

Curriculum Vitae of
Zachary Ryne Noel

PharmD, PhD, BCCP

UNC Eshelman School of Pharmacy | University of North Carolina at Chapel Hill
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Education & Post Graduate Training

Doctor of Philosophy, Health Professions Education University of Maryland, Baltimore Graduate School Baltimore, MD Advisor: Christina Cestone, PhD; Karen Gordes, DPT, PhD	2020 – 2023
Post-Graduate Year 2 Cardiology Pharmacy Residency University of Kentucky Chandler Medical Center Lexington, KY Program Director: Tracy Macaulay, PharmD	2015 – 2016
Post-Graduate Year 1 Pharmacy Practice Residency University of Kentucky Chandler Medical Center Lexington, KY Program Director: Aaron Cook, PharmD	2014 – 2015
Doctor of Pharmacy (summa cum laude) University of Kentucky College of Pharmacy Lexington, KY	2010 – 2014
Undergraduate Studies University of Kentucky Lexington, KY	2007 – 2010

Professional Experience

Academic Appointments

Teaching Associate Professor Division of Practice Advancement and Clinical Education UNC Eshelman School of Pharmacy University of North Carolina at Chapel Hill	2023 – Present
Clinical Associate Professor Department of Practice, Sciences, and Health Outcomes Research University of Maryland School of Pharmacy University of Maryland, Baltimore	July 2023 – December 2023
Assistant Professor Department of Practice, Sciences, and Health Outcomes Research University of Maryland School of Pharmacy University of Maryland, Baltimore	2016 – 2023

Administrative and Leadership Experiences

Residency Program Coordinator 2017 – 2020; 2021 - 2022
Post-Graduate Year 2 Cardiology Pharmacy Residency Program
University of Maryland School of Pharmacy
Baltimore, MD

**Applied Therapeutics, Research, and Instruction at the University of Maryland (ATRIUM)
Cardiology Collaborative** 2016 – 2023
University of Maryland School of Pharmacy
Baltimore, MD

Chief Resident, UK Healthcare Residency 2014 – 2016
University of Kentucky Medical Center
Lexington, KY

Clinical Work Experience

Clinical Pharmacy Specialist, Primary Cardiology Service 2016 – 2023
University of Maryland Medical Center
Baltimore, MD

Clinical Staff Pharmacist 2014 – 2016
University of Kentucky Medical Center
Lexington, KY

Float Staff Pharmacist 2014 – 2016
Rite Aid Pharmacy
Lexington, KY

Pharmacy Intern 2010 – 2013
Baptist Health Lexington
Lexington, KY

Pharmacy Technician & Intern 2009 – 2014
Rite Aid Pharmacy
Lexington, KY

Licensure and Certifications

Basic Life Support Instructor 2019 – 2023
American Heart Association
Instructor ID: 09190819199

Board Certified Cardiology Pharmacist (BCCP) 2018 – Present
Board of Pharmacy Specialties
Credential Number: B10100032

Board Certified Pharmacotherapy Specialist (BCPS) 2015 – 2022
Board of Pharmacy Specialties
Credential Number: 3151679

Registered Pharmacist 2014 – Present
Kentucky (license number 017012); Maryland (license number 24428)

Advanced Cardiac Life Support Certification for Healthcare Providers 2014 – 2023
American Heart Association
Certification Number: SCIXSDHMSG7W

