

**Curriculum Vitae**  
**Forrest L. Smith, Ph.D.**  
Professor  
Department of Pharmaceutical Sciences  
Harding University College of Pharmacy  
915 E. Market Ave., 12230  
Searcy, AR 72143  
Office: 501-279-5507, fsmith1@harding.edu

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**Professional Positions:**

2007-        **Professor** – Department of Pharmaceutical Sciences, Harding University College of Pharmacy, Searcy, AR  
2016-2017    **Professor & Interim Chair** -- Department of Pharmaceutical Sciences, Harding University College of Pharmacy, Searcy, AR  
2007-2016    **Professor & Associate Dean for Academic Affairs**, Harding University College of Pharmacy  
1999-2007    **Associate Professor** -- Department of Pharmacology and Toxicology, Virginia Commonwealth University Medical Center, Richmond, VA  
1993-1999    **Assistant Professor** -- Pharmacology and Toxicology, Virginia Commonwealth University Medical Center, Richmond, VA  
1996-2007    **Affiliate Professor** -- Dental School, VCU Medical Center, Richmond, VA  
1998-2007    **Affiliate Professor** -- Institute for Drug and Alcohol Studies, VCU Medical Center, Richmond, VA

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**Professional Education:**

1990-1993 **Postdoctoral Fellow** (Pharmacology) – Dept. of Pharmacology and Toxicology, Medical College of Virginia, Richmond, VA, Research Grant: National Research Service Award (NRSA) from NIDA on Title: "Spinal Endogenous Opioid Modulation of Antinociception by Intrathecal Calcium Administration"  
  
1984-1989 **Ph.D.** (Pharmacology) - Dept. of Pharmacology, Texas Tech University Health Sciences Center, Lubbock, TX  
  
1978-1983 **B.S.** (Biology) - Abilene Christian University, Abilene, TX

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**Significant Pharmaceutical Industry Experience:**

2007-2008    Consultant, KAI Pharmaceuticals, Inc.  
2006-2007    Consultant and Study Director, Corgentech, Inc.  
2005-2007    Consultant and Study Director, TyRx Pharmaceuticals, Inc.  
2003-2007    Consultant and Study Director, Purdue Pharma L.P.  
2004-2005    Consultant and Study Director, AlgoRx Pharmaceuticals, Inc.  
1991-2002    Consultant and Study Director, Purdue Frederick Research Center, Yonkers, NY  
1999-2002    Consultant and Study Director Southern BioSystems, Birmingham, AL  
2000-2002    Consultant and Study Director, Guilford Pharmaceuticals, Baltimore, MD  
1988-1989    Clinical Consultant, The Pain Center, Dept. of Anesthesiology, Texas Tech University Health Sciences Center, Lubbock Texas

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**Research Support:**

**Prior Grants Submitted/Completed**

<b>VCU NIH funding 1990-2007:</b>	<b>Funded:</b> \$5,602,348;	<b>Submitted Unfunded:</b> \$3,318,543
<b>Harding University:</b>	<b>Funded:</b> \$350,000	<b>Submitted Unfunded:</b> \$67,710

**Research Support:****Prior Grants Submitted/Completed**

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**Harding University:**                      **Funded:** \$350,000                      **Submitted Unfunded:** \$67,710

**Grant#/Title**

Blue & You Foundation Grant: Introducing wearable simulators into a disaster drill to enhance engagement with community partners. \$67,710, 8/23/21 to 5/22/23. Lisa Engle, Patty Smith; **F. Smith**  
 Role: Outside contributor: grant editing, research design and analysis of data.

Status: Not funded

DH-18-0018 Arkansas Department of Health Contract: Community Pharmacists Stamping Out Smoking By Delivering Tobacco Intervention and Treatment. (Contractor: Julie Kissack; **F. Smith** Role: Contract Investigator, 10% Effort), Dates/Amounts: 11/2018 to 11/2019, \$350,000

Status: Completed

R01-DA-020836 *Role of Protein Kinase C in Opioid Tolerance*

Role: Co-PI with Drs. Dewey (VCU), G. Henderson and C. Bailey (U. Bristol, United Kingdom)

International Research Collaboration on Drug Addition grant

Dates/Amounts: 7/01/06-6/30/11      Total Costs: \$1,638,530

Percent effort: 25%

Status: Completed

R01-DA-016470-25 *Enkephalins: Neuropharmacology and abuse potential*

Role: Co-Principal Investigator with Drs. Dewey, S.P. Welch, D. Selley, L. Sim-Selley

Dates/Amounts: 3/1/02 to 2/29/07 Total Costs \$1,139,645

Status: Completed

P32-DA-09789 Program Project: *Endogenous Cannabinoids and Brain/Immune Function* (PI: Billy R. Martin)

Role: Co-PI with Drs. S.P. Welch, W.L. Dewey:

Project 4 Cellular Systems in the Acute and Chronic Effects of Cannabinoids

Dates/Amounts: 7/1/02 to 6/30/07 Total Costs: \$452,886

Status: Completed

T32-NIGMS *Graduate Education in Pharmacological Sciences*

Role: Administrative committee: program policy and implementation, pre-doctoral trainee selection, curriculum and fiscal management

Dates/Amounts: 7/01/07-0/30/12      Total Costs: \$1,767,284

Status: unfunded

R01-GM-06157 *Local anesthetic behavior & signal transduction*

Role: Principal Investigator 12/1/02 to 11/30/07 Total costs \$1,117,500

Status: unfunded

R01-DA-013592 *Buprenorphine substitution in opioid dependent neonates*

Role: Principal Investigator 12/1/00 to 11/30/05 Total costs \$906,250

Status: unfunded

P50-DA-05274 Center Grant: *Evaluation of opioid tolerance/dependence in neonatal rats.*

Role: Principal Investigator 8/1/96 to 7/31/01 Total Costs \$519,684.

