brien	Arkansas Cystic Fibrosis Center – Adult Program	4.5	Weekly clinic that follows approximately 85 patients. Pharmacist sees 20-25 patients/ mo. In both clinics patient care activities include medication reconciliation, adherence counseling, vitamin D replacement, bone densitometry, patient education, dosing recommendations). Annual census: 240 - 300 clinic visits
	Arkansas Cystic Fibrosis Center – Ped. Program		Clinic meets 4 times/week and follows 163 patients. Pharmacist sees 35-40 patients/mo. Annual census: estimated 500 clinic visits

Faculty	Service	Pt Care (Mo/Yr)	Comments
Kendrea Muldrew	Burn Center - ACH	12	Prevents, identifies, & resolves pharmacy-related patient care issues (design, monitor, & evaluate patient-specific therapeutic regimens). Develop & revise new therapeutic protocols
	Antimicrobial Stewardship Program -ACH	2.5	
Holly Maples	Inpatient Renal Transplant - ACH	12	Services per CMS requirements for accreditation available 7 days/wk, 7 transplants in past year approx LOS ≈ 2 wks.
	Antimicrobial Stewardship Program -ACH		Co-director, 50% salary savings. Services provided 7 days/wk. Follow all hospital patients (except NICU) on vancomycin. Avg monthly census 125 pt/mo. Accomplishments: No significant vanco nephrotoxicity requiring dialysis since program started. Annualized doses per day decreased 7.8%. Improved ACH standing against other PHIS hospitals (40 total) by decreasing standing to 7th (had been 2nd with initiation of program) after 2 years
	Inpatient Cystic Fibrosis -ACH		Services provided 7 days/wk (antibiotic management and other dosing adjustments). 134 patients hospitalized in 2009, avg LOS 14 days. Home IV support (antibiotic drug level monitoring/other outpatient antibiotic recommendations...average 1 per week).
	Therapeutic Drug Monitoring Service - ACH		Available for any other drug monitoring question prn
	ID/HIV Clinic - ACH		Weekly clinic follow approximately 33 HIV (+) patients. Approx 132 visits/yr (4 per patient)
Marsha Crader	St. Bernards Medical Center	12	Medication reconciliation, antimicrobial stewardship.
	St. Bernards Senior Health Clinic		Pharmacotherapy consult & approximately 180 chart reviews each year (approximately 25 percent of clinic census).
Dosha Cummins	AHEC-NE Family Practice Service	12	Family Medicine Inpatient Service Team Daily services provided to inpatient team with avg census (30 medicine + 7 OB patients)
	AHEC-NE Family Practice Clinic		Pharmacotherapy service that is determined by real-time patient visits in clinic, the ED or in the hospital and nursing home
Eric Schneider	AHEC-NW Family Practice Clinic - Fayetteville	12	Provides anticoagulation and patient counseling services to ≈ 30 clinic patients/mo, (Clinic census ≈100 patients/day)
Lois Coulter	AHEC-NW Family Practice Clinic – Fayetteville	12	Provides anticoagulation and patient counseling services to ≈ 30 clinic patients/mo and the inpatient Family Practice Service @Washington Regional Medical Center (avg daily census 12 patients/day)
Jonelle Hudson	AHEC-NW Family Practice Clinic – Springdale	12	Provides anticoagulation and patient counseling services to ≈ 50 clinic patients/mo and the inpatient Family Practice Service @ Northwest Medical Center (avg daily census 10-20 patients/day)
Melanie Claborn	Fayetteville VA - Veterans Healthcare System of the Ozarks	12	NA at time of printing.