Honors and Awards

<i>Teacher of the Year</i> , PharmD Class of 2023, University of Maryland School of Pharmacy	2023
<i>Junior Investigator Award</i> , Cardiology Practice and Research Network, American College of Clinical Pharmacy	2022
<i>Medication Safety Award</i> , Maryland Society of Health-System Pharmacists	2022
<i>Francis S. Balassone Lecturer</i> , University of Maryland School of Pharmacy	2022
<i>AACP Teacher of the Year</i> , University of Maryland School of Pharmacy	2020
<i>Jeffrey Ensor Leadership Award</i> , Maryland Society of Health-System Pharmacists	2018
<i>Faculty Preceptor of the Year</i> , University of Maryland School of Pharmacy	2018
<i>Spirit Award</i> , University of Maryland School of Pharmacy	2017
<i>Impact Award</i> , UK Healthcare Pharmacy Residency Program	2016
<i>Post-Graduate Year 1 Research Award</i> , UK Healthcare Pharmacy Residency Program	2015
<i>James Rhodes Scholar Award</i> , University of Kentucky College of Pharmacy	2014
<i>Rho Chi Service Award</i> , University of Kentucky College of Pharmacy	2013
<i>Track & Field and Cross Country Athletic Scholarship</i> , University of Kentucky Athletic Department	2008 – 2010

Publications (*corresponding author; affiliated trainees underlined)

Refereed Publications

1. S, **Noel ZR***, Macaulay TE, Gale SE, Cain J. An Inter-Institutional PharmD Elective Course and Qualitative Analysis Exploring Student Engagement and Collaboration. *Currents in Pharmacy Teaching and Learning*. Mar;14(3):359-365. <https://doi.org/10.1016/j.cptl.2022.01.018>.
2. Willeford A, Leiman V, **Noel ZR***. Impact of a Pharmacist-to-Dose Direct Oral Anticoagulant Protocol on Medication Errors at an Academic Medical Center. *J Am Coll Clin Pharm*. 2021. DOI: 10.1002/jac5.1503
3. Pincus KJ, Blackman AL, Suen SY, Devabhakthuni S, Gale SE, **Noel ZR**, Seung H, Sheth Pandi N. Statin gap in patients living with HIV: Assessing dose appropriateness. *HIV Medicine* 2021;00:1-7. DOI: 10.1111/hiv.13150
4. **Noel ZR***, Flannery AH. The Implications of Conduction Abnormalities on Pharmacotherapy Decision-making. *Ann Pharmacother*. 2020 Nov 13;1060028020973387.
5. **Noel ZR***, See VY, Flannery AH. Walk the Line-The Importance of Well-Informed Interpretation of QT Prolongation. *Ann Pharmacother*. 2021. Jan;55(1):123-126. doi: 10.1177/1060028020934718.
6. Reed BN, **Noel ZR**, Heil EL, Shipper AG, Gardner AK. Surveying the selection landscape: A systematic review of processes for selecting postgraduate year 1 pharmacy residents and key implications. *J Am Coll Clin Pharm*. 2020. <https://doi.org/10.1002/jac5.1334>
7. Broscious R, Kukin A, **Noel ZR**, Devabhakthuni S, Seung H, Ramani H, Reed BN. Comparing Diuresis Patterns in Hospitalized Patients With Heart Failure With Reduced Versus Preserved Ejection Fraction: A Retrospective Analysis. *J Cardiovasc Pharmacol Ther*. 2020. doi: 10.1177/1074248420960930
8. Mouradjian MT, Plazak ME, Gale SE, **Noel ZR**, Watson K, Devabhakthuni S. Pharmacologic Management of Gout in Patients with Cardiovascular Disease and Heart Failure. *Am J Cardiovasc Drugs*. 2020. doi:10.1007/s40256-020-00400-6.
9. Plazak ME, Mouradjian MT, Watson K, Reed BN, **Noel ZR**, Devabhakthuni S, Gale, SE. An aspirin a day? Clinical utility of aspirin therapy for the primary prevention of cardiovascular disease. *Expert Rev Cardiovasc Ther*. 2019 Aug;17(8):561-573. doi: 10.1080/14779072.2019.1642108