Status: Completed

R01-DA-016470-25 *Enkephalins: Neuropharmacology and abuse potential*

Role: Co-PI with William L. Dewey 4/1/96 to 3/31/01 Total Costs \$1,129,500

Status: Completed

R29-DA06175 FIRST, *Role of Calcium in Morphine tolerance*

Dates/Amounts: 7/1/95 to 6/31/00 Total Costs \$625,000

Status: unfunded

F32-DA05415, National Research Service Award (NRSA)

Role: Principal Investigator Dates/Amounts: 12/1/91 to 11/30/94, \$94,500

Status: Completed

**Private Drug Company Contract Funding: 1991-2007: \$5,539,996**

<b>Company</b>	<b>Project</b>	<b>Years</b>	<b>Amount</b>
Purdue Pharma L.P., Ardsley, NY	lipoygenase inhibitors local anesthetic microspheres	1991-2000	\$4,429,455
Southern BioSystems, Birmingham, AL	Evaluation of novel local anesthetic delivery systems	1999-2002	\$253,838
Guilford Pharmaceuticals, Inc., Baltimore, MD	Evaluation of local anesthetic microspheres	2001	\$127,000
Purdue Pharma L.P. Ardsley, NY	Oxycodone-naloxone, oxy-naltrexone combinations	2004-2006	\$206,981
AlgoRx Pharmaceuticals, Inc., Secaucus, NJ	Topical LAC-34 and its enantiomers vs. topical commercial local anesthetics	2005	\$404,022
TyRx Pharmaceuticals, Inc., Monmouth Junction, NJ	Behavioral and Pharmacokinetic Properties of Bupivacaine in Tyrosine Polyarylate Mesh	2005	\$116,700

## Teaching Experience

### Courses-Lectures Taught at Harding University

2007 -	Marriage-Family Counseling  Licensed Professional Counselors	COUN-6330/MHC-6330 Psychopharmacology	Introduction to Pharmacology Literature Review and Evaluation Antipsychotic Drug Therapy Treatment of Bipolar Disorder Antidepressant Therapies Anti-Anxiety-Hypnotic Drugs Treatment of Attention Deficit-Hyperactivity Disorder Treatment of Eating Disorders Management of Headache-Migraine Drugs of Abuse Management of Organic Brain Syndromes Treatment of Acute and Chronic Pain
2007 - 2011	Physician Assistant	PAS-6220 Clinical Pharmacology	Treatment of Nausea and Vomiting, headache-migraine, acute and chronic pain
2007 -	Pharmacy	PHA 5220 Foundations of Pharmaceutical Sciences	Receptor ligands, Receptor binding, Dose-response curves
2010 -	Pharmacy	PHA 5240 Principles of Drug Action	Autonomic nervous system; sympathomimetics; sypatholytics; parasympathomimetics; parasympatholytics; somatic motor neuron drugs
2017 -	Pharmacy	PHA 5260 Pharmaceutics	Extended Release Drug Preparations
2018	Pharmacy	PHA 5280 Pathophysiology I	Hepatobiliary system; GI physiology
2018-	Pharmacy	PHA 5290 Pathophysiology II	Psychosis; Mood Disorders
2009 -	Pharmacy	PHA 6310 Pharmacology & Chemistry I	Congestive heart failure, arrhythmias, Respiratory Diseases
2019	Pharmacy	PHA 6320 Pharmacology & Chemistry II	Female Reproduction; Skin Disorders; PUD, IBD, Crohn's Disease, Ulcerative colitis; Liver disease and drug metabolism; Arthritis; Osteoporosis
2010 - 2021	Pharmacy	PHA 6320 Pharmacology & Chemistry II	Female Reproduction; Skin Diseases; Metabolism and liver Disease; Nausea & Vomiting, PUD & GERD, Drugs That Affect GI Motility, Disorders of the Colon; Arthritis; Osteoporosis
2022 - present	Pharmacy	PII PHA 6910 & 20; PIIL PHA 6930 & 40 Integrated Pharmacy Sequence I-IV	Female Reproduction; Skin Diseases; Metabolism and liver Disease; Nausea & Vomiting, PUD & GERD, Drugs That Affect GI Motility, Disorders of the Colon; Arthritis; Osteoporosis

2011 -	Pharmacy	PHA 7340 Pharmacology and Chemistry IV	Opioids; Opioid substitution; ADHD drugs; migraine; anticonvulsant drugs; myasthenia gravis, medical cannabis, neurodegenerative disorders; Parkinson's disease
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### Lectures Taught at the Virginia Commonwealth University Medical Center

