

Catherine E. O'Brien, Pharm.D.

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Curriculum Vitae

Business

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EDUCATION AND TRAINING

2006 – 2008	Multidisciplinary Clinical Pharmacology Fellowship University of Arkansas for Medical Sciences (UAMS) College of Pharmacy Little Rock, AR	
2005 – 2006	Pharmacy Practice Residency, UAMS Hospital Little Rock, AR	
2001–2005	UAMS College of Pharmacy Little Rock, AR	Doctor of Pharmacy May 2005 High Honors, Faculty Gold Key
1992–1994	University of Arkansas at Little Rock Little Rock, AR	Bachelor of Science in Chemistry, August 1994
1988–1991	Louisiana Tech University Ruston, LA	Chemistry Major

ACADEMIC APPOINTMENTS

2016 – Present	Associate Professor Department of Pharmacy Practice UAMS College of Pharmacy, Little Rock, AR	
2009 – Present	Assistant Professor Department of Pediatrics, Division of Clinical Pharmacology and Toxicology UAMS College of Medicine, Little Rock, AR	
2008 – 2016	Assistant Professor Department of Pharmacy Practice UAMS College of Pharmacy, Little Rock, AR	
2005 – 2008	Clinical Instructor UAMS College of Pharmacy Little Rock, AR	

PROFESSIONAL EXPERIENCE

2008 – Present	Clinical Pharmacist, Pediatric Pulmonary Clinic, Arkansas Children's Hospital, Little Rock, AR
2007 – Present	Clinical Pharmacist, Adult Cystic Fibrosis Clinic, UAMS, Little Rock, AR
2006 – 2008	Clinical Pharmacist, Internal Medicine Cardiology Service, UAMS, Little Rock, AR
2005 – 2008	Relief Pharmacist, Cantrell Drug, Little Rock, AR
2005 – 2006	Clinical Pharmacist, Coumadin Clinic, UAMS, Little Rock, AR
1995 – 2001	Research Associate, Center for Osteoporosis and Metabolic Bone Disease (PI: Robert Jilka, Ph.D.), UAMS, Little Rock, AR

RESEARCH AND FUNDING

FOUNDATION FUNDING

Primary contact, "Health and Wellness Education Series for Medically Underserved Areas in Arkansas," Blue and You Foundation, **\$1000**, August 2013 – August 2014. Submitted to fund the 2013-14 professional development project for the UAMS College of Pharmacy Student Society of Health-System Pharmacists.

INTRAMURAL FUNDING

Principal Investigator, "Bone microarchitecture at the radius: a comparison between children with cystic fibrosis and healthy controls," CUMG, **\$37,986.84**. January 2010 – July 2013.

EXTRAMURAL FUNDING (FELLOWSHIP PROJECTS)

Principal Investigator, "Short Term Safety and Efficacy of Lubiprostone in Adults with Cystic Fibrosis." Takeda and Sucampo Pharmaceuticals, **\$27,556.80**. June 2008 – April 2010.

Principal / Junior Investigator, "Effect of Lubiprostone on Nutritional Status and Pulmonary Function in Adults with Cystic Fibrosis," (Cindy D. Stowe, Senior Investigator) American Society of Health System Pharmacists (ASHP) Foundation Junior Investigator Research Grant, **\$18,000**. May 2007 – April 2009.

UNFUNDED PROPOSALS

Principal Investigator, "Early markers of cystic fibrosis lung disease: role of the neutrophil: lymphocyte ratio", NIH NHLBI R01 HL116230-01, **\$999,450**. Submitted January 2012.

COLLABORATIVE RESEARCH PROJECTS

Co-Investigator: "Evaluation of Home Medication Reconciliation by Clinical Pharmacists for Adult and Pediatric Cystic Fibrosis Patients" (PI: Jessica Louie, PharmD and Lisa Hong, PharmD; Co-Investigators: Hanna Phan, Pharm, Denise Pinal, PharmD and Lisa Biondo, PharmD), 2015 - 2016

Catherine E. O'Brien

Principal Investigator: "Multi-center evaluation to establish patterns of treatment of MRSA in cystic fibrosis patients" (Co-investigators: Kalen Manasco, PharmD; Hanna Phan, PharmD; Paul Beringer, PharmD; Sis Ueng, PharmD; Lisa Lubsch, PharmD; Daniel Cortes, BScPharm; Erin McDade, PharmD; Wendy Bullington, PharmD; Maeve Moran, BSc (Pharm), MPSI, MSc; Rebecca Pettit, PharmD, MBA; Elizabeth Autry, PharmD; Bob Kuhn, PharmD; Jeffrey Boogren, RPh; Alison Orr; Emily Schroeder, PharmD; Jamie Shropshire, PharmD; Mariela Duval, PharmD), 2014 - present

Principal Investigator: "Knowledge, Attitudes, and Experiences among Parents of Children with Cystic Fibrosis Regarding Gastrostomy Tube Placement" (Co-investigators Sara Johnston, RD; Mary Jo Chambers, LCSW; Sonya Thompson, RN; Brandi Whitaker, PhD; Gulnur Com, MD; Amy Seay, PhD), September 2013 – present

Co-investigator, "Quality of Life Outcomes among Adults with Cystic Fibrosis" (co-investigators Allen Sherman, PhD, Stephanie Simonton-Atchley, PhD, Dianne Campbell, MSW, and Paula Anderson, MD), 2010 – 2015

Principal Investigator, "UAMS College of Pharmacy Student Communication Survey," (Co-investigators Cindy D. Stowe, PharmD, Nalin Payakachat, PhD, and Schwanda Flowers, PharmD) UAMS College of Pharmacy, 2010

Principal Investigator, "Comparison of responses to UAMS College of Pharmacy Employer and Graduate Surveys," (Co-investigators Cindy D. Stowe, Pharm.D. and Schwanda Flowers, Pharm.D.) UAMS College of Pharmacy, 2009

FELLOWSHIP PROJECTS

Co-investigator, "Utility of the Multiple-Mini Interview (MMI) in the Admissions Process of the College of Pharmacy," (Cindy D. Stowe, Principal Investigator) UAMS College of Pharmacy, 2007 - Present.