10. **Noel ZR***, Beavers CJ, Dunn SP, Schullo-Feulner AM, Caldas L, Dixon DL. Identifying Core Content for Electrocardiogram Instruction in Doctor of Pharmacy Curricula. *American Journal of Pharmaceutical Education*. 2018; 82 (10).
11. Longyhore DS, Dixon DL, **Noel ZR***. A Modified Approach to Setting Curriculum Boundaries in Pharmacy School. *American Journal of Pharmaceutical Education*. 2018; 82 (9) Article 7010.
12. Watson K, Broscious R, Devabhakthuni S, **Noel ZR**. Focused Update on Pharmacologic Management of Hypertensive Emergencies. *Current Hypertension Reports* (2018) 20:56.
13. Kukin A, **Noel ZR**, Watson K. Through the Decades: β -Blocker Use and Outcomes in Acute Coronary Syndromes. *Cardiol Rev*. 2018 May/Jun;26(3):157-166. doi: 10.1097/CRD.000000000000197.
14. **Noel Z***. Safety concerns regarding selexipag in pulmonary arterial hypertension. *Am J Health Syst Pharm*. 2018 Apr 1;75(7):420. doi: 10.2146/ajhp170884.
15. **Noel ZR***, Kido K, Macaulay TE. Selexipag for the Treatment of Pulmonary Arterial Hypertension. *Am J Health-Syst Pharm*. 2017; 74:e360-6.
16. **Noel ZR**, Bastin ML, Montgomery AA, Flannery AH. Comparison of High-Dose Versus Standard Dose Oseltamivir in Critically Ill Patients with Influenza. *J Intensive Care Med*. March 2016. DOI 10.1177/0885066616638649.
17. **Noel ZR**, Beavers CJ. Proprotein Convertase Subtilisin/Kexin Type 9 Inhibitors: A Brief Overview. *Am J Med*. 2017 Feb;130(2):229.e1-229.e4. doi: 10.1016/j.amjmed.2016.09.021.
18. Cain J, **Noel Z**, Smith KM, Romanelli F. Four Rights of the Pharmacy Educational Consumer. *Am J Pharm Educ*. 2014 Aug 15;78(6):115. doi: 10.5688/ajpe786115.

Books Chapters

- 1) **Noel ZR***. Ventricular Arrhythmias. *Pharmacotherapy First: A multimedia learning resource*. American Pharmacists Association. 2023.
- 2) **Noel ZR***, Tisdale JE. Chapter 6: Arrhythmias. ACCP Board Certification Review Course. 2020-2022.
- 3) Merry J, **Noel ZR**. Appropriate Post-Acute Anticoagulation Guidelines. Empirian Health Short Stay Prescribing Guidelines. Monograph. Empirian Health, Inc. 2020. <https://www.empirian.com/s/>
- 4) **Noel ZR***. Ventricular Arrhythmias. *Pharmacotherapy First: A multimedia learning resource*. American Pharmacists Association. 2018.
- 5) Smetana K, **Noel ZR**, Sidhartha RD. Chapter 19: Drugs Acting on the Cerebral and Peripheral Circulations. *Side Effects of rugs Annual*. 40th Edition. 2018
- 6) **Noel ZR**. Ventricular Arrhythmias and Advanced Cardiac Life Support. *American Society of Health-System Pharmacy Board-Certified Cardiology Pharmacist Review Course*. 2018.

Scientific/Research Abstracts and Posters

- 1) **Noel ZR***, Gordes K, Cestone C, Kulo V, Jun HJ. *The Effects of "Ungrading" Individual Readiness Assurance Tests*. American Association of Colleges of Pharmacy Annual Meeting. Denver, CO. July 2023.
- 2) **Noel ZR***, Sera L, McPherson ML. *Old Habits Die Hard: Longitudinal Changes in PharmD Student Learning and Study Strategies Inventory Scores*. American Association of Colleges of Pharmacy Annual Meeting. Dallas, TX. July 2022.
- 3) Defreitas N*, **Noel ZR**. *Evaluation of Medication Errors Involving Low-Dose Rivaroxaban at an Academic Medical Center*. American Society of Health-System Pharmacists Midyear Clinical Meeting. Virtual. December 2021.

