

LUCAS A. BERENBROK PharmD, MS, BCACP, FAPhA

Curriculum Vitae • April 2024

Personal: 27 Richey Ave Pittsburgh, PA 15214 | 724.561.7694

Professional: University of Pittsburgh School of Pharmacy, Department of Pharmacy & Therapeutics
3501 Terrace St, 9060 Salk Hall | Pittsburgh, PA 15261 | berenbrok@pitt.edu | 412.624.8109

Leadership Style: Servant Leader

Personal Mission Statement: To cultivate pharmacist leaders who advance pharmacy practice by bettering patient health and medication-related outcomes with multidisciplinary outpatient healthcare teams.

EDUCATION AND TRAINING

UNDERGRADUATE

2005-2009	Grove City College, Grove City, PA	Bachelor of Science 2009	Biochemistry
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GRADUATE

2009-2013	University of Pittsburgh School of Pharmacy Pittsburgh, PA	Doctor of Pharmacy 2013	Pharmacy
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2015-2017	University of Pittsburgh School of Medicine Pittsburgh, PA	Master of Science 2017	Clinical Research
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POSTGRADUATE

2013-2014	University of North Carolina Eshelman School of Pharmacy Chapel Hill, NC	PGY1 Community Pharmacy Residency 2014	Community Pharmacy Practice
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Program Director:
Stephanie P. Ferreri

CONTINUING

2020	University of Pittsburgh Office of Academic Career Development, Health Sciences Pittsburgh, PA	Faculty Leadership Academy	Leadership
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Program Director:
Darlene F. Zellers

2024	University of Pittsburgh Office of the Senior Vice Chancellor for Research	Big Proposal Bootcamp	Research
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Program Directors:
Rob A. Rutenbar
Michael Holland

APPOINTMENTS AND POSITIONS

ACADEMIC

Nov 2022-present	University of Pittsburgh Department of Communication Science and Disorders Pittsburgh, PA	Associate Professor <i>(Secondary Appointment)</i>
July 2022-present	University of Pittsburgh Clinical and Translational Science Institute Pittsburgh, PA	Associate Professor <i>(Secondary Appointment)</i>
July 2021-present	University of Pittsburgh School of Pharmacy Pittsburgh, PA	Assistant Professor
July 2021-present	University of Pittsburgh School of Pharmacy Pittsburgh, PA	Associate Professor <i>(Primary Appointment)</i>
July 2014-June 2021		Assistant Professor

NON-ACADEMIC

2019-present	UPMC Primary Care Precision Medicine Pittsburgh, PA	Pharmacogenomics Specialist
2018-2020	Gatti Pharmacy Indiana, PA	Staff Pharmacist
2013-2014	Kerr Drug/Walgreens Kerr East, North Carolina	Relief Pharmacist
2010-2012	Accredo Health Group Warrendale, PA	Pharmacy Intern
2008-2010	Accredo Health Group Warrendale, PA	Pharmacy Technician

CERTIFICATION AND LICENSURE

CERTIFICATION

UNC Eshelman School of Pharmacy	Teaching Certificate Program for Pharmacy Residents 2014
	Teaching Mentor: Joel Farley, RPh, PhD
American Pharmacists Association	Pharmacy-Based Immunization Delivery Certificate Program for Pharmacists 2014
	Faculty Trainer 2017
National Association of Chain Drug Stores	Community Pharmacy-Based Point-of-Care Testing Certificate Program for Pharmacists 2015
	Trained Trainer 2015
Institute for Research Education & Training in Addictions (IRETA)	Introduction to Motivational Interviewing 2015
American Heart Association	BLS for Healthcare Providers August 2021
Team-Based Learning Collaborative™	TBLC Fundamentals Track Workshops 2019

SPECIALTY CERTIFICATIONS

Board of Pharmacy Specialties (BPS)	Board Certified Ambulatory Care Specialist July 2018
Council for Tobacco Treatment Training Programs (CTTTP)	Tobacco Treatment Specialist July 2018

PROFESSIONAL LICENSURE

Pennsylvania Board of Pharmacy Pharmacist License No. RP448933	2014-present
Pennsylvania Board of Pharmacy Authorization to Administer Injectable Medications License No. RPI009465	2014-present

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Kappa Psi Pharmaceutical Fraternity, Inc.	2009-present
The Rho Chi Society	2011-2013
American Society of Health-System Pharmacists	2012-2019
North Carolina Association of Pharmacists	2013-2014
American Pharmacists Association	
Academy of Pharmacy Practice and Management	2013-present
Academy of Student Pharmacists	2009-2013
Pennsylvania Pharmacists Association	2014-present
American Association of Colleges of Pharmacy	2015-present
Clinical Pharmacogenetics Implementation Consortium	2017-present
Phi Lambda Sigma Pharmacy Leadership Society (Hon.)	2020-present
Pharmacogenetic Variation Consortium	2020-present

HONORS AND AWARDS

Ambridge Area High School	
Class Valedictorian	2005
American Pharmacists Association-	
Academy of Student Pharmacists	
National Patient Counseling Competition	
Top Ten Finalist	2012
American Pharmacists Association	
APPM Presentation Merit Award (x3)	2018
Fellow selected by APhA-APPM	2024
Certificate of Outstanding Contribution in Reviewing	
Journal of the American Pharmacists Association	2019,2020
Kappa Psi Pharmaceutical Fraternity, Inc.	
Kappa Psi Pharmaceutical Foundation Scholarship	2012
Kappa Psi Beta Kappa Chapter	
Leasure K. Darbaker Brother of the Year	2012
Robert J. Ertel Scholastic Achievement Award	2013
Asklepios Key	2013
University of Pittsburgh	
Lilly Student Achievement Award	2013
APhA-ASP Faculty Member of the Year	2015, 2018
Stanford I. Cohen Teacher of the Year	2018
Brenneman Award	2018-2020
School of Pharmacy Rising Star Award	2019
Senior Vice Chancellor for Engagement's Partnerships of	
Distinction Award, PittPharmacy SilverScripts	2021
AcademyHealth	
Best Abstracts of 2021 Annual Meeting -	
Structural Racism, Disparities, and Equity in Health	2021
Pharmacy Leadership and Education Institute	2023
Albert B. Prescott Pharmacy Leadership Award	

Applied Geography Conference – AGX 2023 Best Paper for Communication and Storytelling	2023
Pennsylvania Pharmacists Association – 2024 Annual Conference 2024 Poster of Distinction	2024

PUBLICATIONS

PEER REVIEWED REFEREED ARTICLES

1. Gazda NP, **Berenbrok LA**, Ferreri SP. Comparison of two medication therapy management practice models on return on investment. *J Pharm Pract.* 2017;30(3):282-285. PMID: 26888260.
2. Grieve LB, **Berenbrok LA**, Pater KS. Using your VOICE(S): Adding telephonic communication to pharmacy education. *Inov Pharm.* 2017; 8(2).
3. Steltenpohl EA, Barry BK, Coley KC, McGivney MS, Olenak JL, **Berenbrok LA**. Point of care testing in community pharmacies: Keys to success from Pennsylvania pharmacists. *J Pharm Pract.* 2018;31(6):629-635. PMID: 29034781.
4. **Berenbrok LA**, Hart KM, McGrath SH, Coley KC, McGivney MS, Empey PE. Community pharmacists' educational needs for implementing clinical pharmacogenomic services. *J Am Pharm Assoc.* 2019;59(4):539-544. PMID: 31010787.
5. Doong K, **Berenbrok LA**, Coley KC, Carroll JC, Richardson R, Antinopoulos BC, Patel A, McGivney MS. Implementation of comprehensive medication management at supermarket pharmacies in a pharmacy network. *J Am Pharm Assoc.* 2019;59(4S):S25-31. PMID: 31080149.
6. Sutt AR, Pagliaro AM, Wilson E, Renner H, Hall DL, **Berenbrok LA**, McGivney MS, Coley KC. Facilitating pandemic influenza vaccination implementation in grocery store chain community pharmacies. *J Am Pharm Assoc.* 2019;59(6):848-851. PMID: 31405807.
7. Lapping AD, Carroll JC, Coley KC, Somma McGivney MA, Doong K, Antinopoulos B, Richardson R, **Berenbrok LA**. Implementation strategies from deployment of the National Diabetes Prevention Program in Pennsylvania community pharmacies. *J Am Pharm Assoc.* 2020 May-Jun;60(3S):S29-S36.e1. DOI: 10.1016/j.japh.2020.01.010. PMID: 32122758.
8. Coley KC, Gessler C, McGivney M, Richardson R, DeJames J, **Berenbrok LA**. Increasing adult vaccinations at a regional supermarket chain pharmacy: A multi-site demonstration project. *Vaccine.* 2020;38(24):4044-4049. PMID: 32093985.
9. **Berenbrok LA**, Renner HM, McGivney MAS, Coley KC. A conceptual value-based incentivization model of adult immunization for community pharmacists. *J Am Pharm Assoc.* 2020;60(6):835-842. DOI: <https://doi.org/10.1016/j.japh.2020.04.023>.
10. **Berenbrok LA**, Gabriel N, Coley KC, Hernandez I. Evaluation of frequency of encounters with primary care physicians vs visits to community pharmacies among Medicare beneficiaries. *JAMA Netw Open.* 2020;3(7):e209132. doi:10.1001/jamanetworkopen.2020.9132.
11. Pruskowski JA, Ruby CM, **Berenbrok LA**, Seybert AL, and Handler SM. Medication-related 30-day rehospitalizations in palliative care patients. *J Am Coll Clin Pharm.* 2020;3(6). DOI: <https://doi.org/10.1002/jac5.1289>.
12. Kanmaz TJ, Culhane NS, **Berenbrok LA**, Jarrett J, Johanson EL, Ruehter VL, Trolli E, Welch LH, Heldenbrand SD. Curriculum crosswalk of the core entrustable professional activities for new pharmacy graduates. *Am J Pharm Educ.* 2020;84(10). DOI: <https://doi.org/10.5688/ajpe8077>.