Co-investigator, "Longitudinal Evaluation of Pharmacy Students' Communication Skills," (Cindy D. Stowe, Principal Investigator) UAMS College of Pharmacy, 2007 – Present.

Principal Investigator, "Description of Drug Therapy in Arkansas State Employees with a Diagnosis of Metabolic Syndrome," UAMS College of Pharmacy, 2006.

Co-investigator, "Metabolic Syndrome in Participants of a Community Health Screening," (Amy M. Franks, Principal Investigator) UAMS College of Pharmacy, 2006.

RESIDENCY PROJECT,

Co-investigator, "Cross-sectional Study of Gabapentin or Mirtazapine for Sleep in Elderly Patients," (Lisa Hutchison, Principal Investigator), UAMS College of Pharmacy, 2005-Present.

PEER-REVIEWED PUBLICATIONS

1. **O'Brien CE**, Com G, Fowlkes J, Tang X, James LP. Peripheral quantitative computed tomography detects differences at the radius in prepubertal children with cystic fibrosis compared to healthy controls. *PLoS ONE* [in press]
2. Heldenbrand S, Dayer LE, Martin BC, **O'Brien C**, Choi AN, Gubbins PO, Hawthorne J, Ramey M, Willis K, Flowers SK. Advanced pharmacy practice experience evaluation scores are positively associated with multiple-mini interview score, pre-pharmacy GPA and pharmacy GPA. *AJPE* 1 Nov 2017 [Epub ahead of print]
3. **O'Brien CE**, Flowers SK, Stowe CD. Desirable skills in new pharmacists: a comparison of opinions from practitioners and senior student pharmacists. *Journal of Pharmacy Practice* 2017; 30(1):94-98. doi: 10.1177/0897190015621804
4. McCaleb R, Warren RH, Willis D, Maples HD, Bai S, **O'Brien CE**. Description of respiratory microbiology of children with long-term tracheostomies. *Respiratory Care* 2016; 61(4): 447-452. doi: 10.4187/respcare.03518
5. Heldenbrand SD, Flowers SK, Bordelon BJ, Gubbins PO, **O'Brien CE**, Stowe CD, Martin BC. Multiple mini-interview performance predicts academic difficulty in the Pharm.D. curriculum. *AJPE* 2016; 80(2): Article 27.
6. Stolarz AJ, Farris RA, Wiley CA, **O'Brien CE**, Price ET. Fenofibrate lowers inflammatory chemokines in airway epithelia from healthy and cystic fibrosis donors. *Clinical and Translational Science* 2015; 8(6):696-701. doi: 10.1111/cts.12310.
7. Mir A, Cleves M, **O'Brien CE**, Martin B. Exploring the possible association between montelukast and neuropsychiatric events among children with asthma: A matched nested case-control study. *Pharmacoepidemiol Drug Saf* 2015; 24: 435-445. doi: 10.1002/pds.3758
8. Stowe CD, Castleberry AN, **O'Brien CE**, Flowers SK, Warmack TS, Gardner SF. Development and Implementation of the Multiple Mini-Interview in Pharmacy Admissions *Currents in Pharmacy Teaching and Learning* 2014; 6: 849-855. DOI: <http://dx.doi.org/10.1016/j.cptl.2014.07.007>
9. Com GC, Cetin N, **O'Brien CE**. Complicated *Clostridium difficile* colitis in children with cystic fibrosis: association with gastric acid suppression? *Journal of Cystic Fibrosis* 2014; 13: 37-42. DOI:10.1016/j.jcf.2013.08.005
10. **O'Brien CE**, Price ET. The blood neutrophil to lymphocyte ratio correlates with clinical status in children with cystic fibrosis: A retrospective study. *PLoS ONE* 2013 8(10): e77420. doi:10.1371/journal.pone.0077420
11. **O'Brien CE**, Harden H, Com G. A survey of nutrition practices for patients with cystic fibrosis. *Nutr Clin Pract* 2013; 28: 237-241. DOI:10.1177/0884533612468162
12. Tangpricha V, Kelly A, Stephenson A, et al. for the **Cystic Fibrosis Foundation Vitamin D Evidence-Based Review Committee**. An update on the screening, diagnosis, management, and treatment of vitamin D deficiency in individuals with cystic fibrosis:

evidence-based recommendations from the Cystic Fibrosis Foundation. *J Clin Endocrinol Metab* 2012; 97(4):1082-93. DOI: 10.1210/jc.2011-3050