- 4) **Noel ZR**, Willeford A*, Leiman VL. *Impact of Pharmacist-to-Dose Direct Oral Anticoagulant Service at an Academic Medical Center*. American College of Clinical Pharmacy Annual Meeting. Virtual. October 2021.
- 5) Pincus K, Blackman AL, Devabhakthuni S, Gale SE, **Noel ZR**, Sheth P. *Statin Dose Appropriateness in Patients Living with HIV Compared to Uninfected Patients*. American College of Clinical Pharmacists Annual Meeting. Held virtually Oct 2020.
- 6) Kukin A, Gale SE, Reed BN, Devabhakthuni S, Watson K, **Noel ZR**. Effect of Video-assisted Counseling versus Traditional Counseling on Patient Comprehension of Prescribed Direct Oral Anticoagulants. American College of Clinical Pharmacists Annual Meeting. Held virtually Oct 2020.
- 7) Wasik A, **Noel Z*** *Changes in Diuretic Regimen and Impact on Readmission Rates Following Transcatheter Aortic Valve Replacement*. American College of Cardiology 67th Annual Scientific Session and Expo. Orlando, FL. Mar 2018
- 8) Pinkos K, Reed B, Devabhakthuni S, **Noel Z***. Rates of Off-Label Dosing of Apixaban in End Stage Renal Disease: A retrospective analysis of a large health-system. 75th ASHP Midyear Clinical Meeting. Orlando, FL. Dec 2017.
- 9) Schmersahl S, Reed B, Devabhakthuni S, **Noel Z**. *Evaluation of Impact of Upstream Clopidogrel on Time to Coronary Artery Bypass Grafting*. 75th ASHP Midyear Clinical Meeting. Orlando, FL. Dec 2017.
- 10) Mouradjian M, **Noel Z**. Evaluation of Appropriateness of Bivalirudin Prescribing at an Academic Medical Center. 75th ASHP Midyear Clinical Meeting. Orlando, FL. Dec 2017.
- 11) **Noel Z**, Bastin-Thompson M, Flannery A. *Comparison of High Dose Oseltamivir Versus Standard Dose Oseltamivir in Critically Ill Patients*. Poster. Society of Critical Care Medicine National Meeting, Orlando, FL, February 2016
- 12) **Noel Z***, Matson A, Goodin, A, Dobesh PP, Trujillo T, Ripley TL, Macaulay TE. Relationship between Faculty Evaluation Scores and Qualifications on Participant Knowledge Retention Rates in Continuing Pharmacy Education Activities. Poster. University Health Consortium National Meeting, New Orleans, LA, December 2015
- 13) **Noel Z***, Cook AM, Davis G. Role of the pharmacy residency on-call program in management of direct thrombin inhibitor (DTI) use for heparin-induced thrombocytopenia (HIT). Poster. American Society of Health-System Pharmacists National Meeting, Orlando, FL, December 2013.

Presentations (*presenting author)

National and International

- 1) Cozart M, Papke JL, **Noel ZR**, Challen ., *Old School Teaching Styles Versus New School Learners*. American College of Clinical Pharmacy. Education and Training PRN. Webinar. Aug 2023.
- 2) **Noel ZR***, Pittinger A, Peterson B. *"C" Your Way to It: Using 4C/ID to Inform Teaching and Learning*. American Association of Colleges of Pharmacy Annual Meeting, Denver, CO. July 2023.
- 3) **Noel ZR***, Persky A. *Too Much, Too Fast: Using Cognitive Load Theory to Inform Teaching and Learning*. American Association of Colleges of Pharmacy Annual Meeting, Dallas, TX, July 2022
- 4) Watson KW, **Noel ZR**. *Voila! You Are Now Equipped with the Magical Presentation Secrets*. American Society of Health-System Pharmacists Midyear Clinical Meeting. December 2021
- 5) **Noel ZR***, Zarowitz B. *DOAC Dilemmas: Direct Oral Anticoagulants for Atrial Fibrillation in the Oldest Old Adults and End Stage Renal Disease*. Joint Board Certification presentation at the American College of Clinical Pharmacy Annual Meeting and American Society of Health-System Pharmacists. October 2021 and December 2021.