Faculty	Service	Pt Care (Mo/Yr)	Comments
Scott Kaufman	Mercy Medical Center, Rogers, AR	12	Provides Pharmacokinetic Dosing Service, Renal Dosing Service, Antimicrobial Surveillance & Stewardship service & daily ICU rounds
Tom Frank	AHEC-NE Family Practice Service	12	Family Medicine Inpatient Service Team Daily services provided to inpatient team with avg census (30 medicine + 7 OB patients).
	AHEC-NE Family Practice Clinic		Pharmacotherapy service that is determined by real-time patient visits in clinic, the ED or in the hospital and nursing home
Eli Vinson	AHEC So.AR – Eldorado - UAMS Faculty Clinic	12	Provides anticoagulation monitoring services to 10-15 clinic patients/week generates \$22472/yr. Provides four two-hour diabetes education classes/mo for approximately 8-10 clinic patients/wk. Billing mechanism in progress
Jon Vinson	AHEC Fort Smith – Family Medical Center	12	NA at time of printing.
Sherry Myatt	AHEC Pine Bluff - Family Practice Center	12	Provides anticoagulation and asthma clinics for ~50 patients/month including the Justiss/Lindsey Clinic. Bills for these services and since July has seen ~500 patients [since July have billed about \$34,000 (~\$3000/month)]. Rounds with Family Medicine in the hospital every morning.
Jan Hastings	No patient care duties		Co-Coordinator Community APPE
Eddie Dunn	No patient care duties		
Melanie Reinhardt	No patient care duties		
Dan Spadaro	No patient care duties		Coordinator Experiential Education
Brenna Neumann	No patient care duties		Coordinates Community Experiential Practice – NW
JD Gannaway	No patient care duties		Co- Director ADIC
Cindy Stowe	No patient care duties		Associate Dean Professional Education
Renee DeHart	No patient care duties		Associate Dean Administrative Affairs
Stephanie Gardner	No patient care duties		Dean
Schwanda Flowers	No patient care duties		Assistant Dean Experiential Education
Kathryn Neill	No patient care duties		Director Institutional APPE and Institutional IPPE
Jon Wolfe	No patient care duties		Associate Dean Development
Paul O. Gubbins	No patient care duties		Chair
Brad Martin	No patient care duties		Division Head, Pharmaceutical Evaluation & Policy
Nalin Payakachat	No patient care duties		Division Pharmaceutical Evaluation & Policy
Chenghui Li	No patient care duties		Division Pharmaceutical Evaluation & Policy
Qayyim Said	No patient care duties		Division Pharmaceutical Evaluation & Policy
Nicki Hilliard	No patient care duties		NEO
Dao Le	No patient care duties		NEO
Ed Hesterlee	No patient care duties		Development
Dwight Davis	No patient care duties		Director, Evidence-Based Prescription Drug Program
Martha Carle	No patient care duties		Pharmacy Practice eLearning Director

**UAMS Experiential Capacity Summary
Annual Report**

APPE 2009-2010 (107 students, 17 assigned to NW)

Type of Experience	Capacity Available	Students Assigned	Overage based on assigned students
<i>Entire State</i>			
Acute Care	401	336	16%
Ambulatory Care	157	122	22%
Advanced Community (and Management)	341	171	50%
Community Mgmt	259	99	62%
Hospital Mgmt			
Electives	302	126	58%
<i>NW Arkansas*</i>			
Acute Care	41	25	39%
Ambulatory Care	38	26	32%
Advanced Community (and Management)	66	28	58%
Community Mgmt	42	9	79%
Hospital Mgmt	27	7	74%
Electives	31	17	45%

**NW includes Ft. Smith sites*

APPE 2010-2011 (113 students, 23 assigned to NW)

Type of Experience	Capacity Available	Students Assigned	Overage
<i>Entire State</i>			
Acute Care	434	327	24%
Ambulatory Care	199	139	30%
Advanced Community (and Management)	325	198	39%
Community Mgmt	333	77	77%
Hospital Mgmt	310	111	
Electives	291	154	47%
<i>NW Arkansas*</i>			
Acute Care	82	59	28%
Ambulatory Care	54	31	42%
Advanced Community (and Management)	62	41	34%
Community Mgmt	45	14	69%
Hospital Mgmt	39	20	48%
Electives	33	22	33%

**NW includes Ft. Smith sites*

APPE (120 students, 30 assigned to NW)

Type of Experience	Capacity Available	Students Assigned	Overage
<i>Entire State</i>			
Acute Care	434	300	31%
Ambulatory Care	199	180	10%
Advanced Community (and Management)	325	120	63%
Community Mgmt	333	120	64%
Hospital Mgmt	310	120	
Electives	291	240	18%
<i>NW Arkansas*</i>			
Acute Care	82	75	9%
Ambulatory Care	54	45	17%
Advanced Community (and Management)	62	30	52%
Community Mgmt	45	30	33%
Hospital Mgmt	39	30	23%
Electives	33	60	-82 %

**NW includes Ft. Smith sites*

Experiential needs based on 120 students total & 30 students at the NW campus (25% overage)

	Acute	Ambulatory Care	Advanced Community	Community Mgmt	Hospital Mgmt	Electives
State	375	225	150	150	150	300
NW	94	57	38	38	38	75

Acute & Ambulatory Care Experiences Available 2010-2011 (entire state)

Acute Care Experiences		Ambulatory Care Experiences	
Month	Rotations Available	Month	Rotations Available
June	4	June	5
July	8	July	1
August	10	August	6
September	13	September	3
October	9	October	6
November	10	November	7
January	10	January	8
February	14	February	9
March	16	March	6
April	13	April	9