13. **O'Brien CE**, Anderson PA, Stowe CD. Lubiprostone for constipation in adults with cystic fibrosis: a pilot study, *Ann Pharmacother* 2011;45:1061-1066. DOI 10.1345/aph.1Q219
14. **O'Brien CE**, Anderson PA, Stowe CD. Use of the chloride channel activator lubiprostone for constipation in adults with cystic fibrosis: a case series, *Ann Pharmacother* 2010;44:577-581. DOI 10.1345/aph.1M642
15. Franks AM, **O'Brien CE**, Stowe CD, Wells TG, Gardner SF. Candesartan cilexetil effectively reduces blood pressure in hypertensive children, *Ann Pharmacother* 2008; 42(10):1388-1395. DOI 10.1345/aph.1L212
16. **O'Brien CE**, Harik N, James L, Seib P, Stowe CD. Cesium-induced QT-interval prolongation in an adolescent, *Pharmacotherapy* 2008; 28(8): 1059-1065.
17. **O'Brien CE**, Franks AM, Stowe CD. Multiple rubric-based assessments of student case presentations, *AJPE* 2008; 72 (3): Article 58.
18. Hutchison LC, **O'Brien CE**. Changes in pharmacokinetics and pharmacodynamics in the elderly patient, *Journal of Pharmacy Practice* 2007; 20 (1): 4-12.

BOOK CHAPTERS

Phan H, **O'Brien CE**. Cystic Fibrosis. In: Thomas MC, Faculty Panel Chair. *PSAP 2017 Book 2 Pulmonary and Emergency Medicine*. ACCP 2017:41-66. ISBN-13: 978-1-939862-52-5.

O'Brien CE, Lowry J, Palmer K, Farrar HC, Kearns, GL, James LP. Gastrointestinal Drugs. In: Yaffe SJ, Aranda JV, eds. *Neonatal and Pediatric Pharmacology: Therapeutic Principles in Practice*. 4th ed. Philadelphia, Penn: Lippincott Williams & Wilkins; 2011:742-759.

ABSTRACTS AND MEETING PRESENTATIONS

1. **O'Brien CE**, Beringer P, Ueng S, Lubsch L, McDade EJ, Moran M, Pettit RS, Autry E, Schroeder E, Duval MA, Shropshire J, Manasco K, Kuhn RJ. Anti-MRSA antibiotics for pulmonary exacerbations in CF: patterns of use and outcomes. *Pediatr Pulmonol* 2017; 52(S47):S457. Poster presentation, North American Cystic Fibrosis Conference (NACFC), November 2017, Indianapolis, IN.
2. **O'Brien CE**, Stafford R, Teeter B, Reid J, Payakachat N, Franks A. Patient-centered communication uptake during a community pharmacy IPPE: A qualitative analysis. *AJPE* 2017; 81(5); Article S5, page 85. Poster presentation, American Association of Colleges of Pharmacy Annual Meeting, July 2017, Nashville, Tennessee.
3. Whitaker B, Blanchard M, Henshaw J, Com G, **O'Brien CE**. Differences in knowledge, attitudes and experiences for gastrostomy tube placement among caregivers of children with cystic fibrosis. *Pediatr Pulmonol* 2016; 51(S45): S686. Poster presentation, NACFC, October 2016, Orlando, Florida.

4. Dayer LE, Flowers SK, Martin BC, **O'Brien CE**, Choi AN, Hawthorne J, Willis K, Ramey M, Heldenbrand S. Multiple-mini interview for pharmacy school admissions is prognostic with advanced pharmacy practice scores. *AJPE* 2016;80(5) Article S2. Poster presentation, American Association for College of Pharmacy (AACP) Annual Meeting, July 2016, Anaheim, CA.
5. Blanchard M, Whitaker B, Henshaw J, Com G, **O'Brien, C**. Knowledge, attitudes, and experiences among parents of children with cystic fibrosis regarding gastrostomy tube placement. Poster presentation, Society of Pediatric Psychology Annual Conference, April 2016, Atlanta, GA.
6. Louie JM, Hong LT, Biondo LR, Pinal DI, **O'Brien CE**, Phan H. Evaluation of home medication reconciliation by clinical pharmacists for adult and pediatric cystic fibrosis patients. *Pediatr Pulmonol* 2015; 50:533. Poster presentation, NACFC, October 2015, Phoenix, Arizona.
7. **O'Brien CE**, Johnston S, Henshaw JA, Com G. Algorithm-driven improvement in vitamin D management. *Pediatr Pulmonol* 2014;49:573. Poster presentation, NACFC, October 2014, Atlanta, Georgia.
8. Sherman AC, Simonton-Atchley S, **O'Brien CE**, Reddy RM, Campbell D, Jensen B, Wagner L, Anderson PJ. Predictors of adherence to enzyme supplements among adult cystic fibrosis patients: a longitudinal study. *Pediatr Pulmonol* 2013;48:633. Poster presentation, NACFC, October 2013, Salt Lake City, Utah.
9. Sherman AC, Simonton-Atchley S, Reddy RM, Campbell D, **O'Brien CE**, Jensen B, Wagner L, Anderson PJ. Health behaviors among adults with cystic fibrosis. *Pediatr Pulmonol* 2013;48:634. Poster presentation, NACFC, October 2013, Salt Lake City, Utah.
10. Simonton-Atchley S, Sherman AC, Campbell D, Reddy RM, **O'Brien CE**, Jensen B, Wagner L, Anderson PJ. Positive and negative dimensions of social support: associations with quality-of-life outcomes among adults with cystic fibrosis. *Pediatr Pulmonol* 2013;48:636. Poster presentation, NACFC, October 2013, Salt Lake City, Utah.
11. Jensen B, **O'Brien CE**, Sherman A. Impact of spiritual beliefs on medication adherence in cystic fibrosis patients. Poster presentation, Arkansas Association of Health-System Pharmacists Fall Seminar, October 2013, Little Rock, AR
12. McCaleb RV, Maples H, Warren R, Willis D, **O'Brien CE**. Retrospective analysis of respiratory cultures of individuals with neurodisabilities who are tracheostomy dependent. Poster presentation (encore), Annual meeting for the Association of Providers for Children with Complex Medical Needs, October 2012, Des Moines, IA.
13. Sherman AC, Simonton-Atchley S, Campbell D, **O'Brien CE**, Reddy RM, Anderson PJ, Jensen B, Kumar S. Religious coping and psychological distress among adults with cystic fibrosis. *Pediatr Pulmonol* 2012;S35:436. Poster presentation, NACFC, October 2012, Orlando, FL.
14. Anderson PJ, Sherman AC, Reddy RM, Campbell D, **O'Brien CE**, Jensen B, Kumar S, Simonton-Atchley S. Relationship between illness beliefs and quality-of-life outcomes