From	School	Course	Lectures
		<b><u>Course Director and Instructor</u></b>	
1997-2002	Medicine	PHTX-548 Director Drug Dependence	Organizing 13 faculty to present lectures during semester, arranging syllabus (i.e., lectures of all faculty) for transmittal to students on Blackboard, preparing exams , proctoring and grading exams, evaluating teaching faculty, advising students
1996-2007	Dental	PHTX-609, 611 Co-Director, Dental Pharmacology and Pain Control	Organizing 18 faculty to present lectures during semester, arranging syllabus (i.e., lectures of all faculty) for transmittal to students on Blackboard, preparing exams , proctoring and grading exams, evaluating teaching faculty, advising students
		<b><u>Instructor in Course</u></b>	
2002-2007	Pharmacy	PHTX-603, Pharmacology	--Pharmacologic management of peptic ulcer disease --Drugs used to treat nausea and vomiting --Gastrokinetic drugs/diarrhea/laxatives --Emetic and anti-emetic drugs --Pharmacologic management of inflammatory bowel disease
1992-2007	Medicine	PHTX-400 Drugs and Their Action	--Undergraduate pharmacology course for pre-professional students --Pharmacology of the autonomic nervous system --Pharmacology of the respiratory system—treatment of asthma, allergens and reactive airway diseases
1993-2007	Medicine	PHTX-537 Principles of Pharmacology	--Pharmacology of muscarinic receptors—agonists/antagonists --Nicotinic receptor agonists/antagonists --Pharmacology of the autonomic ganglia
1997-2007	Medicine	PHTX-548, Drug Dependence	--Overview of the CNS --Pharmacokinetics/pharmacodynamics --Drugs of Abuse
2002-2007	Medicine	MII Pharmacology, Medical Students	--Pharmacologic management of peptic ulcer disease --Drugs used to treat nausea and vomiting --Gastrokinetic drugs/diarrhea/laxatives --Emetic and anti-emetic drugs --Pharmacologic management of inflammatory bowel disease
1994-2007	Medicine	PHTX-691, Research Design and Methods	--Experimental research design --Utilization of graded and quantal analysis for determination of effective dose-50 values (ED50) --Determination of potency-ratio values, 95% confidence limits --Utilization of area under the curve analysis for research studies of time-course data --Determination of maximum efficacy
1996-2007	Dental	PHTX-609, Dental Pharmacology and Pain Control	--Pharmacology of the autonomic nervous system --Muscarinic agonists, antagonists, anticholinesterase agents --Nicotinic receptor agonists, antagonists, ganglionic blockers --Adrenergic receptor agonists, antagonists, indirect agonists --Pharmacology of the renal system—diuretic and anti-diuretic drugs --Pharmacology of the respiratory system—treatment of asthma, allergens and reactive airway diseases --Pharmacology of the gastrointestinal system
1999-2007	Dental	PHTX-611, Dental Pharmacology and Pain Control	--Treatment of cocaine abusers in dentistry --Treatment of methamphetamine abusers in dentistry
1990-2007	Dental	PMC-441 Pharmacology and Pain Control for Dental Hygienists	--Introduction to the autonomic nervous system --Pharmacology of the sympathetic nervous system --Pharmacology of the parasympathetic nervous system --Nicotinic receptor agonists and blockers --Introduction to the cardiovascular system --Pharmacologic management of angina --Pharmacologic management of congestive heart failure --Treatment of arrhythmias

			<ul style="list-style-type: none"> <li>--Pharmacologic treatment of hypertension</li> <li>--Treatment of shock and anemia</li> <li>--Pharmacology of the renal system—diuretic and anti-diuretic agents</li> <li>--Pharmacology of the gastrointestinal system</li> </ul>
1995-2007	Nursing	PMC-516 Pharmacology for Nurse Anesthetists	<ul style="list-style-type: none"> <li>--Pharmacologic management of peptic ulcer disease</li> <li>--Emetic and anti-emetic drugs</li> <li>--Introduction to the cardiovascular system</li> <li>--Inotropic agents</li> <li>--Pharmacologic treatment of arrhythmias</li> <li>--Pharmacologic treatment of angina</li> <li>--Pharmacologic treatment of hypertension</li> <li>--Diuretic and anti-diuretic agents</li> </ul>

## VCU Graduate Student, Postdoctoral Ph.D. Fellows and Other Student Training

### Graduate Student Training at Virginia Commonwealth University Medical Center:

Dates	Individual	Degree Sought	Department
1995-1997	Suzanne Thornton	Ph.D. Completed <sup>1</sup>	Pharmacology
2000-2004	Ruby R. Jarved	Ph.D. completed <sup>3</sup>	Pharmacology
2000-2002	Richard Carter	M.S. Completed	Pharmacology
1999-2000	Torrey Hawley	M.S. completed	Nurse Anesthesia
1998-1999	Richard Davis	M.S. Completed	Nurse Anesthesia
1998-1999	Raymond J. Lindsay	M.S. Completed	Nurse Anesthesia
1997-1999	Cassie Choe	M.S. Completed	Pharmacology

### Postdoctoral Fellows Trained at VCU

Dates	Postdoctoral Fellow	Current Position
2005-2008	Bichoy Gabra, Ph.D.	Pharmacist, Detroit, MI
2000-2004	Krista Scoggins, DVM	Research Associate, VCU
1999-2000	Simone Heyliger, Ph.D.	Associate Professor, Hampton University School of Pharmacy, Hampton, VA
2001-2004	Jason Schechter, Ph.D.	Postdoctoral Fellow, Frank Porreca, Dept. Pharmacology, U. of Arizona, Tucson, AZ