**DEVELOPMENT REPORT
2009-2010**

Year	Total Gifts	Gifts (Alumni)	# Gifts (Alumni)	# Alumni Donors	Gifts (Non-Alumni)	# Gifts (Non-Alumni)	# Non-Alumni Donors
2005	\$134,466	\$75,990	462	386	\$58,476	80	37
2006	\$223,553	\$90,187	370	293	\$133,366	169	86
2007	\$266,309	\$122,430	541	424	\$143,879	188	110
2008	\$475,528	\$168,150	564	414	\$307,307	248	125
2009	\$621,456	\$298,440	760	472	\$323,016	417	238

2009 Gifts

\$621,456 (from above)
 \$550,000 (AR SBoP – Rural Scholarship/Loan – UAMS Fund)
 \$550,000 (Wal-Mart & Collier Drug – NW Regional Campus – UA Foundation Fund)
 \$100,000 (Attorney General – Abuse Prevention Professorship – UAMS Fund)
\$1,821,456 TOTAL 2009
 Outstanding Pledges = \$359,150

University of Arkansas for Medical Sciences - College of Pharmacy				
Projected Yearend Revenue & Expense Statement for FY2010				
As of April 30, 2010				
Description	April 30 YTD Actual	Projected FY10 Annual Actual	FY10 Annual Budget	Variance to Budget
REVENUE:				
GRANTS/CONTRACTS	1,689,669	1,977,388	1,457,467	(519,921)
OTHER OPERATING REVENUES	2,651,458	3,048,065	4,199,045	1,150,980
INTRA-UNIVERSITY REVENUES	80,179	95,000		(95,000)
INVESTMENT INCOME	71,656	75,000		(75,000)
GIFTS - OPERATING	79,017	81,500		(81,500)
STATE APPROPRIATIONS	550,000	550,000		(550,000)
SPENDING AUTH FUND 111	7,416,947	8,877,701	8,877,701	-
TOTAL OPERATING REVENUE	12,538,926	14,704,654	14,534,213	(170,441)
EXPENSE:				
SALARIES/WAGES	7,490,732	9,059,431	9,190,156	130,725
FRINGE BENEFITS	1,687,246	1,990,053	2,025,418	35,365
TOTAL COMPENSATION AND BENEFITS	9,177,978	11,049,484	11,215,574	166,090
MAINTENANCE & OPERATING	1,513,035	1,704,426	2,072,185	367,759
INDIRECT COST	425,075	505,516	375,000	(130,516)
SCHOLARSHIP/FELLOWSHIP	208,806	208,806	100,000	(108,806)
DEPRECIATION/AMORTIZATION	294,829	320,000		(320,000)
TOTAL SUPPLIES/OTHER EXPENSE	2,441,745	2,738,748	2,547,185	(191,563)
TOTAL OPERATING & OTHER EXPENSE	11,619,723	13,788,232	13,762,759	(25,473)
OPERATING (GAIN) OR LOSS	919,203	916,422	771,454	(195,914)
NON-OPERATING:				
CAPITAL APPROPRIATIONS	171,998	171,998		(171,998)
FUND BALANCE TRANSFERS	299,473	251,860	-	(251,860)
CAPITAL TRANSFERS	(188,748)	(245,642)		245,642
NON-OPERATING CHANGES IN NET ASSETS	282,723	178,216	-	(178,216)
CHANGES IN NET ASSETS INCR/(DECR)	1,201,926	1,094,638	771,454	(374,130)

GRANTS/CONTRACTS: Radiation Health Division created in July 2009. The lack of historical data resulted in conservative estimates of grant revenues for its 2nd year.

OTHER OPERATING REVENUES: Includes Contractual Services Fund income which is projected to be under budget by \$924,000. Lower than expected reimbursable expenses and related indirect cost recovery on the Medicaid contract accounted for \$420,000. Overly optimistic revenue estimates from Rx Results contracts resulted in a revenue shortfall of \$500,000.

STATE APPROPRIATIONS: This represents the \$550,000 in funding transferred from the State Board of Pharmacy to establish a Rural Health Scholarship Program. Program did not exist at time budget was prepared.

INDIRECT COST: Underestimated grant activity in the Radiation Health Division resulted in this budget variance.

SCHOLARSHIP/FELLOWSHIP: Foundation funded scholarships recorded in Restricted Funds were not budgeted in FY10.

DEPRECIATION/AMORTIZATION: Depreciation was not funded by UAMS prior to FY11.