- among adult cystic fibrosis patients. *Pediatr Pulmonol* 2012;S35:436. Poster presentation, NACFC, October 2012, Orlando, FL.
15. Anderson PJ, Sherman AC, Simonton-Atchley S, Campbell D, Reddy RM, Jensen B, Kumar S, **O'Brien CE**. Associations between personal resources and health-related quality-of-life among adults with cystic fibrosis. *Pediatr Pulmonol* 2012;S35:437. Poster presentation, NACFC, October 2012, Orlando, FL.
 16. Simonton-Atchley S, Sherman AC, Campbell D, Reddy RM, **O'Brien CE**, Jensen B, Kumar S, Anderson PJ. Posttraumatic growth among adult cystic fibrosis patients. *Pediatr Pulmonol* 2012;S35:439. Poster presentation, NACFC, October 2012, Orlando, FL.
 17. Simonton S, Sherman AC, Reddy RM, Campbell D, **O'Brien CE**, Jensen B, Kumar S, Anderson PJ. Associations between illness beliefs and psychosocial adjustment among adults with cystic fibrosis. *Annals of Behavioral Medicine* 2012; 43 (suppl):s33
 18. Sherman AC, Simonton S, Campbell D, Reddy R, **O'Brien CE**, Jensen B, Kumar S, Anderson PJ. Seeking and found global meaning among cystic fibrosis patients: associations with quality-of-life outcomes. *Annals of Behavioral Medicine* 2012; 43(suppl):s34
 19. Sherman AC, Simonton S, **O'Brien CE**, Campbell D, Reddy RM, Jensen B, Kumar S, Anderson PJ. Adherence to airway clearance therapy in cystic fibrosis: effects of treatment beliefs and self-efficacy. *Annals of Behavioral Medicine* 2012; 43 (suppl):s33
 20. Stolarz A. FR, **O'Brien C.**, Price E. Fenofibrate attenuates Interleukin-1 α -stimulated inflammatory chemokine production in small airway epithelial cells *American Society for Clinical Pharmacology and Therapeutics Annual Meeting 2012*. National Harbor, Maryland 2012.
 21. McCaleb RV, Maples H, Warren R, Willis D, **O'Brien CE**. Retrospective analysis of respiratory cultures of individuals with neurodisabilities who are tracheostomy dependent. *Journal of Investigative Medicine* 2012;60(1):446. Platform presentation, Southern Regional Meeting for the Society of Pediatric Research, February 2012, New Orleans, LA.
 22. Stolarz A. FR, **O'Brien C.**, Price E. Fenofibrate Modulates Colony Stimulating Factor Production in Cystic Fibrosis Bronchial Epithelial Cells. *Pittsburgh International Lung Conference Personalized Medicine of Lung Disease*. Pittsburgh, PA 2011:232.
 23. **O'Brien CE**, Reddy R, Anderson PJ. Patient-centered discussion about adherence significantly improves self-assessed adherence to chest physiotherapy in a single-center adult CF population. *Pediatr Pulmonol* 2011;46(S34):463. Poster presentation, NACFC, November 2011, Anaheim, CA.
 24. Harden H, **O'Brien CE**. Assessment of quality improvement initiatives in clinic procedures for vitamin D levels of CF patients. *Pediatr Pulmonol* 2011;46(S34):464. Poster presentation, NACFC, November 2011, Anaheim, CA.
 25. Simonton S, Sherman AC, Campbell D, Reddy RM, Kumar S, **O'Brien CE**, Anderson PJ. Depression and anxiety symptoms among adults with cystic fibrosis. *Pediatr Pulmonol* 2011;46(S34):532. Platform presentation, NACFC, November 2011, Anaheim, CA.