### Membership on Student Thesis or Dissertation Committees at Virginia Commonwealth University Medical Center:

Dates	Individual	Degree Sought	Department
2020-2022	Kohlton Rhoda	DNP Completed	U. Marysville, St. Louis, MO
2005-2009	Michelle Hoot	Ph.D. completed	Neuroscience, VCU
2005-2009	Lynn Hull	Ph.D. completed	Pharmacology, VCU
2003-2005	George Dalton	Ph.D. completed	Pharmacology, VCU
2003-2005	Paul Smith	M.S. completed	Biology, VCU Psychology,
1997-2002	Robert A. Nicholson	Ph.D. completed	Psychology, VCU
1997-2002	Diana Cichewicz	Ph.D. completed	Pharmacology, VCU
1999-2001	Vera Campbell	Ph.D. completed	Pharmacology, VCU
1997-2001	David M. Wilson	Ph.D. completed	Pharmacology, VCU
1995-1998	David Mason	Ph.D. completed	Pharmacology, VCU
1997-1998	Alka Bhargava	M.S. completed	Pharmacology, VCU
1996-1997	Robert A. Nicholson	M.S. completed	Psychology, VCU
1994-1997	Daniel Dombrowski	M.S. completed	Biology, VCU

## Harding University College of Pharmacy

### PG1 & PGY2 Pharmacy Pharm.D. Postgraduate Resident Research Preceptor

Year	Name	Project
<b>Unity Health Pharmacy PGY1 Pharm.D. Residents Supporting Preceptor</b>		
--Research design; statistical analyses; meeting presentation preparation, manuscript publication		
2023	Kayla Williams	Outcomes Associated with Parenteral Lorazepam Medication Shortage among Inpatient Adult Psychiatric Patients with Agitation
2023	Lincoln Neal	Optimization of Nasal MRSA PCR Screenings for Early Antibiotic De-escalation in Patients Presenting with Pneumonia Symptoms
2023	Samantha Pratt	Incidence of ICU Delirium When Comparing Benzodiazepine Versus Nonbenzodiazepine Sedation in Critically Ill Patients Requiring Ventilation
2023	Sydney Vanourney	Pharmacist evaluation of pharmacological and baseline risk factors associated with the development of ileus in a small to mid-sized community hospital
2022	Monica Bennett	Evaluating the impact of pharmacist-led discharge counseling on readmission rates in patients with heart failure in a rural community hospital
2022	Madison Cole	Association Between Early Administration of Tocilizumab and Mortality Among Patients Hospitalized with COVID-19
2022	Peyton Cole	Evaluating differences in vancomycin troughs from dosing when using patient specific kinetics versus population-based kinetics in a rural hospital.
2022	April Harris	Outcomes associated with analgosedation versus non-analgosedation techniques in critically ill, ventilated, COVID-19 patients.
2018	Samantha Gauthier	Incidence of Acute Kidney Injury in Adult Patients Receiving Vancomycin in Combination with Piperacillin/Tazobactam versus Vancomycin and Cefepime/Meropenem. <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN
2018	Lindsey Montambault	Appropriateness of direct oral anticoagulant dosing in patients with reduced creatinine clearance. <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN.
2017	Daniel Bailey	Analysis of Adverse Effects Associated with Meperidine versus Morphine in Patients Greater Than 65 Years <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN
2017	Jennifer Doan	Pharmacist Interventions on Psychiatric Drugs. <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN
2016	Chelsa Painter	Assessing the impact of antimicrobial stewardship interventions by clinical pharmacists in a rural hospital using a data mining surveillance system. <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN
2016	Brandon Green	Effects of liposomal bupivacaine, for periarticular pain control post-total knee arthroplasty, a retrospective cohort study. <i>Mid-South Regional Pharmacy Residency Meeting</i> , St. Joseph Medical Center, Memphis, TN

<b>ARcare PGY1 and PGY2 Pharm.D. ASHP Research Preceptor</b>		
--Research design; statistical analyses; meeting presentation preparation, manuscript publication		
2023	Ryback Cyzr Lombay, PGY1	Assessment of Vitamin D Supplementation in Rheumatoid Arthritis Patients Receiving Glucocorticoid Regimens at a Specialty Pharmacy. 2023 Midyear ASHP Anaheim CA.
2023	Haley Vinson	Comparative Efficacy of FDA-Approved Injectable and Non-Injectable Pharmacologic Medications for the treatment of obesity within a Federally Qualified Health Center. 2023 Midyear ASHP Anaheim CA.
2023	Elma Abdullah	Impact of pharmacist-led smoking cessation interventions on tobacco cessation rates in a federally qualified health center. 2023 Midyear ASHP Anaheim CA.
2023	Teresa Rhew, DNP candidate	Assessment of Screening, Knowledge, Self-Efficacy, and Barriers in Hepatitis C: Comparison of Survey Results Before and After Educating Providers. Delta State University, Cleveland, OH Mentor: Kyla Holcomb
2022	Dewansia Sutton PGY1	Impact of Clinical Pharmacist Interventions on Asthma Control in a Federally Qualified Health Center
2022	Aritney Cooper PGY1.	Retrospective Study of the Impact of Pharmacy Services on Hepatitis C (HCV) Outcomes. ASHP Midyear 2022, Las Vegas, NV.
2022	Ashlyn Curry	Cross-Sectional Study of Provider Attitudes Toward Prescribing HIV Pre-Exposure Prophylaxis for Patients in a Federally Qualified Health Center. ASHP Midyear 2022, Las Vegas, NV.
2021-22	Pranav Amin, PGY2	Provider satisfaction with clinical pharmacy consults at a federally qualified health center. 2022
2021	Karlee Carney, PGY1	Provider interest to incorporate pharmacist breastfeeding support in a federally qualified health center
2021	Rachel Coursey, PGY1	A cross-sectional study of COVID-19 vaccination hesitancy in Arkansas at a federally qualified health center
2021	Taylor Borne, PGY1	Analyzing the impact of medication therapy problem (MTP) resolution of glycemic control through pharmacist-led state of emergency telehealth during the COVID-19 Pandemic. Center for Arkansas Veterans Healthcare System Conference. Little, Rock, AR.
2021	Pranav Amin, PGY1	Provider satisfaction with clinical pharmacy consults at a federally qualified health center. 2021 ASHP National meeting, Virtual Poster Presentation.
June 29, 2021	Recognition	Recognition of service to the ARcare residency program in 2020-2021, ARcare, Augusta, AR.