13. Phi C, **Berenbrok LA**, Carroll JC, Firm A, McGivney MS, Coley KC. Impact of a medication adherence packaging service on patient-centered outcomes at an independent community pharmacy. *Pharmacy*. 2021;9(1). <https://doi.org/10.3390/pharmacy9010011>.
14. **Berenbrok LA**, Ciemiecki L, Cremeans AA, Albright R, Mormer E. Pharmacist competencies for over-the-counter hearing aids: A Delphi study. *J Am Pharm Assoc*. 2021 Jul-Aug;61(4):e255-e262. DOI: 10.1016/j.japh.2021.01.039. PMID: 33642240.
15. Writer R, Barthen C, Antinopoulos B, Uber R, Stevenson JM, **Berenbrok LA**. How community pharmacists envision using pharmacogenomic data: A qualitative analysis. *J Am Pharm Assoc*. 2021 Sep-Oct;61(5):e64-e70. DOI: 10.1016/j.japh.2021.04.001. PMID: 33893058.
16. Gammal RS, **Berenbrok LA**, Empey PE, Massart MB. Documenting pharmacogenomic test results in electronic health records: Practical considerations for primary care teams. *J Pers Med*. 2021;11(12):1296. DOI: <https://doi.org/10.3390/jpm11121296>
17. Massart M, **Berenbrok LA**, Munro C, Berman NR, Empey PE. A multidisciplinary precision medicine service in primary care. *Ann Fam Med*. 2022 Jan-Feb;20(1):88. doi: 10.1370/afm.2764. PMID: 35074774.
18. Guo J, Hernandez I, Dickson S, Tang S, Essien UR, Mair C, **Berenbrok LA**. Income disparities in driving distance to health care infrastructure in the United States: a geographic information systems analysis. *BMC Res Notes*. 2022 Jun 27;15(1):225. doi: 10.1186/s13104-022-06117-w. PMID: 35761413.
19. Hernandez I, Dickson S, Tang S, Gabriel N, **Berenbrok LA**, Guo J. Disparities in distribution of COVID-19 vaccines across US counties: A geographic information system-based cross-sectional study. *PLoS Med*. 2022 Jul 28;19(7):e1004069. doi: 10.1371/journal.pmed.1004069. PMID: 35901171.
20. **Berenbrok LA**, Tang S, Gabriel N, Guo J, Sharareh N, Patel N, Dickson S, Hernandez I. Access to community pharmacies: A nationwide geographic information systems cross-sectional analysis. *J Am Pharm Assoc (2003)*. 2022 Jul 15:S1544-3191(22)00233-3. doi: 10.1016/j.japh.2022.07.003. PMID: 35965233.
21. **Berenbrok LA**, DeRuiter M, Mormer E. OTC hearing aids: An opportunity for collaborative working relationships between pharmacists and audiologists. *J Am Pharm Assoc (2003)*. 2022 Aug 24:S1544-3191(22)00285-0. doi: 10.1016/j.japh.2022.08.015. PMID: 36117105.
22. **Berenbrok LA**, Gessler C, Kirisci L, Herrera-Restrepo O, Coley KC. Impact of pharmacist motivational interviewing on hepatitis B vaccination in adults with diabetes. *J Am Pharm Assoc (2003)*. 2022 Aug 19:S1544-3191(22)00283-7. doi: 10.1016/j.japh.2022.08.013. Epub ahead of print. PMID: 36115757.
23. Wouters OJ, **Berenbrok LA**, He M, Li Y, Hernandez I. Association of research and development investments with treatment costs for new drugs approved from 2009 to 2018. *JAMA Netw Open*. 2022 Sep 1;5(9):e2218623. doi: 10.1001/jamanetworkopen.2022.18623. PMID: 36156148.
24. Guo J, Dickson S, **Berenbrok LA**, Tang S, Essien UR, Hernandez I. Racial disparities in access to health care infrastructure across US counties: A geographic information systems analysis. *Front Public Health*. 2023;11:897007. Published 2023 Apr 11. doi:10.3389/fpubh.2023.897007.
25. Lee YM, **Berenbrok LA**, Gálvez-Peralta M, Iwuchukwu O, Kisor DF, Petry N, and Gammal RS. Advancing pharmacogenomics-based care through interprofessional education. *American Journal of Pharmaceutical Education*. 2023. doi.org/10.1016/j.ajpe.2022.10.001.

26. Huang W, Hernandez I, Tang S, Dickson S, **Berenbrok LA**, Guo J. Association between distance to community health care facilities and COVID-19-related mortality across U.S. counties in the COVID-19-vaccine era. *BMC Res Notes*. 2023;16(1):96. Published 2023 Jun 5. doi:10.1186/s13104-023-06366-3.
27. Appolon G, Tang S, Gabriel N, Morales J, **Berenbrok LA**, Guo J, Hernandez I. Association Between Redlining and Spatial Access to Pharmacies. *JAMA Netw Open*. 2023;6(8):e2327315. Published 2023 Aug 1. doi:10.1001/jamanetworkopen.2023.27315.
28. Wong A, **Berenbrok LA**, Snader L, Soh YH, Kumar VK, Javed MA, Bates DW, Sorce LR, Kane-Gill SL. Facilitators and Barriers to Interacting with Clinical Decision Support in the ICU: A Mixed-Methods Approach. *Crit Care Explor*. 2023 Aug 25;5(9):e0967. doi: 10.1097/CCE.0000000000000967.
29. Hernandez I, Tang S, Morales J, Gabriel N, Patel N, Mathis WS, Guo J, **Berenbrok LA**. Role of independent versus chain pharmacies in providing pharmacy access: a nationwide, individual-level geographic information systems analysis. *Health Aff Sch*. 2023 Jul;1(1):qxadoo3. doi: 10.1093/haschl/qxadoo3.
30. **Berenbrok LA**, Duchen A, Cyr T, Mormer E. First experiences with over-the-counter hearing aids for mild-to-moderate hearing loss: A case report. *Pharmacy*. 2024; 12(1): 4. doi.org/10.3390/pharmacy12010004.
31. Reynolds MD, Santa H, Hoffman J, **Berenbrok L**, Kelly MK, Schneider M, Hare J, Beck D, Kulzer J, Schein M, Pringle J. Training health professional students to conduct SBIRT: A step forward to interprofessional collaboration to address substance use. *Journal of Interprofessional Education & Practice*. 2024. <https://doi.org/10.1016/j.xjep.2024.100701>.

OTHER PEER REVIEWED ARTICLES

1. Jarrett JB, **Berenbrok LA**, Goliak KL, Meyer SM, Shaughnessy AF. Entrustable professional activities: A novel framework for pharmacy education. *Am J Pharm Educ*. 2018;82(5):6256. PMID: 30013239
2. Bacci JL and **Berenbrok LA**. Innovative advances in connectivity and community pharmacist patient care services: Implications for patient safety. *Pharmacotherapy*. 2018;38(8):867-874. PMID: 29878391.
3. **Berenbrok LA** and Corbin N. Remote interprofessional education and practice with older adults: Overcoming barriers at the University of Pittsburgh. *AACP Pharmacy Practice*. Winter Newsletter. 2021.
4. Carroll J and **Berenbrok LA**. How to use data to transform pharmacy practice. *Pharmacy Times*. November 29, 2021.
5. Schmidt MT, Pater KS, Mormer E, **Berenbrok LA**. Over-the-counter hearing aids and hearing self-care. *AACP Self-care Therapeutics and Non-prescription Medicine SIG*. Fall Newsletter. 2022.
6. **Berenbrok LA** and Mormer E. Over-the-counter hearing aids – Where do they fit? *iForumRx*. October 6, 2023.

OTHER NON-PEER REVIEWED PUBLICATIONS

1. Culpepper B and **Berenbrok L**. A new weapon in the fight against diabetes: SGLT2 inhibitors. *Inside Pharmacy*. 2013;1(2):8-9.