- 6) Challen L, **Noel ZR**. *The Great Debate: Does Attendance Matter?* American College of Clinical Pharmacy Annual Meeting, October 2021.
- 7) Watson KW, Gale SE, **Noel ZR**. *Creating a High-Functioning Team Where Together Everyone Achieves More*. American Society of Health-Systems Pharmacists (ASHP) Midyear Clinical Meeting, December 2020.
- 8) **Noel ZR**. *Controversies Surrounding Antithrombotic Therapy Following Transcatheter Aortic Valve Replacement*. American Society of Health-Systems Pharmacists (ASHP) Midyear Clinical Meeting, December 2020.
- 9) Smith KJ, Thomas J, Sibicky S, Gale SE, **Noel ZR**. *Work Smarter Not Harder - Instructional Design and Project Management Principles for Course Managers*. American Association of Colleges of Pharmacy (AACP) Annual Meeting, July 2020.
- 10) **Noel ZR**. *Ventricular Arrhythmias and Advanced Cardiac Life Support*. American Society of Health-Systems Pharmacy Cardiology Board Certification Review Course. Webinar. June 2018

Faculty Development and Workshops

- 1) **Noel ZR***. *Oversize Load: Using Cognitive Load Theory to Inform Teaching and Learning*. Faculty Development Workshop. Midwestern University College of Pharmacy. November 2023.
- 2) **Noel ZR***. *Oversize Load: Using Cognitive Load Theory to Curate the Readiness Process*. Team-Based Learning Online Workshop sponsored by CognaLearn. July 2023.
- 3) **Noel ZR***. *Oversize Load: Using Cognitive Load Theory to Inform Teaching and Learning*. Faculty Development Workshop. Feik School of Pharmacy, University of Incarnate Word. San Antonio, TX. March 2023.
- 4) **Noel ZR***. *Oversize Load: Using Cognitive Load Theory to Curate the Readiness Process*. Team-Based Learning Online Workshop sponsored by CognaLearn. May 2022.
- 5) El-Sayed S, **Noel ZR**. *Implementing Team-Based Learning in Health Sciences*. InteDashboard™ Online Roundtable. Virtual. March 2022.
- 6) *There's no "I" in Group: Using Collaborative Learning to Improve Group Work*. University of Maryland Teaching Excellence Day. Baltimore, MD. July 2018.

Regional and Local

- 1) **Noel ZR**. *Teamwork Makes the Dream Work: Using Team-Based Learning in PharmD Education*. Teaching Excellent Day, University of Maryland School of Pharmacy, July 2021
- 2) **Noel ZR**. *Mapping Out a Plan: Anticoagulation Considerations for Atrial Fibrillation Ablation*. American College of Cardiology, Maryland Chapter Cardiovascular Team. Pillars in Cardiology Presentation. Nov 2020.
- 3) **Noel ZR**. *The Pros and Pitfalls of Polling Platforms*. Teaching Excellence Day. University of Maryland, Baltimore. June 2019.
- 4) **Noel ZR**. *#MondayMotivation: Getting the Most from Millennial Learners Starting Day 1*. University of Maryland School of Pharmacy Academy of Preceptors. Baltimore, MD. May 2019
- 5) Devabhakthuni S, **Noel ZR**. *Whose Side Are You On? Warfarin vs DOACs for Stroke Prevention in Atrial Fibrillation and End Stage Renal Disease*. 3rd Annual ATRIUM Spring Symposium. Baltimore, MD. April 2018
- 6) **Noel ZR**. *Role of Dietary Supplements in the Prevention and Treatment of Cardiovascular Disease*. 35th Annual North Central Heart Cardiac Symposium. Sioux Falls, SD. November 2017
- 7) **Noel ZR**. *TSOACs, DOACs, and NOACs...OH MY! Drug Safety Considerations for Using Non-Vitamin K Antagonist Oral Anticoagulants*. ATRIUM Annual Spring CE Symposium. Baltimore, MD. April 2017