## Collaborations With Faculty on Experimental Design, Statistical Analyses, and Meeting Presentations

### Harding University, Searcy, AR

Year	Name	Project
<b>Harding University Faculty, Students and Outside Collaborators</b>		
2023	M. Master, F. Smith D. Knight	Measuring the Impact of a Holistic Health Course on the Perspective of High School Students in Central Arkansas. Arkansas Association of Health Systems Pharmacists. Little Rock, AR.
2022	Daniel Atchley	Increasing the number of Black Men in White Coats in pharmacy and osteopathic medicine. 2022 AACP Annual Meeting, Grapevine, TX.



2022	Courtney Selby	Cracking the Code: A Clinical Escape Room to Enhance Interprofessional Collaboration. ACCP Virtual Meeting
2021	Lisa Engle, Patty Smith	Blue & You Foundation Grant: Introducing wearable simulators into a disaster drill to enhance engagement with community partners. \$67,710, 8/23/21 to 5/22/23. Role: Outside contributor: grant editing, research design and analysis of data.
2021	Liz Underwood, Mallory Turner, Forrest Smith	Employing core entrustable professional activities (EPAs) to measure post-graduate year one (PGY1) pharmacy resident progression, AAHP Virtual Presentation.
2019	Hannah Wright	Safety and efficacy of a two-bag system for treating diabetic ketoacidosis. PGY1, Billings Medical Center, Billings, MT.
2019	Liz Underwood, Mallory Turner, Forrest Smith	Employing core entrustable professional activities (EPAs) to measure post-graduate year one (PGY1) pharmacy resident progression, ASHP National Pharmacy Preceptors Conference, Dallas, TX
2019	Kim Swenson	Impact of education on provider utilization and patient adherence of PrEP protocol. Doctor of Nurse Provider Project. HCN, Searcy, AR
2019	Lisa Echols	Attitudes and immunization rates in undergraduate students in a private university. Doctor of Nurse Provider Project. HCN, Searcy, AR
2019	Juli Lane	Research Question Reflection: Child Advocacy Center Referrals. Doctor of Nurse Provider Project. HCN, Searcy, AR
2017	Comm. Sci. & Disorders	Analysis of effective instruction in teaching health sciences interprofessional Moral Case Deliberation using pre- and post-testing.
2017	Lauren Jimerson	Upward Bound Pre- Post Health Topics Knowledge, HUCOP, Searcy, AR
2016	Bailey Halford Jessica Gall	A survey assessing the educational needs of undergraduate students regarding human papillomavirus. AACP, Chicago, IL.
2014	YoonJung Lee	Time Kill Kinetics of a Novel Antimicrobial Silver Wound Gel Against Select Wound Pathogens. PHA 734 Research Elective, HUCOP, Searcy, AR.
2013	HUCOP Students	High school student knowledge and attitudes on HPV vaccine uptake. PHA 734 Research Elective, HUCOP
2012	Hye Jin Son	Top 10 problematic pediatric drugs, ACCP, Virtual Poster.
2012	Hannah Suh Kathy Chung Katy Yang	Identifying Predictors of Human Papillomavirus (HPV) Vaccine Acceptance in the Male Population of White County, Arkansas. ASHP, Las Vegas, NV.
2011	Meredith Vance	A survey tool that assess patients' understanding of hemoglobin A1c (HgbA1c) values in a charitable clinic setting.

## Service

### National Service:

#### Faculty Promotion Committees

2020 External Reviewer for Dr. Joe Deweese promotion to professor, Dept. of Pharmaceutical Sciences, Lipscomb University College of Pharmacy, Nashville, TN

#### Committees and National Professional Meetings

2011-2016 Accreditation Council for Pharmacy Education (ACPE)-Site Team Reviewer for Colleges of Pharmacy in status as Pre-candidate, Candidate, Accredited, and Continuing Accreditation

2010-16 Grant Reviewer—ACCP New Faculty Research Awards Program

2009 Member, Strategic Planning Summit for Pain and Palliative Care Pharmacy

- 2010-Curr Member, Special Interest Groups (SIG)s in Assessment  
2008-Curr Member of Special Interest Groups (SIG)s in Substance Abuse Education and Assistance. 2009 Delegate to American Association for Colleges of Pharmacy (AACP) for HUCOP at annual meeting in Boston, 2009.