26. Simonton S, Sherman AC, Campbell D, Reddy RM, Kumar S, **O'Brien CE**, Anderson PJ. Adherence to airway clearance therapy among adults with cystic fibrosis. *Pediatr Pulmonol* 2011;46(S34):533. Poster presentation, NACFC, November 2011, Anaheim, CA.
27. Anderson PJ, Sherman AC, Campbell D, Reddy RM, Kumar S, **O'Brien CE**, Simonton S. Health-related quality of life among adult cystic fibrosis patients. *Pediatr Pulmonol* 2011;46(S34):572. Poster presentation, NACFC, November 2011, Anaheim, CA.
28. Crumby AS, Ottoson L, Stinnett A, Maples HD, Dehart R, Jones K, **O'Brien CE**. Use of anti-anxiety medications, antidepressants, and stimulants among students in a college of pharmacy. *AJPE* 2011;75(5) Article 105. Poster presentation, American Association for College of Pharmacy (AACP) Annual Meeting, July 2011, San Antonio, TX.
29. Jones KM, **O'Brien CE**, Maples HD. Implementation and effectiveness of a structured debate in advanced pharmacy practice experiences. *AJPE* 2010;75(5) Article 105. Poster presentation, AACP Annual Meeting, July 2011, San Antonio, TX.
30. Norman S, **O'Brien C**, Maples H. IV or No IV: Eradication of *Pseudomonas aeruginosa* in Pediatric Cystic Fibrosis Patients. Presented in poster format at the Arkansas Association of Health-System Pharmacists Fall Seminar, October 2010, Little Rock, AR. Best poster winner.
Presented as an encore at the University of Arkansas for Medical Sciences Student Research Day, April 1 2011, Little Rock, AR.
31. Barham J, **O'Brien C**, Maples H. Impact of chronic inhaled tobramycin on incidence of tobramycin resistant pseudomonas aeruginosa in cystic fibrosis. *Journal of Investigative Medicine* 2010;58(2):453. Oral presentation, Southern Society for Pediatric Research Annual Meeting, February 2010, New Orleans, LA.
32. Harden H, Thompson S, **O'Brien CE**, Com G. Nutrition recommendations for CF patients: assessing the practices of CF nutrition professionals. *Pediatr Pulmonol* 2010;45(S33):542. Poster presentation, NACFC, October 2010, Baltimore, MD.
33. Hutchison LC, **O'Brien CE**. Cross-sectional study of gabapentin for sleep. *Pharmacotherapy* 2010;30(10):94. Poster presentation, American College of Clinical Pharmacy Annual Meeting, October 2010, Austin, TX.
34. **O'Brien CE**, Flowers SK, Payakachat N, Stowe CD. Preferred communication methods among pharmacy students. *AJPE* 2010;74(5) Article 96 Poster presentation, AACP Annual Meeting, July 2010, Seattle, WA.
35. **O'Brien CE**, Anderson PA, Stowe CD. Lubiprostone for the treatment of constipation in adults with cystic fibrosis: preliminary results. *Pediatr Pulmonol* 2009;40(S32):547. Poster presentation, NACFC, October 2009, Minneapolis, MN.
36. **O'Brien CE**, Reddy R, Anderson PA. Treatment adherence questionnaire in a single center adult CF population. *Pediatr Pulmonol* 2009;40(S32):503. Poster presentation, NACFC, October 2009, Minneapolis, MN.

37. **O'Brien CE**, Flowers SK, Stowe CD. Comparison of responses to UAMS College of Pharmacy Employer and Graduate Surveys. *AJPE* 2009;73(4) Article 57:41. Poster presentation, AACP Annual Meeting, July 2009, Boston MA.
38. Stowe CD, Flowers S, Warmack TS, **O'Brien CE**, Gardner SF. Admission Objective Structure Clinical Examination (OSCE): Multiple-Mini Interview (MMI). *AJPE* 2008; 72(3) Article 72: 56. Poster Presentation, AACP Annual Meeting, July 2008, Chicago IL.
39. Stowe CD, **O'Brien CE**, Warmack TS, Gardner SF. Communication Skill Development: OSCE Assessment of Lay and Healthcare Provider Encounters. *AJPE* 2007; 71(3) Article 60: 14. Poster presentation, AACP Annual Meeting, July 2007, Orlando FL.
40. **O'Brien CE**, Franks AM, Dickey K, Stowe CD. Multiple Rubric-Based Assessments of Student Case Presentations in Recitation. *AJPE* 2007; 71(3) Article 60: 21. Poster presentation, AACP Annual Meeting, July 2007, Orlando, FL.
41. **O'Brien CE**. Cross-Sectional Study of Gabapentin for Sleep in Elderly Patients. Platform presentation, Midwest Pharmacy Resident Conference, April 2006, Omaha, NE.
42. Jilka RL, Lecka-Czernik B, Ali AA, **O'Brien CE**, Weinstein RS, Manolagas SC. Activation of PPAR γ 2 by Rosiglitazone Causes Bone Loss Associated with Increased Marrow Adiposity and Decreased Osteoblast Number in Mice. *J. Bone Miner. Res.* 16 (Sup. 1): SU020, 2001. Poster presentation, 23rd Annual Meeting of the American Society for Bone and Mineral Research (ASBMR), October 2001, Phoenix, AZ.
43. Digregorio-Taguchi GB, Gubrij I, **Smith C**, Parfitt AM, Manolagas SC, Jilka RL. The Transit Amplifying Mesenchymal Progenitor Cell Compartment, not the Stem Cell Compartment, is the Principal Site of Control of Osteoblast Production in Normal and Pathologic Bone Remodeling. *J. Bone Miner. Res.* 15 (Sup. 1): SU 185, 2000. Poster presentation, 22nd Annual Meeting of the ASBMR, September 2000, Toronto, Canada.
44. Jilka RL, Parfitt AM, Manolagas SC, Bellido T, and **Smith C**. Cleavage of Collagen by Osteoblasts In Vitro Generates Anti-apoptotic Signals: A Mechanism for the Regulation of Their Functional Lifespan and Fate During Bone Formation. *J. Bone Miner. Res.* 14 (Sup. 1): SA 140, 1999. Poster presentation, 21st Annual Meeting of the ASBMR, September 1999, St. Louis, MO.
45. Jilka RL, Weinstein RS, Roberson P, Shelton R, Swain F, **Smith C**, Kirchner J, Parfitt AM, and Manolagas SC. PTH Increases Bone Formation by Postponing Osteoblast Apoptosis, not by Increasing Progenitor Proliferation. *Bone* 23 (Sup. 5): F461, 1998. Poster presentation, 20th Annual Meeting of the ASBMR, December 1998, San Francisco, CA.
46. Jilka RL, **Smith C**, and Manolagas SC. Dexamethasone Promotes Apoptosis of Osteoblast Progenitors in Murine Bone Marrow Cultures: Antagonism by IL-6 Type Cytokines. *J. Bone Miner. Res.* 12 (Sup. 1): S411, 1997. Poster presentation, 19th Annual Meeting of the ASBMR, September 1997, Cincinnati, OH.
47. Weinstein RS, Jilka RL, Young C, Miller FL, Shelton R, **Smith C**, Parfitt AM, and Manolagas SC. Glucocorticoid Excess Decreases the Number of Osteoblast Progenitors in the Marrow and Increases Mature Osteoblast Apoptosis in Mice. *J. Bone Miner. Res.* 12 (Sup. 1): P256,