- 8) **Noel ZR.** Extended Dual Antiplatelet Therapy. Kentucky Society of Health-Systems Pharmacists Spring Meeting: Clinical Pearls Session. Lexington, KY. May 2016
- 9) **Noel ZR.** Drug Therapy Update for the Treatment of Hyperlipidemia and Heart Failure. University of Kentucky College of Pharmacy Annual Law Review. Lexington, KY. April 2016

Teaching and Precepting Experience

Course Director

PHAR 5003: Applied Science and Therapeutics 3 (Autoimmune, Joint, and Bone Disorders) 2022 – 2023
Required 2 credit hour second year pharmacotherapy course (~90 students)
 University of Maryland School of Pharmacy

PHAR 5005: Applied Science and Therapeutics 5 (Cardiovascular and Cerebrovascular Disorders) 2022 – 2023
Required 2 credit hour second year pharmacotherapy course (~90 students/year)
 University of Maryland School of Pharmacy

PHMY 536: Essential Study Skills for Pharmacy Students 2020 – 2023
Elective 1 credit hour course for first year pharmacy students (~75 students/year)
 University of Maryland School of Pharmacy

PHMY 5016: Current Concepts and Controversies in Cardiology 2019 – 2021
Elective 2 credit hour course for third year pharmacy students (~10 students/year)
 University of Maryland School of Pharmacy (taught jointly with University of Kentucky College of Pharmacy)

Facilitator, Lecturer, or Instructor

PHMY 536: Essential Study Skills for Pharmacy Students 2020 – 2023
 University of Maryland School of Pharmacy
 Instructor for the following topics (~75 students/year):
Learning Myths
Spacing, Interleaving, and Retrieval Practice
Memory Devices
Learning and Study Strategies Inventory
Desirable Difficulties in Learning

MSPR 521: Pathophysiology and Therapeutics I 2019 – 2023
 University of Maryland School of Medicine
 Lecturer for the following topics (~150 students/year):
 Antiarrhythmic Drugs
 Antihypertensive Medications
 Antiplatelet, Anticoagulant, and Fibrinolytic Medications

PHAR 5005: Applied Science and Therapeutics 5 2017 – 2023
 University of Maryland School of Pharmacy
 Lecturer and Facilitator for the following topics (~90 students/year):
Arrhythmias
Antiarrhythmic Drug Pharmacology
Venous Thromboembolism
Anticoagulant Pharmacology
Anatomy, Physiology, and Assessment

PHAR 5004: Applied Science and Therapeutics 4 2017 – 2023
 University of Maryland School of Pharmacy
 Lecturer and Facilitator for the following topics (~90 students/year):

Drug Dosing in Kidney Disease
Overview of End Stage Kidney Disease and Dialysis

PPS 957: Pharmacotherapeutics II 2015
University of Kentucky College of Pharmacy
Lecturer for the following topics (~130 students):
Pulmonary Arterial Hypertension
Hyperlipidemia

Preceptor

APPE 451: Acute Care Cardiology 2017 – 2023
University of Maryland Medical Center
4 students/year

Interventional Cardiology and Cardiovascular Imaging 2017 – 2023
Post-Graduate Year 2 Cardiology Residency Program
University of Maryland Medical Center
Primary preceptor in July for 2 residents/year

Elective Experiences in Electrophysiology and Cardiology Consults 2017 – 2023
Post-Graduate Year 2 Cardiology Residency Program
University of Maryland Medical Center
Primary preceptor in December/March for 2 residents/year

Primary Cardiology I 2017 – 2023
Post-Graduate Year 1 Residency Program
University of Maryland Medical Center
Primary preceptor January – March for 3 residents/year

Primary Cardiology I, II, and III 2016 – 2023
Post-Graduate Year 2 Cardiology Residency Program
University of Maryland Medical Center
Primary preceptor August – November for 2 residents/year

Blogs and Media Contributions

Applied Science, Therapeutics, and Research at the University of Maryland (ATRIUM) Cardiology Collaborative Blogs