**Peer Reviewer for the following Scientific Journals**

<i>Brain Research</i>	<i>European J. Pharmacology</i>
<i>Brain Research Bulletin</i>	<i>Neuroscience Letters</i>
<i>Journal of Pharmacol and Exp. Ther.</i>	<i>Neuroscience</i>
<i>Pharmacology Biochemistry Behavior</i>	<i>Neuropharmacology</i>
<i>Life Sciences</i>	<i>Molecular Pharmacology</i>
<i>Pain</i>	

**State Service:**

- 2017-19 Arkansas Department of Health: Collaboration on Tobacco cessation projects
- 2018-19 DH-18-0018 Arkansas Department of Health Contract: Community Pharmacists Stamping Out Smoking By Delivering Tobacco Intervention and Treatment. (Contractor: Julie Kissack; **F. Smith Role:** Outcomes Development and Assessment)
- 2016- Pharmacy Residency Research Committee, As Committee Member Provide guidance on experimental design, hypothesis, experimental plan and statistical analysis for PGY1 Pharm.D. residents, Unity Health Hospital, Searcy, AR
- 2020- PGY1 & PGY2 Residency Research Preceptor, Provide pharmacy residents guidance, advice, and assistance on research design and statistical analysis for their clinical projects. ARcare, Augusta, AR.

**Major Committee and University Service:**

**Harding University Committees:**

- 2012-2015 Chair, University Assessment Committee  
2007- 2010 University Assessment Committee  
2010-2016 Graduate Academic Affairs Committee—*ad hoc*  
2007- 2016 Academic Leaders Committee  
2007-2016 Graduate Academic Leaders Committee  
2009-2010 McNutt Teacher Achievement Award Selection Committee

**Harding University College of Pharmacy Committees:**

- 2020- Member, Curriculum Redesign Committee  
2020- Member, Curriculum Committee  
2009- 2011 Joint Pharmacy/PA Curriculum Task Force  
2007- 2017 Executive Committee  
2007-2009 Curriculum & Assessment Committee--Chair  
2009- 2016 Curriculum Committee—*ex officio*  
2009- 2016 Assessment Committee—*ex officio*  
2008- 2010 Spiritual Life Committee

**Virginia Commonwealth University Committees/Service:**

- 1997-2007 Ad hoc Review Committee for the Drug Abuse Small Grants Program for the NIDA Drug Abuse Research Center at VCU  
1997-2007 Dean's Representative for M.S. thesis defenses, and Ph.D. comprehensive examinations and dissertation defenses.

**Virginia Commonwealth University Departmental Committees:**

- 2006-2007 Departmental Space Committee, Move and consolidation of departmental faculty to new facilities in MSB I and MSBII in 2008 at VCU  
1997-1998 Chairman, Curriculum Committee, Pharmacology and Toxicology, VCU  
1995-1997 Member, Curriculum Committee, Pharmacology and Toxicology, VCU

### **Memberships in-Scientific and Professional Societies; Journal Peer Reviews**

- 2008 - Arkansas Association for the Assessment of Curricular Learning  
2009 - American Association of Pharmaceutical Scientists  
2007-2016 Assessment Institute  
2010-2016 American Pain Society  
2006-2007 American Association of Colleges of Pharmacy (AAPC)  
2005-2009 College on Problems of Drug Dependence (CPDD)  
1997-2008 International Narcotic Research Conference (INRC)  
1995-2003 International Cannabinoid Research Society (ICRS)  
1993-2004 Virginia Society for Neuroscience

### **Notable Scholarly Achievements**

- A. *Developed surgical procedure for implanting Alzet osmotic minipumps in P9 neonatal rats that is widely referenced in the PubMed literature.*
- B. *Software Development: Creation of Effective Dose-50 (ED<sub>50</sub>) and Potency-Ratio (PR) calculators with 95% C.L. for rapid evaluation of laboratory data.*  
Who Utilizes the Program?:  
1. Faculty at VCU and other universities  
2. National Institute on Drug Abuse (NIDA) intramural research program  
3. Drug Enforcement Administration (DEA)  
4. Individual scientists at pharmaceutical companies
- C. *Discoverer of the brain mechanism of morphine analgesic tolerance, and its semisynthetic analogs*  
1. Protein Kinase C alpha mediates phosphorylation of the MOR resulting in desensitization and subsequent analgesic tolerance.  
2. Further studies reveal Serine-370 is phosphorylated, and the location of tolerance is in the periaqueductal gray.

### **Invited Lectures/Presentations/Symposia**

- 2020 Research Day, Harding University College of Nursing. Medical Cannabis lecture, Searcy, AR  
2008 ACPE Continuing Education 004-999-08-22-L01-P for the American Association of Hospital Pharmacists (AAHP), Chronic Pain: Treatment with Narcotic Analgesics, Tunica, MS.  
2008 Continuing Education for UAMS Area Health Education Center (AHEC), Pain Management: A Pharmacologist's Perspective, Batesville, AR.  
2007 Invited speaker to University of Arkansas for Medical Sciences, College of Pharmacy, Little Rock, AR. Research seminar on: Identification of Several Signal Transduction Mechanisms Mediating Pain and Opioid Tolerance.  
2006 KAI Pharmaceuticals, San Francisco, CA: Effects of RACK inhibitors on acutely reversing morphine analgesic tolerance, and identification of the putative PKC isoforms involved.  
2004 College on Problems of Drug Dependence, San Juan, PR. Chair of research symposium and presenter on Reversion of morphine tolerant mice into a non-tolerant state with PKC and PKA inhibitors.  
1998 Guilford Pharmaceuticals, Baltimore, MD. Methodological approaches to the evaluation of local anesthetic sustained release microsphere delivery in rat models.  
1996 College on Problems of Drug Dependence San Juan, PR. Research symposium presentation on Analgesic tolerance in neonatal rats continuously receiving fentanyl by osmotic minipump.