2. **Berenbrok LA** and Culpepper B. The pharmacist's emerging role in weight management: A look into new prescription weight-loss medications. *Inside Pharmacy*. 2013;1(1):30-31.
3. Jarrett JB and **Berenbrok LA**. Entrustable professional activities: Personalization and expansion for pharmacy graduates? *Am J Pharm Educ*. 2016; 80 (9):161. PMID: 28090110.
4. **Berenbrok LA**, Carroll JC, Coley KC, and McGivney MS. Pharmacy technician role expansion: An evidence-based position paper. July 2018. National Association of Chain Drug Stores.
5. Sparks MK and **Berenbrok LA**. Standardized colleagues in pharmacy education. *Am J Pharm Educ*. 2018; 82 (6):7167. PMID: 30181680.
6. Katie Doong, **Lucas Berenbrok**, James Stevenson, Ryley Uber, Jack Becker, Michele Klein-Fedyshin. Pharmacist-led pharmacogenomics clinical services in outpatient settings: a systematic review. PROSPERO 2019 CRD42019119746 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42019119746.
7. **Berenbrok LA**. The primary care pharmacist. *J Am Pharm Assoc*. 2020;60(1):8-9. PMID: 31917250.
8. American Pharmacists Association. Immunization quick reference guide. 2019-2020. Available from: <https://media.pharmacist.com/APhA/documents/Immunization/imz-sig-immun-ref-guide-low-res.pdf>. Accessed on May 7, 2020.
9. **Berenbrok LA**, Tang S, Coley KC, Boccuti C, Dickson S, Hernandez I. Access to potential COVID-19 vaccine administration facilities: A geographic information systems analysis. December 16, 2020. https://s8637.pcdn.co/wp-content/uploads/2020/12/covid-vaccine-distribution-pharmacy-locations-state-county-west_health-university_pittsburgh.pdf.
10. Katz DS, Gabriel C, **Berenbrok LA**. Expansion of pharmacy preceptors' cannabidiol knowledge and confidence to ensure patient safety. *J Am Pharm Assoc*. 2021 Jul-Aug;61(4):e212-e213. DOI: 10.1016/j.japh.2021.03.021. PMID: 33863654.
11. Davis EM, **Berenbrok LA**, Bhatte S, Carter WM, Chu K, Connor SE, Douaihy AB, Frank LR, Macadangang, Notier A, Pringle JL, Rigotti L. Chancellor's Ad Hoc Committee on Health and Well-being: Recommendations on addressing tobacco and alternative tobacco use final report. Pittsburgh, PA, May 2021, pages 1-55, May 2021.
12. **Berenbrok L** and Mormer E. You may soon be able to buy hearing aids over the counter at your local pharmacy. *The Conversation*. <https://theconversation.com/you-may-soon-be-able-to-buy-hearing-aids-over-the-counter-at-your-local-pharmacy-165159>. Published September 21, 2021.
13. Norris MS, Steinmetz Pater K, **Berenbrok LA**. Expanding remote ambulatory care learning environments from COVID-19 to beyond. *Am J Health Syst Pharm*. 2022 Apr 1;79(8):621-622. doi: 10.1093/ajhp/zxab463. PMID: 34864848.
14. Dickson S, Hernandez I, Gabriel N, Kirby M, Newman TV, **Berenbrok LA**. Estimated savings from application of a domestic reference price model for pricing of drugs at launch, 2015-2019. Council for Informed Drug Spending Analysis 2021. Available at <https://www.cidsa.org/publications/estimated-medicare-savings-from-domestic-reference-pricing>. Discussed by the Medicare Payment Advisory Committee (MedPAC) Report to Congress entitled "Medicare and the Health Care Delivery System", June 2022. Available at https://www.medpac.gov/wp-content/uploads/2022/06/Jun22_MedPAC_Report_to_Congress_SEC.pdf.

15. Crossey CD, Garcia A, **Berenbrok LA**. An approach to insulin tapering and discontinuation after glucagon-like peptide-1 receptor agonist initiation. *Am J Health Syst Pharm*. 2022 Aug 18;zxac230. doi: 10.1093/ajhp/zxac230. PMID: 35981331.
16. **Berenbrok L** and Mormer E. Over-the-counter hearing aids have been greenlighted by the FDA – your local pharmacist will soon be able to sell you the device you need. *The Conversation*. <https://theconversation.com/over-the-counter-hearing-aids-have-been-greenlighted-by-the-fda-your-local-pharmacist-will-soon-be-able-to-sell-you-the-device-you-need-184890>. Published August 23, 2022.
17. **Berenbrok L** and Jarlenski M. With over-the-counter birth control pills likely to be approved, pharmacists and pharmacies could play an ever-increasing role in reproductive health care. *The Conversation*. <https://theconversation.com/with-over-the-counter-birth-control-pills-likely-to-be-approved-pharmacists-and-pharmacies-could-play-an-ever-increasing-role-in-reproductive-health-care-189216>. Published October 28, 2022.
18. **Berenbrok L**, Pringle JL, and Carroll J. FDA approval of over-the-counter Narcan is an important step in the effort to combat the US opioid crisis. *The Conversation*. <https://theconversation.com/fda-approval-of-over-the-counter-narcan-is-an-important-step-in-the-effort-to-combat-the-us-opioid-crisis-198497>. Published March 29, 2023.
19. **Berenbrok LA** and Mormer E. Over-the-counter hearing aids. *JAMA*. 2023;329(14):1225-1226. doi:10.1001/jama.2023.1795.
20. Koverman MS, Sun C, Berman NR, Munro C, Phillips B, Rowe KB, Massart MB, **Berenbrok LA**. Primary care is what's missing: A response to a comparison of targeted vs. expanded pharmacogenomic testing [published online ahead of print, 2023 May 8]. *J Am Pharm Assoc*. 2023;S1544-3191(23)00144-9. doi:10.1016/j.japh.2023.05.004.
21. **Berenbrok LA**. 2023 Prescott Lecture: Leading with excitement, purpose, and proof. *J Am Pharm Assoc*. 2023;S1544-3191(23)00150-4. doi:10.1016/j.japh.2023.05.009.
22. Rowe K, **Berenbrok L** and Empey P. Can at-home DNA tests predict how you'll respond to your medications? Pharmacists explain the risks and benefits of pharmacogenetic testing. *The Conversation*. <https://theconversation.com/can-at-home-dna-tests-predict-how-youll-respond-to-your-medications-pharmacists-explain-the-risks-and-benefits-of-pharmacogenetic-testing-209312>. Published September 15, 2023.
23. **Berenbrok L**, Culley C, Pater K. FDA advisory panel's conclusion that oral phenylephrine is ineffective means consumers need to think twice when buying cold and flu meds. *The Conversation*. <https://theconversation.com/fda-advisory-panels-conclusion-that-oral-phenylephrine-is-ineffective-means-consumers-need-to-think-twice-when-buying-cold-and-flu-meds-213510>. Published October 26, 2023.
24. Sun CN, **Berenbrok LA**, Stevenson JM. Dynamic and accessible pharmacogenomic results: a response to pharmacogenomic testing for antidepressant treatment selection. *Neuropsychopharmacology*. 2024 Feb 10. doi: 10.1038/s41386-024-01816-3.

TEXTBOOK CHAPTERS

1. Stevenson JM and **Berenbrok LA**. Chapter 1. Introduction and fundamentals of pharmacogenomics. In: Lam JT, Gutierrez MA, Shah S, eds. *Pharmacogenomics: a primer for clinicians*, 1e. New York, NY: McGraw-Hill; 2021.

2. Rosenberg E, **Berenbrok LA**, Truong H. Chapter 9. Ethical and legal implications and advocacy related to disasters and emergencies. In: Desai M, Truong H, Normann SA, eds. Disasters and emergencies: A planning and response guide for pharmacy professionals, 1e. Washington, DC: American Pharmacists Association;2021.

PUBLISHED INTERVIEWS

1. Bonner L. How often do patients see their pharmacist? New study gives insight. *PharmacyToday*. 2020;26(10):41. <https://doi.org/10.1016/j.ptdy.2020.10.021>.
2. PBA Health. Over-the-counter hearing aids: Everything pharmacies need to know. Elements. March 17, 2022. https://www.pbahealth.com/elements/over-the-counter-hearing-aids-retail_pharmacy.
3. Chan C. OTC hearing aids may soon be available at pharmacies. *PharmacyToday*. 2022;28(6):24. <https://doi.org/10.1016/j.ptdy.2022.05.008>.
4. Linville C. You heard that right! America's Pharmacist. August 2022. <https://digitaleditions.sheridan.com/publication/?m=22640&i=753784&view=contentsBrowser&fbclid=IwAR3XkgAIQSRQgP95XzNQbMzeyXIA4iduCS4a&ver=html5> (accessed 2022 September 30).
5. Blum K. Closing the chronic care gap in rural South Carolina. August 2023. <https://www.specialtypharmacycontinuum.com/Operations-and-Management/Article/08-23/Closing-the-Chronic-Care-Gap-in-Rural-South-Carolina/71170> (accessed 2023 September 26).
6. Keshner A. As Rite Aid closes some pharmacies, neighborhoods could lose a 'pivotal' piece of America's health system. <https://www.marketwatch.com/story/as-rite-aid-closes-some-pharmacies-neighborhoods-could-lose-a-pivotal-piece-of-americas-health-system-2a700b29?mod=home-page> (accessed 2023 October 17).

ABSTRACTS AND POSTERS

Mentored students denoted by *.

1. *D'Orazio D, *Esteves C, *Mihalko R, *Podrebarac S, Coley K, **Berenbrok L**. Implementation strategies for Over-the-Counter (OTC) hearing aid services: A qualitative analysis of independent community pharmacies. American Pharmacists Association Annual Meeting and Exposition. Orlando, FL. March 2024.
2. *Skender E, *Messersmith I, Miller T, **Berenbrok L**. PrEP accessibility: Visualizing an expanded scope of pharmacy practice in Pennsylvania. Applied Geography Conference AGX 2023. Pittsburgh, PA. October 2023.
3. *Chieffo N, *Leong A, *Stuck E, Mormer E, **Berenbrok LA**. Opportunities for interprofessional collaboration between pharmacists and hearing professionals in Pennsylvania: A descriptive geographic information system study. 2022 Midyear Clinical Meeting & Exhibition. Las Vegas, NV. December 2022.
4. Coley KC, **Berenbrok LA**, Gessler C, Kirisci L, Ghaswalla P, Herrera-Restrepo O. Hepatitis B vaccination initiation in US adults with diabetes: The experience of a pharmacist-led motivational interviewing program. World Hepatitis Summit 2022. Virtual event.
5. Guo J, Hernandez I, Tang A, Essien U, **Berenbrok L**. Income disparities in driving distance to health care infrastructure. AcademyHealth 2022 Annual Research Meeting. Washington, DC. June 2022.