1997. Plenary poster presentation, 19th Annual Meeting of the ASBMR, September 1997, Cincinnati, OH.

48. Weinstein RS, Carlin AA, Miller FL, Shelton R, **Smith C**, Roberson P, Parfitt AM, and Manolagas SC. The Effects of Androgen Deficiency on Bone Remodeling and Bone Mineral Density are Mediated via Cells of the Osteoblastic Lineage. *J. Bone Miner. Res.* 11 (Sup. 1): 137, 1996. Platform presentation, 18th Annual Meeting of the ASBMR, September 1996, Seattle, WA.

49. Jilka RL, Weinstein RS, Bellido T, Miller FL, **Smith C**, Parfitt AM, and Manolagas SC. Demonstration of Programmed Cell Death (Apoptosis) in Osteoblasts: Evidence for Modulation of this Process by Growth Factors and Cytokines. *J. Bone Miner. Res.* 11 (Sup. 1): P213, 1996. Plenary poster presentation, 18th Annual Meeting of the ASBMR, September 1996, Seattle, WA.

INSTRUCTION – UAMS College of Pharmacy

CURRENT

Coordinator and Lecturer

PHPR 7106 Introduction to Patient-Centered Communication

Lecturer

PHPR 7304 Therapeutics III: "Fluid, Electrolytes, and Nutrition", "Cystic Fibrosis"

Elective

PHPR 7354 Treatment Adherence

Small Group Facilitator and Mentor

PHPR 7103 Career Orientation and Communication

Preceptor

PHPR 6714 Ambulatory Care Advanced Pharmacy Practice Experience

PREVIOUS

Instructor and Lecturer

PHPR 5654 Pharmacy Practice III: Injection Certification Lab, EKG Interpretation

Lecturer

PHPR 4625 Therapeutics I: "Hypertension: overview and classification"; "Hypertension: Drug Therapy"; "Hypertension: Special Situations"

PHPR 5645 Therapeutics III: "Diaper Dermatitis and Pediatric GERD"

PHPR 5342 Geriatrics Therapeutics: "Insomnia Medications in the Elderly"

PHPR 5442 Introduction to Research Methods: "Elderly Adults and Informed Consent"

PHPR 5362 Drug Induced Diseases: "Drug Induced Constipation", "Drug Induced Delirium"

PHPR 4625 Therapeutics I: "Constipation"

PHPR 5472 Problem based learning in pediatrics, 2hrs, various topics

Special Problems Electives

Treatment Adherence, Manuscript Preparation, Research

Preceptor

PHPR 6714 Direct Patient Care Advanced Practice Experience, Cardiology

Small Group Facilitator

PHPR 4625 Therapeutics I Recitation

PHPR 5635 Therapeutics II Recitation

INSTRUCTION – UAMS Graduate School (previous)

INTX 6653 Clinical Toxicology: “Drug-Drug Interactions”

INSTRUCTION – UAMS College of Medicine (previous)

Pharmacology/Toxicology Longitudinal Elective: “Antidepressants”, “Pharmacogenomics”

RESEARCH MENTORING

1. Joshua Robinson, PharmD: Arkansas Children’s Hospital PGY1 resident 2016-17, project “Evaluation of Vitamin D Dosing in Children with Cystic Fibrosis”
2. Jonathan Martinez, PharmD: Arkansas Children’s Hospital PGY1 resident 2015-16, project: “Medication Reconciliation: Creating the Best Possible Home Medication List”
3. Andrew Houck, PharmD: Arkansas Children’s Hospital PGY1 resident 2014-15, project: “Quality Improvement in Asthma Patient Education: Comparison of Parent/Patient and Health Care Professional Perspectives”
4. Grant Florer, UAMS College of Pharmacy 2013 summer research fellow, project: “Adherence to new guidelines for the treatment of pediatric fever and neutropenia: a retrospective study of cases treated at Arkansas Children’s Hospital”
5. Karisma Patel, PharmD: Arkansas Children’s Hospital pharmacy resident 2012-13, project: “Risk factors associated with the development of multi-drug resistant *Pseudomonas aeruginosa* in children and adults with cystic fibrosis”
6. Trinity Lahti, PharmD: Arkansas Children’s Hospital pharmacy resident 2011-12, project: “Interactive Patient Cases: Development and Evaluation of a Novel Nontraditional Teaching Method”
7. Kirsten Boggs, PharmD: Arkansas Children’s Hospital pharmacy resident 2011-12, project: “Effect of ADHD Medication Use on Nutritional Status and Need for Nutritional Intervention in Pediatric Subjects with Cystic Fibrosis”
8. Rachael McCaleb, UAMS College of Pharmacy 2011 and 2012 summer research fellow, project: “A retrospective analysis of the antimicrobial colonization/infection in the respiratory tract of individuals with neurodisabilities who are tracheostomy dependent”
9. Sarah Norman: UAMS College of Pharmacy 2010 summer research fellow, project: “IV or No IV: Eradication of *Pseudomonas aeruginosa* in Pediatric Cystic Fibrosis Patients”
10. Jonathan Barham: UAMS College of Pharmacy 2009 summer research fellow, project: “Impact of chronic inhaled tobramycin on incidence of tobramycin resistant *pseudomonas aeruginosa* in cystic fibrosis”