- 1995 Purdue Pharma L.P., Ardsley, NY. Local anesthetic potency and efficacy of bupivacaine microspheres injected by peri-sciatic injection using STIMEX-needle nerve stimulator delivery
- 1990 American Society for Pharmacology and Experimental Therapeutics, Milwaukee, WI. Research symposium presentation on intrathecal calcium elicits a robust antinociceptive response in spinal mice in

## Bibliography

### Peer-Reviewed and in Review Journal Publications from 1986 to 2024:

April 2024, 2633 authors have cited my research publications in their peer-reviewed biomedical journal publications (Research Gate.com).

For a complete list of publications in PubMed, type “smith-fl”

<http://www.ncbi.nlm.nih.gov/sites/entrez?db-PubMed>

#### \* = Corresponding Author

- Carney, K., **Smith, F.**, Taylor, B., Douglass, G., Jones, S. Provider Support for Pharmacist Lactation Consultant Training to Promote Long-term Breastfeeding and to Give Medication Recommendations on Mother-Infant Issues *Exp Res Clin Soc Pharm* (in review, 2024).
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### **Representative Selection of over 100 Peer-Reviewed Posters and Presentations from 1986 to 2024**

- Nuhung A, Warren C, Martinez A, Smith F Cost analysis of antidotes and antivenoms among patients presenting with overdose or envenomation utilizing various purchasing methods. 2023 Midyear ASHP Anaheim CA.
- Gates M, Bailey D. Smith F. Identification of inpatient hypoglycemic risk factors in a small to mid-sized community. 2023 Midyear ASHP Anaheim CA.
- Ameyaw P, Neal L, Turner S, Smith F. Evaluating the efficacy of antibiotic usage in the treatment of UTI 2023 Midyear ASHP Anaheim CA.
- Abdulla E, Jones S, Smith F, Borne T, Douglass G. Impact of pharmacist-led smoking cessation interventions on tobacco cessation rates in a federally qualified health center. 2023 Midyear ASHP Anaheim CA.
- Lombay RC, Holifield C., Smith F, Cooper A, Underwood E. Assessment of Vitamin D Supplementation in Rheumatoid Arthritis Patients Receiving Glucocorticoid Regimens at a Specialty Pharmacy. 2023 Midyear ASHP Anaheim CA.
- Vinson H, Underwood L, Smith F, Douglass G, Comparative Efficacy of FDA-Approved Injectable and Non-Injectable Pharmacologic Medications for the treatment of obesity within a Federally qualified health center. 2023 Midyear ASHP Anaheim CA.
- Cooper A, Holderfield C, Smith F, Douglass G: Retrospective Study of the Impact of Pharmacy Services on Hepatitis C (HCV) Outcomes. ASHP Midyear 2022, Las Vegas, NV.
- Sutton D, Douglass G, Smith F, Jones S. Impact of clinical pharmacist interventions on asthma control in a FQHC. ASHP Midyear 2022, Las Vegas, NV.
- Bre'Anna M, Cooper A, Holderfield C, Underwood E, **Smith F**, Douglass G, Comparative Effectiveness Assessment of Self-Administered Biologics vs Oral Biologic Therapies in Rheumatoid Arthritis using RAPID3 Score. ASHP Midyear 2023, Anaheim, CA.
- Ghotra S, Albrecht M, Knight D, Smith F, Meeker M., Shipp M., Assessing the impact of intraprofessional oral care education on health sciences students. 2023, AAHP, Little Rock, AR
- Griffin, J, Wendee, A, Nevels, T, Knight, D, Smith F, Rural Nicaragua: Hypertension and type 2 diabetes prevalence and public education solutions. 2023 AAHP, Little Rock, AR
- Williams, K., Hays, S., **Smith, F.**, Sukpraprut-Braaten, S., Narlesky, M. Outcomes Associated with Parenteral Lorazepam Medication Shortage Among Inpatient Adult Psychiatric Patients with Agitation. ASHP Midyear 2023, Anaheim, CA.