6. Huang W, Hernandez I, Tang S, Gabriel N, Sharareh N, Patel N, **Berenbrok L**, Guo J. Disparities in the association between proximity to community healthcare facilities and COVID-19 related mortality across US counties in the COVID-19-vaccine era. AcademyHealth 2022 Annual Research Meeting. Washington, DC. June 2022.
7. Huang W, Hernandez I, Tang S, Gabriel N, Sharareh N, Patel N, **Berenbrok L**, Guo J. Rural-Urban Disparities in COVID-19 related mortality across US counties by racial and ethnic composition. AcademyHealth 2022 Annual Research Meeting. Washington, DC. June 2022.
8. Hernandez I, **Berenbrok L**, He M, Li Y, Wouters O. Association between treatment costs and research and development investments for new drugs approved from 2009 to 2018. AcademyHealth 2022 Annual Research Meeting. Washington, DC. June 2022.
9. Hernandez I, Tang S, Gabriel N, Guo J, Sharareh N, Patel N, Dickson S, **Berenbrok L**. Access to community pharmacies: A nation-wide geographic information systems analysis. Academy Health 2022 Annual Research Meeting. Washington, DC. June 2022.
10. Riden KA, **Berenbrok LA**, Coons JC, Empey PE. Multidisciplinary clinician preparedness for pharmacogenomic results in the EHRs at a large health-system. CPIC-PGRN. Aurora, CO. May 2022.
11. **Berenbrok LA**, Tang S, Gabriel N, Guo J, Sharareh N, Patel N, Dickson S, Hernandez I. Access to community pharmacies: A nation-wide geographic information systems analysis. American Pharmacists Association Annual Meeting and Exposition. San Antonio, TX. March 2022.
12. **AACP Pharmacogenomics SIG Committee for PGx Cases**. Development of an open-access pharmacogenomics patient case repository for pharmacy educators. 2021 AACP Annual Meeting. July 17-22, 2021.
13. *Snader L, *Suh YH, **Berenbrok LA**, Wong A, Kane-Gill S. Identification of facilitators and barriers to clinicians' response to receiving clinical decision support alerts in the intensive care unit (ICU). 2021 ACCP Virtual Poster Symposium. May 25 and 26, 2021.
14. Guo J, Dickson SD, **Berenbrok LA**, Tang S, Essien UR, Coley K, Hernandez I. Racial disparities in access to potential COVID-19 vaccine administration facilities across US states: A geographic information systems analysis. Oral Presentation at 2021 Academy Health Annual Research Meeting (online meeting). June 15, 2021.
15. Munro C, Berman N, **Berenbrok LA**, Empey PE, Massart M. Two genetic counselors walk into a primary care clinic. ACMG Annual Clinical Genetics Meeting. April 2021.
16. Massart M, **Berenbrok LA**, Berman N, Munro C, Empey PE. Novel clinical model to deliver genetic services from a multidisciplinary primary care team. ACMG Annual Clinical Genetics Meeting. April 2021.
17. Mormer E, **Berenbrok L**, Cremeans A, Ciemniecki L. Collaboration with pharmacists on OTC hearing help. Annual Convention of the American Speech-Language Association, San Diego, CA. November 2020. (Convention cancelled.)
18. *Mercer J, *Kim J, **Berenbrok L**. Innovative experiential learning and clinical skills preparing APPE and practice-ready student pharmacists. FIP World Congress, Seville, Spain. September 2020. (Conference cancelled, poster available online September 2020)
19. *Ciemniecki L, **Berenbrok LA**, Cremeans A, Albright R, Mormer E. A Delphi method to establish pharmacist competencies for OTC hearing aid knowledge and referral. AAA2020 + HearTech Expo, New Orleans, LA. April 2020. (Conference cancelled, presentation available online September 2020)
20. *Sprando AC, Coley KC, **Berenbrok LA**, Carroll JC. Evaluation of brief messages to inform a meningococcal group B vaccine multimedia educational campaign on a university campus. American Pharmacists Association Annual Meeting and Exposition. National Harbor, MD. March 2020. (Conference cancelled, virtual presentation May 2020)

21. *White A, *Murray K, Antinopoulos B, **Berenbrok L**, Carroll JC, McGivney MS, Coley KC. A formative evaluation of a pharmacist-led adherence intervention at a regional supermarket pharmacy call center for employees with obstructive lung disease. American Pharmacists Association Annual Meeting and Exposition. National Harbor, MD. March 2020. (Conference cancelled, virtual presentation May 2020)
22. Murphy E, Firm A, **Berenbrok L**, Grieve L, Beck D. The merged pharmacology classroom: A formative and interdisciplinary approach to physician assistant education. Canadian Association of Physician Assistants 2019 Annual Conference. Niagara Falls, ON, Canada. October 2019.
23. Pruskowski J, Ruby C, **Berenbrok LA**, Seybert A, Handler S. MeRIT: Characterizing medication related rehospitalizations in palliative care patients: An exploratory study. 2019 American College of Clinical Pharmacy Annual Meeting. New York, NY. October 2019.
24. Adams SM, Stevenson JM, Coons JC, **Berenbrok LA**, Empey PE. Dissemination of pharmacogenomics education through the Test2Learn platform. Clinical Pharmacogenetics Implementation Consortium Meeting. Memphis, TN. June 2019.
25. *Jordan JL, *Snyder DE, *Mancuso TG, **Berenbrok LA**. Understanding employee preferences for an employer-sponsored comprehensive medication management benefit. American Pharmacists Association Annual Meeting and Exposition. Seattle, WA. March 2019.
26. *Barthen CL, *Writer RL, Antinopoulos BC, Uber R, Stevenson JM, **Berenbrok LA**. An implementation plan for integrating pharmacogenomic data at a regional supermarket community pharmacy. American Pharmacists Association Annual Meeting and Exposition. Seattle, WA. March 2019.
27. Lapping AM, **Berenbrok LA**. Successful implementation strategies for community pharmacy-based National Diabetes Prevention Programs (NDPP) in Pennsylvania. American Pharmacists Association Annual Meeting and Exposition. Seattle, WA. March 2019.
28. Adams SM, Coons JC, Stevenson JM, **Berenbrok LA**, Empey PE. Threading pharmacogenomics education throughout the core PharmD curriculum: 4 years of experience using personal genomic testing in the classroom. American Association of Colleges of Pharmacy Annual Meeting. Boston, MA. July 2018.
29. **Berenbrok LA**, Renner H, McGivney M, Coley KC. A value-based model for incentivizing adult immunizations at community pharmacies. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
30. Buck T, **Berenbrok L**, Coley K, Renner H, McGivney M, Firm A. Evaluating patients' perceived value and experience with a comprehensive medication review in an independent community pharmacy. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
31. Cho K, Coley K, **Berenbrok L**, McGivney M, McGrath S, Hopper A, Gilmore L, McCullough J. Identifying key factors associated with high-achieving chain pharmacy teams delivering quality care for patients in medically underserved areas. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
32. Doong K, **Berenbrok L**, Coley K, McGivney M, Antinopoulos B, Moore C, Richardson R. Evaluating the early implementation of pharmacist-provided patient care services of a statewide pharmacy network within a regional grocery chain pharmacy. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
33. *Gabriel C, *Valentino J, Antinopoulos B, **Berenbrok L**, McGivney M. Evaluation of a patient-centered technician training program to comprehensively engage patients in clinical services in a grocery store pharmacy chain. American Pharmacists Association Annual Meeting and

- Exposition. Nashville, TN. March 2018.
34. Gessler C, Richardson R, DeJames J, Kovac J, Moore C, Hall D, **Berenbrok L**, Coley K. Pandemic vaccine strategic planning at a regional grocery store chain pharmacy. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
 35. *Groves AS, **Berenbrok LA**. Student led integration of medication disposal envelopes into pharmaceutical care to older adults. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
 36. *Hake K, *Cothrel S, *Nesmith D, *Blazewick A, Rudzik K, McGivney M, **Berenbrok L**, Carroll J, Coley K, Kozminski M, Antinopoulos B. Using rapid-cycle problem solving during initial implementation of patient care services within independent community pharmacies participating in a statewide pharmacy care network. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
 37. *Nichols D, McGivney M, Abraham O, Coley KC, **Berenbrok LA**. Empowering community pharmacy technicians to improve inventory and drug product management. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
 38. *Pagliaro A, *Sutt A, Renner H, **Berenbrok L**, McGivney M, Coley K, Wilson E. Facilitating pandemic vaccination implementation in grocery store chain community pharmacies. American Pharmacists Association Annual Meeting and Exposition. Nashville, TN. March 2018.
 39. *Chatellier K, *Ioannou K, *Schwenk A, **Berenbrok LA**. The impact of a longitudinal geriatric introductory pharmacy practice experience on first and second year student pharmacist development. ASCP Annual Meeting & Exhibition. Kissimmee, FL. November 2017.
 40. Zhu J, Adams SM, Stevenson J, Coons J, **Berenbrok LA**, Grieve L, Empey E. Development of a micro-credentialing framework for pharmacogenomics education. AACP Annual Meeting. Nashville, TN. July 2017.
 41. Pater KS, Schonder K, **Berenbrok L**, Grieve LB, Skledar SJ, Smith RB, Howrie DL. The co-curriculum – providing structure for student achievement. AACP Annual Meeting. Nashville, TN. July 2017.
 42. *Pinto M, **Berenbrok L**, Hernandez I. Patient adherence to antidepressant medications and its relationship to adherence to oral diabetes medications. Pharmacy Quality Alliance Annual Meeting. Baltimore, MD. May 2017.
 43. Hoang K, Renner H, **Berenbrok L**, Coley K, McGivney M, Carroll J, Harriman McGrath S, Gilmore L. Identifying how patients with diabetes prefer to be engaged in a community pharmacy-based diabetes self-management education program. American Pharmacists Association Annual Meeting and Exposition. San Francisco, CA. March 2017.
 44. Kovac J, **Berenbrok L**, Coley K, Renner H, McGivney M, Jordan C, Richardson R. Eliciting successful patient engagement methods by pharmacists and technicians in a regional grocery chain pharmacy. American Pharmacists Association Annual Meeting and Exposition. San Francisco, CA. March 2017.
 45. *Wilkinson H, *Nichols D, **Berenbrok L**, Carroll J, McGivney M. Examining the role of Pennsylvania community pharmacists in combating the opioid epidemic. American Pharmacists Association Annual Meeting and Exposition. San Francisco, CA. March 2017.
 46. Hart K, **Berenbrok L**, McGrath S, Coley K, Empey P, McGivney M. Improving pharmacists' ability to engage patients in pharmacogenomics testing within a chain community pharmacy. American Pharmacists Association Annual Meeting and Exposition. Baltimore, MD. March 2016.