11. Starr McLain, PharmD: Arkansas Children's Hospital pharmacy resident 2009-10, project: "Medication adherence in adolescents and young adults post-liver and renal transplant: Self-reported barriers and strategies for improvement"

PRESENTATIONS

1. "Communication is key: Innovative Curriculum Prepares Students for Patient Care" Presented at the UAMS 2016 Alumni Weekend (with Michelle Piel, Pharm.D.)
2. "Motivational Interviewing" Presented at the 2016 Annual Meeting of the Arkansas Pharmacists Association, July 2016, Hot Springs, AR
3. "Collaborative CF Pharmacist Research: Multicenter Evaluation to Establish Patterns of Treatment of MRSA in CF Patients – Preliminary Results" Presented at the 2015 North American Cystic Fibrosis Conference in October 2015, Phoenix, AZ (part of a 2 hr ACPE accredited CE)
4. "Research & Collaboration: What are CF Pharmacists Doing?: Multi-center Evaluation to Establish Patterns of Treatment of MRSA in Cystic Fibrosis Patients" Presented at the 2014 NACFC in October 2014, Atlanta GA (part of a 2 hr ACPE accredited CE)
5. "Motivational Interviewing: A Patient-Centered Approach to Communication" Arkansas Association of Health-System Pharmacists Fall Seminar, Little Rock, AR (1 hr, ACPE accredited CE), October 2014
6. "Medication Safety: Everyone has a role" and "UAMS Patient Safety Initiatives" Presented at the 2014 Arkansas Children's Hospital CF Family Resource Day to a group of caregivers and health care professionals
7. "Medication Safety: Everyone has a role" Presented to a group of caregivers and health care professionals at the 2013 Family Resource Day for the Arkansas Center for Respiratory Technology Dependent Children, Little Rock, AR, June 2013.
8. "Practical Pharmacology and Therapeutics of Antidepressants" Presented at the 2013 Arkansas Nurses Association Advanced Pharmacotherapeutics Seminar, Little Rock, AR, June 2013. Approved for CE accredited by the American Nurses Credentialing Center's Commission on Accreditation
9. "Merging the New and the Old: Adult Perspective" and "Merging the New and the Old: Discussion" Presented at the 2012 NACFC in October 2012, Orlando FL (1.25 hrs ACPE accredited CE)
10. "Bone Health in Cystic Fibrosis: Development of a Research Program from a Young Faculty Perspective" UAMS College of Pharmacy Seminar Series. August 26, 2011
11. "OTC Cough and Cold Medications in Children" A PedsPlace presentation at Arkansas Children's Hospital to a multidisciplinary group and approved for physician CME. PedsPlace is also broadcast to distant sites around Arkansas and recorded and archived. March 31, 2011. This was also presented to medical residents and faculty at the UAMS Family

Medicine resident conference on April 27, 2011 and to pharmacists at the UAMS College of Pharmacy Last Chance CE Program, December 2011.

12. "Sinonasal Drug Administration in Cystic Fibrosis" Presented at the 2010 NACFC, Baltimore MD (1 hr ACPE 816-999-10-016-L01-P). This was also presented as an encore to the Pulmonary division at Arkansas Children's Hospital on 2/11/11.
13. "Medication Adherence in CF – Adherence Survey" Presented at 8th Annual CF Family Resource Day to an audience of multidisciplinary health care professionals and parents of children with cystic fibrosis, September 2009
14. "Safe Use of OTC Cough and Cold Medications in Children" Glass Lectureship – Regional Continuing Education Program, Pharmacist CE, Helena, AR (1 hr, ACPE 004-000-08-046-L01-P), November 2008
15. "I Can't Go! Tackling Constipation" Pharmacist CE, Little Rock, AR (1.5 hrs, Arkansas State Board of Pharmacy (ASBP)), Oct 2007. UAMS College of Pharmacy Reunion Weekend CE Program, Little Rock, AR (1.5 hrs, ACPE 004-000-07-061-L01-P), Nov 2007.
16. "Show Me the Evidence! Treating Hypertension in Patients with Compelling Indications" Consultant Pharmacy CE Program, Little Rock, AR (1.5 hrs, ACPE 004-000-07-057-L01), October 2007
17. "Treatment of Hypertension and Compelling Indications: Where's the Evidence?" UAMS College of Medicine, Department of Family and Preventive Medicine, Little Rock, AR. Broadcast to 28 distant sites (1 hr, ASBP and American Academy of Family Physicians (AAFP)), March 2007
18. "Insomnia Medications in the Elderly" Learn at Noon, UAMS College of Pharmacy, Little Rock, AR (1 hr, ACPE 004-000-06-048-L01), October 2006. Arkansas Association of Health-System Pharmacists Fall Seminar, Big Cedar Lodge, MO (1 hr, ACPE 004-999-06-033-L01), October 2006
19. "JNC 7 Guidelines: Treatment of Hypertension" UAMS College of Medicine, Department of Family and Preventive Medicine, Little Rock, AR. Broadcast to 28 distant sites (1 hr, ASBP and AAFP), August 2006
20. "Medication Safety and Moderate Sedation" Nursing in-service, UAMS Emergency Department, Little Rock, AR (0.5 hr), February 2006
21. "The Role of Vitamin Supplementation in the Treatment of Homocysteinemia" Pharmacist CE, Little Rock, AR (1 hr, ASBP), October 2005
22. "Tygacil: A Third Generation Tetracycline" Pharmacist CE, UAMS Hospital Pharmacy, Little Rock, AR (1 hr, ASBP), August 2005