- Neal, L., Clark, B., **Smith, F.**, Turner, S. Optimization of nasal MRSA PCR screenings for early antibiotic de-escalation in patients presenting with pneumonia symptoms. ASHP Midyear 2023, Anaheim, CA.
- Pratt, S., Clark, B., **Smith, F.**, Sukpraprut-Braaten, S. Incidence of ICU Delirium When Comparing Benzodiazepine Versus Non-Benzodiazepine Sedation in Critically Ill Patients Requiring Ventilation. ASHP Midyear 2023, Anaheim, CA.
- Vanourney, P., Underwood, L., **Smith, F.L.**, Sukpraprut-Braaten, S. Pharmacist Evaluation of Pharmacological and Baseline Risk Factors Associated with the Development of Ileus in a Small to Mid-sized Community Hospital. ASHP Midyear 2023, Anaheim, CA.
- Sutton, D. **Smith, F.**, Douglass, G., Jones, S. Impact of Clinical Pharmacist Interventions on Asthma Control in a Federally Qualified Health Center. ASHP Midyear 2022, Las Vegas, NV.
- Cooper A., Holderfield, C., **Smith, F.**, Douglass, G. Retrospective Study of the Impact of Pharmacy Services on Hepatitis C (HCV) Outcomes. ASHP Midyear 2022, Las Vegas, NV.
- Curry A., **Smith F.**, Moore D., Woodland E., Douglass G., Cross-Sectional Study of Provider Attitudes Toward Prescribing HIV Pre-Exposure Prophylaxis for Patients in a Federally Qualified Health Center. ASHP Midyear 2022, Las Vegas, NV.
- Atchley, D., Griffin, A., Harris, A., Knight, M., Efur, M., Vyas, D., **Smith, F.** and Mercer, J.: Increasing the number of Black Men in White Coats in pharmacy and osteopathic medicine. 2022 AACP Annual Meeting, Grapevine, TX.
- Amin, P., Selby, C., Jones, S., **Smith, F.**, McCarty, J., Douglass., Provider satisfaction with clinical pharmacy consults at a federally qualified health center versus an accountable care organization. Central AR Pharmacy Residency Conf., June 10, 2022, Veterans Health Administration, VISN 16, Little Rock, AR.
- Carney, K., Jones, S., Borne, T., **Smith, F.**, Douglass, G. Cross-Sectional Study of Provider Interest to Incorporate Pharmacist Breastfeeding Support for Patients in a Federally Qualified Health Center. Central AR Pharmacy Residency Conf., June 10, 2022, Veterans Health Administration, VISN 16, Little Rock, AR.
- Coursey, R., Selby, C., Smith, F., Douglass, G., A cross-sectional study of COVID-19 vaccination hesitance among patients at a federally qualified health center in Arkansas. Central AR Pharmacy Residency Conf., June 10, 2022, Veterans Health Administration, VISN 16, Little Rock, AR.
- Selby, A.B., **Smith, F.**, Wilson, A.K., Robertson, A.N., Cracking the Code: A Clinical Escape Room to Enhance Interprofessional Collaboration. ACCP National Meeting May 24 & 25, Virtual Poster Presentation.
- Bennett, M., Underwood, E. and **Smith F.** Evaluating the impact of pharmacist-led discharge counseling on readmission rates in patients with heart failure in a rural community hospital. 2022 ASHP National meeting, Virtual Poster Presentation.
- Cole, M., Underwood, E. and **Smith. F.**: Association Between Early Administration of Tocilizumab and Mortality Among Patients Hospitalized with COVID-19. 2022 ASHP National meeting, Virtual Poster Presentation.
- Harris, A., Underwood, E., **Smith, F.**: Outcomes associated with analgosedation versus non-analgosedation techniques in critically ill, ventilated, COVID-19 patients. 2022 ASHP National meeting, Virtual Poster Presentation.
- Cole, P., Turner, S., **Smith, F.**: Evaluating differences in vancomycin troughs from dosing when using patient specific kinetics versus population-based kinetics in a rural hospital. 2022 ASHP National meeting, Virtual Poster Presentation.
- Carney, K., Jones, S., Borne, T., **Smith, F.**, Douglass, G. Cross-Sectional Study of Provider Interest to Incorporate Pharmacist Breastfeeding Support for Patients in a Federally Qualified Health Center. 2021 ASHP National meeting, Virtual Poster Presentation.
- Borne, T., Douglass, G., **Smith, F.**, Selby, C., Johnston, M., Farzad, D., Jones, S.: Analyzing the impact of medication therapy problem (MTP) resolution on glycemic control through pharmacist-

- led state of emergency telehealth during the COVID-19 pandemic. 2021 ASHP National meeting, Virtual Poster Presentation.
- Amin, P., Douglass, G., Selby, C., Jones, S., **Smith, F.** Provider satisfaction with clinical pharmacy consults at a federally qualified health center. 2021 ASHP National meeting, Virtual Poster Presentation.
- Turner, M., Underwood, E., **Smith, F.:** Employing core entrustable professional activities (EPAs) to measure post-graduate year one (PGY1) pharmacy resident progression. 2020 American Association of Hospital Pharmacists (AAHP) National Meeting, Virtual Poster Presentation.
- Turner, M., Underwood, E., **Smith, F.:** Employing core entrustable professional activities (EPAs) to measure post-graduate year one (PGY1) pharmacy resident progression. ASHP National Pharmacy Preceptors Conference, Dallas, TX, 2019.
- Herring, M., Harris, A., Turner, S., **Smith, F.**, Max, M., Yeboah, K., Griffin, S., Story, R., Kamdem, G.L: Blender assessment workflow: An innovative CQI model for collaborative faculty engagement. AACP Annual Meeting, Chicago, IL, 2019.
- Abdulmir, R., Sefah, K., Hatvany, J., Tarrant, J., Yeboah, K., **Smith, FL:** Increased student knowledge of differences in IR- and ER-metoprolol formulation dissolution in a stomach-duodenum model. AACP Annual Meeting, Chicago, IL, 2019.
- Abdulmir, R., Sefah, K., Hatvany, J., Tarrant, J., Yeboah, K., **Smith, FL:** Gains in student knowledge of differences in IR- and ER-metoprolol formulation dissolution in a stomach-duodenum model. Christian Scholars Conference. Lubbock, TX, 2019.
- Smith, FL,** Tarrant, J. and Malkowski, A.: Enhancement of student knowledge beyond lecture using Play-Doh® and beads to construct concentration-response curves. AACP Annual Meeting, Chicago, IL, 2019.
- Smith, FL,** Tarrant, J. and Malkowski, A.: Student knowledge enhanced beyond lecture using Play-Doh® and beads to construct concentration-response curves. Christian Scholars Conference, Lubbock, TX, 2019.
- Daniel Bailey, Elizabeth Underwood, David Wyatt, **Smith, F.L.**, Queenie Wan. Analysis of Neurological Adverse Effects Associated with Meperidine versus Morphine in Patients Greater than 65 Years. Midsouth Regional Residency Conference, St. Jude's Hospital, Memphis, TN, 2017.
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