47. Nierste N, **Berenbrok L**, Smith Cooney S, McCormick K, Coley K, McGivney M. Use of a decision aid to assist pharmacists in providing targeted interventions to overcome patient barriers to medication adherence. American Pharmacists Association Annual Meeting and Exposition. Baltimore, MD. March 2016.
48. *Steltenpohl E, *Barry B, **Berenbrok L**, Coley K, Olenak J, McGivney M. An evaluation of successful point-of-care testing implementation by community pharmacists in Pennsylvania. American Pharmacists Association Annual Meeting and Exposition. Baltimore, MD. March 2016.
49. **Berenbrok LA**. SilverScripts: Student pharmacists engaging elderly patients in the community. Academically Based Community Engagement: An Idea Exchange. University of Pittsburgh. September 2015.
50. Garmong GE, Bacci JL, **Berenbrok LA**, McGrath SH, Ossman KL, Odukoya O, McGivney MS. Impact of pharmacist coaching on targeted medication review completion rates in a traditional chain community pharmacy. American Pharmacists Association Annual Meeting and Exposition. San Diego, CA. March 2015.
51. *Henderson C, Somma McGivney M, Bacci J, **Berenbrok L**. Evaluating and improving a pharmacy student-led community outreach program at local senior centers. American Pharmacists Association Annual Meeting and Exposition. San Diego, CA. March 2015.
52. Jordan CA, McGivney MS, Bacci JL, **Berenbrok LA**, Richardson R, DeJames J, Pringle JL. Impact of brief intervention on patient medication adherence and customer loyalty in a grocery store chain pharmacy. American Pharmacists Association Annual Meeting and Exposition. San Diego, CA. March 2015.
53. *Gazda N, **Berenbrok LA**, Ferreri S. Retrospective analysis on the impact of an integrated MTM program on return on investment (ROI) to the pharmacy. AMCP 2014 Nexus. Boston, MA. October 2014.
54. **Berenbrok L**, Michaels N, Lee J, Petri D, Marciniak M, Ferreri S. The influence of community pharmacists on star ratings: focus on diabetes medication adherence. American Pharmacists Association Annual Meeting and Exposition. Orlando, FL. March 2014.
55. **Berenbrok L**, Bacci J, McCartney E, Menard A, McGivney M, McGrath S. Students as catalysts for change: implementation and expansion of medication therapy management services within a community chain pharmacy. American Pharmacists Association Annual Meeting and Exposition. Los Angeles, CA. March 2013.

PROFESSIONAL ACTIVITIES

PHARMD STUDENT TEACHING

University of Pittsburgh School of Pharmacy

- | | |
|-----------|---|
| 2014-2019 | Faculty research mentor, PHARM 5819 Community Leadership, Innovation, & Practice, 1 credit summer term, CLIP Area of Concentration students |
| 2014-2019 | Course co-coordinator, PHARM 5110 Pharmacists Patient Care 1, 3 credits fall term, first year students |
| 2014-2021 | Course coordinator, PHARM 5212 Community Pharmacist Practice 1, 1 credit fall term, second year students |

- 2015 Course faculty, PHARM 5115 Anatomy and Physiology 2, 3 credits spring term, second year students, *Electrophysiology*
- 2015-2017 Course co-coordinator, PHARM 5213 Community Pharmacist Practice 2, 1 credit spring term, second year students
- 2015-2022 Course faculty, PHARM 5111 Pharmacists Patient Care 2, 3 credit spring term, first year students
- 2016-present Course co-coordinator, PHARM 5220 Case Conference Series 3, 3 credits fall term, second year students
- 2017-present Course co-coordinator, PHARM 5227 Case Conference Series 4, 3 credits spring term, second year students
- 2017-present Faculty preceptor, PHARM 540X Advanced Pharmacy Practice Experience, 5-week rotation, fourth year students, *Academia Elective and Ambulatory Core*
- 2017-2021 Faculty, PHARM 5324 Case Conference Series 5, 1 credit fall term, third year students, *APhA Pharmacy-Based Immunization Delivery*
- 2018-present Faculty, PHARM 5113 Community Health 2, 1 credit spring term, first year students, *Motivational Interviewing*
- 2018-present Faculty, PHARM 5121 Case Conference Series 2, 1 credit spring term, first year students, *Motivational Interviewing Skills with Standardized Patients*
- 2018 Faculty, PHARM 5311 Safe Medication Use and Pharmacoeconomics, 2 credits spring term, third year students, *Principles & Practice of Medication Safety: Community Setting Applications*
- 2018-2022 Faculty, PHARM 5213 Community Pharmacist Practice 2, 1 credit spring term, second year students, *Medication Therapy Management, Point-of-Care Testing*
- 2019 Faculty, PHARM 5122 Case Conference Series 1, 1 credit fall, first year students
- 2022-present Course co-coordinator, PHARM 5233 Professional and Career Development 2, 0.5 credits second professional year, second year students

PHARMACY RESIDENT TEACHING

University of Pittsburgh School of Pharmacy PGY-1 Community-based Residency

- 2014-2015 Residency Preceptor, University of Pittsburgh PGY1 Community Pharmacy Residency
Brandon Antinopoulos, PharmD; Gale Garmong, PharmD; Christine Jordan, PharmD; Kyle McCormick, PharmD
- 2015-2016 Residency Coordinator, University of Pittsburgh PGY1 Community Pharmacy Residency
Kristin Hart, PharmD; Nicole (Nierste) Jasperson, PharmD

- 2015-2019 Program Coordinator, Training Outpatient Pharmacists Techniques in Evidence-based Research (TOP TIER), A community pharmacy residency research course
PGY1 Community-based Pharmacy Residents in Pennsylvania
- 2016-2017 Residency Coordinator, University of Pittsburgh PGY1 Community Pharmacy Residency
Karen Hoang, PharmD; Jonathan Kovac, PharmD
- 2017-2018 Residency Coordinator, University of Pittsburgh PGY1 Community-based Pharmacy Residency
Katherine Cho, PharmD; Katie Doong, PharmD
- 2018-2019 Residency Coordinator, University of Pittsburgh PGY1 Community-based Pharmacy Residency
Amber Lapping, PharmD; Sneha Mitra, PharmD; Catherine Phi, PharmD
- 2019-2020 Teaching Mentor, University of Pittsburgh PGY1 Community-based Pharmacy Residency
Carly Gabriel, PharmD; Kelsey Hake, PharmD; Evan Turco, PharmD
- 2021-present Preceptor, University of Pittsburgh/UPMC PGY2 Ambulatory Care Shadyside, Primary Care Precision Medicine Longitudinal Rotation and Academia Rotation
Carly Gabriel, PharmD; Caroline Crossey, PharmD; Michelle Koverman, PharmD
- 2021-present Coordinator, University of Pittsburgh/UPMC Ambulatory Care Residency Research Group
- 2023-present Preceptor, University of Pittsburgh/UPMC Western Psychiatric Hospital PGY1/PGY2 Pharmacogenomics Elective Rotation
Christine Sun, PharmD

PHARMACY FELLOW TEACHING

University of Pittsburgh School of Pharmacy

- 2016-2018 Fellowship Committee, Research Fellowship in Community Care
Hannah M. Renner, PharmD, MPH
- 2018-2019 Fellowship Committee, Community Pharmacy Practice Development Fellow
Katie Doong, PharmD
- 2018-2020 Research and Teaching Mentor, Clinical Pharmacogenomics Fellow
Ryley Uber, PharmD
- 2019-2021 Teaching Mentor, Community Pharmacy Practice Development Fellow
Sophia Cothrel, PharmD
- 2020-2022 Research Mentor and Practice Preceptor, Clinical Pharmacogenomics Fellow
Katherine Riden, PharmD
- 2021-2023 Research Mentor and Practice Preceptor, Clinical Pharmacogenomics Fellow
Katherine Robinson, PharmD

2022-2024 *Research Mentor and Practice Preceptor, Clinical Pharmacogenomics Fellow*
Kayla Rowe, PharmD

OTHER TEACHING

University of Pittsburgh School of Medicine

Fall 2018 Faculty facilitator, MS-1: Introduction to Medical Interviewing

University of Pittsburgh School of Social Work

Fall 2018 Guest lecturer, SOCWRK 1000 Introduction to Social Work

2020-2021 Guest lecturer, SWBEH 2077 Human Behavior: Adult Development and Aging

University of Pittsburgh School of Health and Rehabilitation Sciences

Fall 2018 Guest lecturer, PAS 2304 Pharmacology 2

Fall 2019 Guest lecturer, HRS 1095 Community Connector Course

Washington & Jefferson College

Spring 2021 Guest lecturer, HIS 275 Race, Medicine, and Society

University of Pittsburgh College of General Studies, Osher Lifelong Learning Institute (OLLI)

Spring 2022 Faculty, Genomics and the Future of Health Care: A Precision Medicine Primer

University of Pittsburgh School of Public Health

Spring 2022 Guest lecturer, HUGEN 2036 Genetic Counseling Internship

CURRICULUM DEVELOPMENT

University of Pittsburgh School of Pharmacy

2016-present Test2Learn™ Community-Based Pharmacogenomics Certificate Program
The Test2Learn™ Community-based Pharmacogenomics Certificate Program uses highly-interactive exercises using real personal or aggregated genetic data to train community pharmacists and other learners to decipher and translate genetic tests, make appropriate recommendations for the patient, and counsel and collaborate with prescribers to help optimize patient medication regimens.