PROFESSIONAL SERVICE – Local

Promotion and Tenure Committee, UAMS College of Pharmacy	2016 – present
Admissions Committee, UAMS College of Pharmacy	2015 – 2017
Curriculum committee, UAMS College of Pharmacy Chair, 2016 – 2017	2015 – 2017
UAMS Cystic Fibrosis Facebook group for adult patients Administrator/Moderator	2014 – 2017
UAMS College of Pharmacy Teaching Certificate Program Mentor	2011 – present
Arkansas Center for Respiratory Technology Dependent Children, Family Resource Day Committee	2011 – 2012
Faculty advisor, Student Society of Health System Pharmacists	2010 – 2016
Cystic Fibrosis (CF) Family Resource Day Committee	2010 – 2011
Arkansas Association of Health-System Pharmacists, board member Fall Seminar student programming co-chair, 2013 & 2014	2009 – 2016
Continuing Education Committee, UAMS College of Pharmacy	2009 – 2015
Student Research Committee, UAMS College of Pharmacy Chair, 2010 – 2014	2009 – 2015
CF Nutrition Committee, Arkansas Children's Hospital	2009 – present
CF QI and Research Committee, Arkansas Children's Hospital	2009 – present
UAMS College of Pharmacy Admissions Multiple Mini Interview Write and review cases, summarize data, train interviewers	2007 – 2016
Judge, SSHP Clinical Skills Competition, UAMS College of Pharmacy	2005 – 2008, 2014

PROFESSIONAL SERVICE – National

Reviewer, American Association of Colleges of Pharmacy (AACP) Annual Meeting abstracts	2017
Referee, Patient Preferences and Adherence	2014 – present
Referee, Respiratory Care	2014 – present
Referee, PLoS ONE	2014 – present
Referee, Currents in Pharmacy Teaching and Learning	2013 – present
Referee, Digestive Diseases and Sciences	2013 – present
Reviewer, ASHP Foundation Pharmacy Resident Practice-Based Research Grant	2012 – present
Reviewer, Walmart Scholar Program, AACP	2012 – present
Vitamin D Management Guidelines Committee Cystic Fibrosis Foundation	2010 – 2012
Referee, American Journal of Health-System Pharmacists	2010 – present
Referee, Pharmacotherapy	2008 – present
Reviewer, Crystal APPLE Award, AACP	2008
Referee, Annals of Pharmacotherapy	2005

CERTIFICATIONS

2006	Postgraduate Teaching Course	UAMS College of Pharmacy
2005	Authorization to administer immunizations	Arkansas State Board of Pharmacy
2004	CPR certification	American Red Cross

PROFESSIONAL DEVELOPMENT

Auburn University Motivational Interviewing Training Institute	August 2010
Comprehensive Motivational Interviewing Training (comMIt™)	August 2012
American College of Clinical Pharmacy Focused Investigator Training	August 2013

PROFESSIONAL ORGANIZATIONS

American College of Clinical Pharmacy, full member	2009 – 2013
Pediatric Pharmacy Advocacy Group	2008 – 2010
Arkansas Association of Health-System Pharmacists (AAHP)	2005 – present
American Association of Colleges of Pharmacy (AACP)	2005 – present
Arkansas Pharmacists Association (APA)	2005 – present
Rho Chi Honor Society, Beta Iota Chapter	2003 – present

HONORS AND AWARDS

2010	Co-author and faculty mentor of poster winner at the Arkansas Association of Health-System Pharmacists annual Fall Seminar (student and primary author, Sarah Norman)
2007	Wal-Mart Annual Conference Scholarship to attend the AACP Teachers Seminar AACP Annual Meeting (Orlando, FL)
2006	Wal-Mart Annual Conference Scholarship to attend the AACP Teachers Seminar AACP Annual Meeting (San Diego, CA)
2005	Faculty Gold Key, UAMS College of Pharmacy
2005	APhA Mortar and Pestle Professionalism Award, UAMS College of Pharmacy
2004	Who's Who in American Colleges and Universities, UAMS College of Pharmacy
2004	AAHP Scholarship, UAMS College of Pharmacy
2004	ASHP National Clinical Skills Competition Top Ten Finalist
	ASHP Midyear Clinical Meeting (Orlando, FL)
2003, 2004	Jordin Scholar, UAMS College of Pharmacy scholarship

SELECTED COMMUNITY ACTIVITIES

2013 – 2014	Boomer Esiason Foundation, member of Team Boomer for the 2013 Bank of America Chicago Marathon, 2014 Little Rock Marathon
2011 – present	Volunteer, Cathedral of St. Andrew, Little Rock, AR
2001 – present	Volunteer pharmacist, Westside Free Medical Clinic, Catholic Diocese of Little Rock, Member of advisory board (2008)
1997 – 2013	Parent-Teacher Organization: Secretary (2004-2005), Vice-President (2005-2006)