University of Pittsburgh School of Pharmacy and School of Health and Rehabilitation Sciences

2019-present CHAMP: Championing Hearing Using Accessible Medication Experts at the Community Pharmacy
This highly interactive, online program teaches pharmacists to safely and effectively help patients seeking hearing aids at the community pharmacy by addressing professional competencies created and agreed upon by professional pharmacy and audiology organizations, hearing aid industry experts, and persons with hearing loss.

American Pharmacists Association

2023-present Pharmacy-based OTC hearing aids advanced training program
This 3-hour competency-based, interprofessional advanced training program on over-the counter (OTC) hearing aids developed by University of Pittsburgh faculty is suited for both pharmacists and student pharmacists. The self-paced eLearning program will review epidemiology of hearing loss, laws and regulations related OTC hearing aids, and the pharmacists' OTC hearing aid patient care process. At the end of this training, pharmacists will discover how to recognize, intervene, and refer patients with hearing loss to hearing healthcare.

MENTORED GRANT FUNDED RESEARCH

Pennsylvania Pharmacists Association Educational Foundation	Implementation strategies for Over-the-Counter (OTC) hearing aid services: A qualitative analysis of independent community pharmacies	Faculty research mentor MPIs: Dominic D’Orazio, Caitlin Esteves, Rebecca Mihalko, Sydney Podrebarac	2024	\$975
Pennsylvania Pharmacists Association Educational Foundation	OTC hearing aids in the community pharmacy	Faculty research mentor PI: Elizabeth Midey	2020-2022	\$1,000
Pennsylvania Pharmacists Association Educational Foundation	Successful implementation strategies for community pharmacy-based Nation Diabetes Prevention Programs (NDPP) in Pennsylvania	Faculty research mentor PI: Amber Lapping, PharmD	2018-2019	\$600
Pennsylvania Pharmacists Association Educational Foundation	Impact of a medication adherence packaging service provided by an independent community pharmacy on patient-centered outcomes	Faculty research mentor PI: Catherine Phi, PharmD	2018-2019	\$1,000
American Pharmacists Association Foundation	Evaluating the early implementation of pharmacist-provided patient care services of a statewide pharmacy network within a regional grocery chain pharmacy	Faculty research mentor PI: Katie Doong, PharmD	2017-2018	\$1,000
American Pharmacists Association Foundation	Identifying key factors associated with high-achieving chain pharmacy teams delivering quality care for patients in medically underserved areas	Faculty research mentor PI: Katherine Cho, PharmD	2017-2018	\$1,000

American Pharmacists Association Foundation	Eliciting successful patient engagement methods by pharmacists and technicians in a regional grocery chain pharmacy	Faculty research mentor PI: Jonathan Kovac, PharmD	2016-2017	\$1,000
Pennsylvania Pharmacists Association Educational Foundation	Patient preference for engagement in a community pharmacy-based diabetes self-management education program	Faculty research mentor PI: Karen Hoang, PharmD	2016-2017	\$400

MENTORING

University of North Carolina Eshelman School of Pharmacy

2013-2014 Honors Program, Research Mentor
Nicholas Gazda, PharmD Class of 2016

University of Pittsburgh School of Pharmacy

2014-2015 Area of Concentration in Pharmacy Business Administration, Faculty Advisor
Reina Fink, PharmD Class of 2015

2016-2017 PQA-CVS Health Foundation Scholars, Research Mentor
Michael Pinto, PharmD Class of 2019

University of Pittsburgh Office of Undergraduate Research

2020-2021 ARTSC 0120 First Experiences in Research, Faculty Research Mentor
Elizabeth Midey, PharmD Class of 2026

ARTSC 0121 Continuing Experiences in Research, Faculty Research Mentor
Elizabeth Midey, PharmD Class of 2026

2022 ARTSC 0120 First Experiences in Research, Faculty Research Mentor
Audrey Leong

University of Pittsburgh Graduate School of Public Health

2019-2020 A Case Study: The Implementation of the Meds to Beds Program On the Gynecology/Oncology Unit at a UPMC Hospital, Masters Essay Reader
Maira Undavalli, BS

2022-2023 Clinical Utility of Pharmacogenomics in Hospice Care Patients through the Lens of the Quadruple Aims of Healthcare
Carolyn Rose Maxwell, BS

University of Pittsburgh Institute for Clinical Research Education

2021 Master Thesis Committee – Innovation Specialty Track
Jennifer Pruskowski, PharmD, BCPS, BCGP, CPE

CHAPTER ADVISING

University of Pittsburgh School of Pharmacy

2015-2017 Pennsylvania Pharmacists Association, Faculty Advisor
2016-2021 American Pharmacists Association-Academy of Student Pharmacists, Faculty Advisor
2018-2023 Kappa Psi Pharmaceutical Fraternity, Inc., Beta Kappa Chapter Faculty Advisor and
Grand Council Deputy
2021-present Phi Lambda Sigma Pharmacy Leadership Society, Beta Delta Chapter Faculty Advisor

University of Pittsburgh Schools of the Health Sciences

2015-present Interprofessional Student Board affiliated with Primary Care Progress at Pitt, Faculty
Advisor

STUDENT ADVISING

2015-2018 Career Learning and Advising Group, Faculty Advisor
Melanie Beers, Brian Keaton, Julie Mandel, Abby Meyer, Kaela-Marie Walsh, and Bradley Wong, PharmD Class of 2018

2015-2019 Career Learning and Advising Group, Faculty Advisor
Kristel Chatellier, Amanda Colangelo, Richard (Jay) Dong, Kelsey Hake, Ashley Kamp, and Michael Pinto, PharmD Class of 2019

2016-2020 Career Learning and Advising Group, Faculty Advisor
Rebecca (Funto) Babalola, Victoria Blake, Kelly Jenniches, Cameron Karnick, Divya Patel, and Katelyn Rudzik, PharmD Class of 2020

2017-2021 Career Learning and Advising Group, Faculty Advisor
Jose Barro, Jennifer Dolphin, Madeline Mitchell, Hunter Vermilya, Valerie Wan, and Jacob Winschel, PharmD Class of 2021

2018-2022 Career Learning and Advising Group, Faculty Advisor
Alexa Casanova, Bunly Heng, Yianni Leventopoulos, Ethan Markowski, Grace Rong, Roisin Sabol, PharmD Class of 2022

2019-2023 Professional Development Advising Group, Professional Development Advisor
Janiah Abraham, Alexandra Adams, Seung Won Baek, Brandon Stephens, Jing Ling Zheng, PharmD Class of 2023

2020-present Professional Development Advising Group, Professional Development Advisor
Douglas Altavilla, Benjamin Davic, Megan Hutar, Sharon Jayamohan, Katherine McGraw, Molly Stockwell, PharmD Class of 2024

2021-present Professional Development Advising Group, Professional Development Advisor
Emmanuel Ampofo, Lucas Mendoza, Anna Monson, Elizabeth Midey, Brittany Solosky, Kayleigh Walker, PharmD Class of 2025

2022-present Professional Development Advising Group, Professional Development Advisor
Abigail Bakus, Shawn Carroll, Pranjal Das, Olivia Frey, Brinn Mancuso, Isaac May

2023-present Professional Development Advising Group, Professional Development Advisor
Alexis Andreas, Autumn Ellis, Olivia Le, Tarun Metla, Conor Ryan, Brooke Veit

RESEARCH

CURRENT GRANT SUPPORT

National Institute on Deafness and Other Communication Disorders	Increasing access to hearing healthcare with OTC hearing aids and community pharmacists	Principal Investigator	2023-2025	Loan Repayment Program Award
State of PA - Commonwealth Universal Research Enhancement Program (CURE)	Genotype-guided Comprehensive Medication Management to Improve Depression	Co-Investigator	2023-2026	\$1,300,763
Veterans' Health Administration	Pharmacogenomics Education and Training	Co-Investigator	2023-2026	\$513,750
University of Pittsburgh / UPMC - Precision Medicine Implementation Program (PreMIP)	Implementing Risk-Based Preemptive Pharmacogenomic (PGx) Testing in Employee Health	Co-Principal Investigator	2022-2025	\$1,000,000

GRANTS UNDER REVIEW

National Institutes of Health – R21	Increasing access to hearing healthcare: An assessment of pharmacy technician educational training for the provision of over-the-counter hearing aids in rural Alabama and Mississippi pharmacies	Co-Principal Investigator	2024-2026	\$415,968 Score 21 Percentile 7%
National Institutes of Health – R01	Spatial access to health care as a determinant of diabetes management and outcomes	Co-Investigator	2024-2025	\$3,872,482

GRANTS NOT FUNDED

PhRMA Foundation	Assessing patient-centered value associated with use of medication adherence packaging services (MAPS) in patients with multiple chronic diseases	Co-investigator	2020	\$99,906
Community Pharmacy Foundation	RxDataBank: An online database of curated evidence, interactive graphics, and data visualizations devoted to advancing community pharmacy practice with data	Primary Investigator	2021	\$39,916
Community Pharmacy Foundation	Creation of a national registry of community pharmacy professionals for qualitative and survey-based research	Primary Investigator	2022	\$40,000
Community Pharmacy Foundation	An OTC Hearing Aids Implementation Playbook for Community Pharmacists	Primary Investigator	2022	\$40,000
Center for Social and Urban Research at the University of Pittsburgh	Expanding Pharmacist Provision of Contraceptive Services in Pennsylvania	Primary Investigator	2022	\$20,000
University of Pittsburgh Clinical and Translational Science Institute's Research Initiative For Special Populations Pilot Award	Utility of Pharmacogenomic Testing in Hospice	Primary Investigator	2022	\$25,000
National Association of Chain Drug stores	Addressing Food Insecurity and Community Wellness using Pharmacist Extenders and Mobile Supermarket	Primary Investigator	2022	\$750,000

PRIOR GRANT SUPPORT

West Health Policy Center	Application of an innovation-based domestic reference scheme for the pricing of drugs at launch	Co-Primary Investigator	2020 30%	\$55,761
West Health Policy Center	Access to community pharmacies providing immunization services: Implications for administration of the COVID-19 vaccine	Co-Primary Investigator	2020 26%	\$59,905
American Academy of Audiology, Outreach Grant	EAR-SCANS refrigerator magnets	Co-project Lead	2020-2022	\$1,000
Premier Healthcare Solutions, Inc.	The impact of a multimedia educational campaign on meningococcal group B vaccination rates in a university student population	Primary Investigator	2019-2022	\$250,000
National Association of Chain Drug Stores	Implementing a hepatitis B vaccination program at a regional chain community pharmacy	Co-Primary Investigator	2019-2021	\$350,000
National Association of Chain Drug Stores	Test2Learn™: Community pharmacists pharmacogenomics education certificate program	Co-Investigator/ Program developer	2016-2021 2%	\$124,865
University of Pittsburgh, Advisory Council on Instructional Excellence	Championing Hearing using Accessible Medication Experts at the Community Pharmacy (CHAMP): An over-the-counter hearing aid certificate program for student pharmacists	Co-Director	2019-2020	\$19,500
University of Pittsburgh, Advisory Council on Instructional Excellence	The merged pharmacology classroom: A formative and interdisciplinary approach to physician assistant education	Co-Investigator	2018-2019	\$5,530

National Center for Interprofessional Practice and Education	Interprofessional Education Exchange Program (iPEEP)	Co-Investigator	2018 2.5%	\$100,000 (includes 50% cost-share match from the University of Pittsburgh School of Nursing)
Substance Abuse and Mental Health Services Administration TI-026423-03	Pittsburgh SBIRT: Training health professions students to conduct SBIRT	Council of Directors	2016-2019 5%	\$686,598
National Association of Chain Drug Stores	Expanding the role of pharmacy technicians and workforce impact	Co-Investigator	2017-2018 3%	\$49,461
National Association of Chain Drug Stores and Centers for Disease Control and Prevention	Improving vaccination rates through community partnerships and technology	Co-Investigator	2016-2018 8%	\$299,243

OTHER RESEARCH RELATED ACTIVITIES

2015-2019	American Pharmacists Association (APhA) Contributed Papers Program	Abstract Reviewer/ Poster Judge
2016-present	Journal of the American Pharmacists Association (JAPhA)	Peer Reviewer
2017-present	The Pennsylvania Pharmacist	Peer Reviewer
2018-2021	Journal of the American Pharmacists Association (JAPhA)	Editorial Advisory Board
2018-present	Currents in Pharmacy Teaching and Learning	Peer Reviewer
2019-present	Journal of Pharmacy Practice	Peer Reviewer
October 2019	Pharmacogenomics	Peer Reviewer
October 2019	Vaccine	Peer Reviewer
January 2020	Research in Social and Administrative Pharmacy	Peer Reviewer
April 2021	Pharmacogenomics and Personalized Medicine	Peer Reviewer
April 2021	Journal of the American College of Clinical Pharmacy	Peer Reviewer
July 2022	American Journal of Health-System Pharmacy	Peer Reviewer

CURRENT RESEARCH INTERESTS

Community pharmacy services, comprehensive medication management, employee health and wellness, entrustable professional activities, geographic information system mapping, health disparities, immunizations, interprofessional education, over-the-counter hearing aids, pharmacogenomics, point-of-care testing

INVITED SEMINARS AND LECTURESHIPS

LOCAL PRESENTATIONS

November 2014, Expired Meds, KDKA-TV CBS Pittsburgh

Recorded interview with Susan Koeppe

May 2015, Partners for Healthy Living, KDKA-TV CBS Pittsburgh

Recorded promotion for the Birmingham Free Clinic

February 2016, Dietary and herbal supplements, Urban League of Greater Pittsburgh, Pittsburgh, PA

May 2016, Quality measures in community pharmacy practice: The new frontier, University of Pittsburgh School of Pharmacy Spring Continuing Education Seminar: Topics in Pharmacy Practice and Education, Pittsburgh, PA

October 2017, Safe travels: Recommended vaccinations before traveling abroad, University of Pittsburgh School of Pharmacy Fall Continuing Education Seminar: Updates and Emerging Topics in Pharmacy Practice, Pittsburgh, PA

September 2018, Better together: How nurses and pharmacists are working together to advance patient care, PPG Nurses Seminar, Pittsburgh, PA

October 2019, Entrustable professional activities: A new assessment framework for experiential learning, University of Pittsburgh School of Pharmacy Fall 2019 Preceptor Continuing Education Seminar: Updates in Pharmacy Practice and Education, Pittsburgh, PA

April 2022, Clinical PGx services and education of healthcare practitioners, Achieving precision prescribing at Pitt/UPMC, presentation to Qatari Delegation, Pittsburgh, PA

May 2022, The Pharmacist's Role in Hearing Health Care, The Hearing Loss Association of America Pittsburgh Chapter, Pittsburgh, PA, online webinar

June 2022, Clinical applications of PGx in primary care, University of Pittsburgh School of Pharmacy Spring 2022 Preceptor Continuing Education Seminar, Pittsburgh, PA, online continuing education

August 2022, OTC hearing aids: A new frontier for hearing healthcare, UPMC Health Plan CE Series, Pittsburgh, PA, online continuing education

December 2022, Audiologists supporting pharmacists in hearing self-care, University of Pittsburgh Department of Communication Science and Disorders Audiology Seminar Series, online continuing education

September 2023, Pharmacogenomics in Primary Care, UPMC Health Plan CE Series, Pittsburgh, PA, online continuing education

REGIONAL PRESENTATIONS

February 2015, CMS Star Ratings: Utilizing MTM to boost your impact, Pennsylvania Pharmacists Association Mid-Year Conference, Harrisburg, PA

January 2016, Designer genes: Pharmacogenomic testing in your pharmacy practice, Pennsylvania Pharmacists Association Mid-Year Conference, Harrisburg, PA

September 2016, The star-spangled revolution: How community pharmacies can boost their quality measures, Pennsylvania Pharmacists Association Annual Conference, King of Prussia, PA

May 2018, Advancing pharmacy precepting with entrustable professional activities, University of Chicago at Illinois College of Pharmacy, Chicago, IL

January 2020, Getting ready for OTC hearing aids, Pennsylvania Pharmacists Association Mid-Year Conference, Harrisburg, PA

January 2020, Practice update: Point-of-Care testing by Pennsylvania pharmacists, Pennsylvania Pharmacists Association Mid-Year Conference, Harrisburg, PA

February 2020, Entrustable professional activities: Assessment perspectives for student pharmacists, Student National Pharmaceutical Association Region 1 and 2 Conference, Pittsburgh, PA

September 2022, OTC hearing aids: Are they right for you?, Value Drug Company, Pittsburgh, PA, online webinar

February 2023, Pharmacogenomics in Primary Care, Pennsylvania Pharmacists Association Mid-Year Conference, Lancaster, PA

February 2023, Updates on OTC Hearing Aids, Pennsylvania Pharmacists Association Mid-Year Conference, Lancaster, PA

March 2023, Teaming with pharmacists for hearing health care, Hearing Healthcare Alliance of Ohio Spring Webinar, online webinar

August 2023, Collaborating with Pharmacists on OTC Hearing Aids, Pennsylvania Academy of Audiology Conference, Camp Hill, PA

NATIONAL PRESENTATIONS

March 2018, Leveraging leadership in community-based pharmacy residency programs, American Pharmacists Association Annual Meeting and Exposition, Nashville, TN

March 2018, Students as catalysts for change: Innovation in interprofessional experiential education, American Pharmacists Association Annual Meeting and Exposition, Nashville, TN

May 2018, Improving adult immunization rates and registry reporting through healthcare collaborations, National Immunization Conference, Atlanta, GA

September 2018, Increasing adult vaccinations through community partnerships and technology, Public Health & Pharmacy Symposium: Adult Immunization & Preparedness at the Centers for Disease Control and Prevention, Atlanta, GA

March 2020, Preparing for OTC hearing aids: Are you ready?, American Pharmacists Association Annual Meeting and Exposition, National Harbor, MD (Conference cancelled, presentation available online May 2020)

April 2020, Embracing OTC hearing aids: Partnering with community pharmacists, AAA2020 + HearTech Expo, New Orleans, LA (Conference cancelled, presentation available online September 2020)

July 2020, EHR Go user group meeting, AACP 2020 Annual Meeting, Long Beach, CA. (Conference cancelled, presentation available online)

July 2020, Implementation strategies and leading practices for integrating substance use education within Doctor of Pharmacy curricula, AACP 2020 Annual Meeting, Long Beach, CA. (Conference cancelled, presentation available online)

October 2020, Collaborative care: Cardiovascular pharmacogenomics for the family medicine provider, AAFP Family Medicine Experience (FMX), Chicago, IL

November 2020, Pharmacogenomics: The who, what, and how it's done, PLUGS® (Patient-centered Laboratory Utilization Guidance Services) Virtual Summit 2020, Seattle, WA

December 2020, The pharmacist/genetic counselor collaboration in pharmacogenomics, American Association of Colleges of Pharmacy Pharmacogenomics SIG, online webinar

December 2021, PGx: Model implementations and resources to support the use of pharmacogenomics, National Council for Prescription Drug Programs, online webinar

March 2022, OTC hearing aids: Partnering with local audiologists, American Pharmacists Association Annual Meeting and Exposition, San Antonio, TX

March 2022, Embracing over-the-counter hearing aids: partnering with community pharmacists, American Academy of Audiology HearTECH Expo, St. Louis, MO

April 2022, Geographical access to pharmacies and OTC hearing aids, Mariner Project, University of Iowa College of Pharmacy, Iowa City, IA

June 2022, Disparities in distribution of COVID-19 vaccines across U.S. counties. Oral presentation at AcademyHealth 2022 Annual Research Meeting. Washington, DC. Hernandez I, Dickson S, Tang S, Gabriel N, Berenbrok J, Guo J.

October 2022, Quick Consult: OTC hearing aids, NCPA Annual Convention 2022, Kansas City, MO

October 2022, Access to community pharmacies: A geographic information systems approach, U.S. Public Health Service Pharmacist Provider Status Workgroup, online webinar

November 2022, Hearing aids - What's the opportunity?, National Community Pharmacists Association, online webinar

November 2022, Collaboration with Pharmacists on OTC Hearing Aids, 2022 ASHA Convention, New Orleans, LA

December 2022, Community collaborations: Audiology and Pharmacy working partnerships, American Speech-Language-Hearing Association, online webinar

December 2022, Pulse on Practice & Policy Open Forum Series, OTC hearing aids: What does this mean for pharmacy?, American Pharmacists Association, online webinar

January 2023, OTC Hearing Aids An Opportunity for Collaboration between Audiologists and Pharmacists, American Academy of Audiology, online webinar

March 2023, A better way to manage medications: CMM + Pharmacogenomic Testing, Updates in Precision Medicine and Pharmacogenomics Conference, Orlando, FL

March 2023, Leading with Excitement, Purpose, and Proof, American Pharmacists Association Annual Meeting and Exposition, Phoenix, AZ

April 2023, OTC Hearing Aids: Regulations, Collaborations, and Business Models, AdvanCE Total Pharmacy Solutions Summit, online webinar

April 2023, Pharmacists as Collaborators in OTC Hearing Aids, American Academy of Audiology HearTECH Expo, Seattle, WA

April 2023, A Case-Based Demonstration of Interprofessional Collaboration Between Geriatric Medicine, Pharmacy, Physical Therapy, and Audiology, American Academy of Audiology HearTECH Expo, Seattle, WA

May 2023, Collaborating with Pharmacists on OTC Hearing Aids, AudiologyOnline, online webinar

October 2023, Rolling the dice on pharmacogenetics: A gamified workshop, National Society of Genetic Counselors Annual Conference, Chicago, IL

January 2024, Pharmacogenomics in Older Adults, American Society of Consultant Pharmacists, online webinar, Approved Professional Development for BCGP

March 2024, The PB(R) to My Jelly: Practitioner and Researcher Collaboration in Practice-Based Research, American Pharmacists Association Annual Meeting and Exposition, Orlando, FL

March 2024, To Infinity and Beyond of Hearing Health Care: OTC Hearing Aids to the Rescue, American Pharmacists Association Annual Meeting and Exposition, Orlando, FL

April 2024, A Multidisciplinary Approach to Pharmacogenomics Genetic Counselors and Pharmacists Working Together, Fourth Annual Symposium on Pharmacogenomics, Washington University in St. Louis, online presentation

April 2024, All of Us: What a Clinician Should Know, AACP PK/PD/PGx PRN, online webinar

INTERNATIONAL PRESENTATIONS

May 2017, The role of outpatient pharmacists in antimicrobial stewardship, Department of Pharmacy, Shanghai Changhai Hospital, Shanghai, China

June 2022, Implementing pharmacogenomics in primary care, Precision Medicine World Congress 2022. Santa Clara, Silicon Valley, CA.

SERVICE

UNIVERSITY OF PITTSBURGH, SCHOOL OF PHARMACY

Experiential Learning Committee	2014-2022
PGY1 Community-based Pharmacy Residency (Coordinator)	2015-2019
ACPE Self-Study Committee on Experiential Learning	2015-2016
PharmD Admissions Committee	2015-2016
Co-curriculum Task Force	2016-2017
Code of Conduct Committee	2016-2019
Professional Development and Co-Curriculum Committee	2019-present
EPA Task Force (Chair)	2019-2020, 2023
Task Force on Interprofessional Education	2019
COVID-19 Working Group: Restarting the Student Experience (Co-Chair)	2020
Diversity and Inclusion in the Classroom Taskforce	2021
ACPE Rapid Review Taskforce – Standard 11	2021
Doctor of Pharmacy Council	2021-2025
Doctor of Pharmacy Curriculum Committee (Vice Chair)	2021-2023
Doctor of Pharmacy Curriculum Committee (Chair)	2023-2025
Graduate Program Curriculum Committee (Ex officio)	2023-2025
ACPE Self Study Steering Committee - Standard 10 Curriculum	2023-2025

UNIVERSITY OF PITTSBURGH

Pittsburgh Campus Flu Shot Clinics <i>Pharmacist Immunizer</i>	2015-2019
Medical Advisory Committee <i>Appointed At-large Faculty Representative</i>	2016-2022
University Senate Benefits & Welfare Committee <i>Elected Faculty Representative</i> <i>Elected Chair</i>	2017-2023 2019-2021
Chancellor's Ad Hoc Committee on Health and Well-being	2019-2021
University Senate Faculty Assembly	2019-2021
Pitt CoVAX COVID-19 Vaccination Clinics	2021
Moving Expenses/Household Goods - Policy Committee	2021-2022

UPMC

Matilda H. Theiss Health Center, Pittsburgh, PA <i>Pharmacist</i>	2018-2019
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LOCAL/COMMUNITY

Birmingham Free Clinic, Pittsburgh, PA <i>Pharmacist</i>	2014-2017
Allegheny County Medical Reserve Corps, Pittsburgh, PA <i>N95 Respirator Fit Testing</i> <i>COVID-19 Immunizer</i>	2020 2021

REGIONAL

Pennsylvania Pharmacists Association	
<i>PPCN Mentor Collaborative</i>	2015-2020
<i>Point-of-Care Testing Work Group</i>	2020
Kappa Psi Pharmaceutical Fraternity, Inc.	
<i>Mountain East Province Awards Committee Chair</i>	2012-2016
<i>Mountain East Province Awards Committee</i>	2017-2018
Bidwell Training Center	
<i>Pharmacy Technician Program Advisory Committee</i>	2020-2022

NATIONAL

Kappa Psi Pharmaceutical Fraternity, Inc.	
<i>Resolutions Committee</i>	2011
<i>Ritual Committee</i>	2011-2013
<i>GCC Planning Committee- Career Roundtables Lead</i>	2013-2015
<i>Northwest Province Assistant Supervisor</i>	2015-2017
<i>Fraternity Governance Task Force</i>	2017-2019
American Pharmacists Association	
<i>Pharmacogenomics/Genetic Testing Work Group</i>	2016
<i>Immunization SIG Policy Committee</i>	2018-2019
<i>Entrustable Professional Behavioral Attributes Expert Working Group</i>	2019-2020
<i>Immunization SIG Immunization Reference Guide Task Force</i>	2019-2021
<i>Academy of Pharmacy Practice and Management</i>	
<i>(APhA-APPM) – Alternate Delegate</i>	2019-2020
<i>APhA-APPM & APhA-APRS Task Force on Practice-Based Research</i>	2020-2021
American Association of Colleges of Pharmacy	
<i>Experiential Education Task Force – Mapping EPAs</i>	2017-2019
<i>Pharmacogenomics Sig Committee for PGx Cases</i>	2020-2022
<i>University of Pittsburgh Alternate Faculty Delegate</i>	2020-2021
<i>University of Pittsburgh Faculty Delegate</i>	2021-2023
<i>Pharmacy Practice Section – Programming Committee</i>	2022-2024
<i>ACT Pharmacy Collaborative Community Pharmacy Practice</i>	2023
<i>Transformation Educators Badge Workgroup</i>	
American Society of Health-System Pharmacists	2020
<i>ASHP/ACCP BCACP Literature Study, Faculty</i>	
U.S. Food and Drug Administration	
<i>Drug Safety and Risk Management Advisory Committee,</i>	
<i>Consultant</i>	2019-present
Pharmacy Technician Certification Board	2019-2020
<i>Medication History & Reconciliation Task Force</i>	