1. *Updates on Post-TAVR Antithrombotic Therapy.* ATRIUM Blog. October 2020.
2. *Up in Flames: Antiplatelet Therapy in Patients with Stable Ischemic Heart Disease Receiving Anticoagulation for A-fib.* iForum and ATRIUM Blog. January 2020. (In collaboration with Alina Kukin)
3. *A Tough Pill to Swallow: Clinical Application of Prasugrel in Patients with ACS.* ATRIUM Blog. October 2019.
4. *Three Things You Should Know Before Throwing in the Towel on Triple Therapy.* ATRIUM Blog. June 2019.
5. *Apixaban Over Warfarin for Anticoagulation in Patients with Atrial Fibrillation and End Stage Renal Disease.* ATRIUM Blog. January 2019
6. *No Anticoagulation in Patients with Atrial Fibrillation and End Stage Renal Disease.* ATRIUM Blog. January 2019
7. *Post-TAVR Antithrombotic Therapy: What To Do When No One Knows What To Do.* ATRIUM Blog. December 2018.

8. *The Short End of the Stick: Practical Management of Cardiovascular Drug Shortages*. ATRIUM Blog. October 2018.
9. *Dofetilide: A Diamond in the Rough for Atrial Fibrillation in Patients with Structural Heart Disease*. ATRIUM Blog. March 2018.
10. *Dietary Supplements and Heart Health*. ATRIUM Blog. November 2017.
11. *Anticoagulation Safety (Part 2 of 2): The Role of Anticoagulation Stewardship Pharmacist*. ATRIUM Blog. September 2017.
12. *Anticoagulation Safety (Part 1 of 2): Common Drug Errors with NOACs... I Mean DOACs!* ATRIUM Blog. June 2017.
13. *Upstream P2Y12 Inhibitors and the CABG Quandary*. ATRIUM Blog. April 2017.

Other Contributions (Podcasts, Blogs, Newsletters)

1. *Pharmacy Times* interview. Pharmacists Are Essential Team Members for Managing Direct Oral Anticoagulants. December 2021.
2. *Pharmacy Times* interview. Expert Reviews Common Medication Errors Involving Direct Oral Anticoagulants. December 2021.
3. *Pharmacy Times*. Patients With End-Stage Renal Disease, Atrial Fibrillation Have Unique Considerations When Starting Anticoagulation Therapy. December 2021.
4. *Pharmacy Practice News*. Anticoag Teams Help Optimize DOAC Monitoring. May 2020.
5. CardioScripts Podcast. ENTRUST-AF Trial. January 2020.
6. Up in Flames: Antiplatelet Therapy in Patients with Stable Ischemic Heart Disease Receiving Anticoagulation for A-fib. iForum Podcast. January 2020. (In collaboration with Alina Kukin)
7. *Caveat Emptor: Dietary Supplements and Heart Health*. Latest in Cardiology Expert Analysis. American College of Cardiology. April 2017.
8. *Idarucizumab and Andexanet Alfa*. ACCP Experts in Training Newsletter - Cardiology PRN Focus. March 2016.

Grants

Impact of Animated Video Counseling on Anticoagulation Comprehension and Retention 2018 – 2020
 Funder: American College of Clinical Pharmacists (ACCP), Cardiology Practice and Research Network Seed Grant
 Role: Primary Investigator
 Amount: \$5,000

Patient Care & Quality Improvement Projects

Institutional Guidelines and Protocol 2017 – 2023
 University of Maryland Medical Center
Cangrelor Protocol (original author)
Intravenous Enoxaparin Guidelines (original author)
Disopyramide Protocol (original author)
Aspirin Desensitization Protocol (original author)
Dofetilide Protocol (reviewer)
Direct Oral Anticoagulants Guidelines (reviewer)
Hypertensive Crisis Protocol (reviewer)

Bivalirudin Protocol (reviewer)

Pharmacist-to-Dose Direct Oral Anticoagulant Training 2019 – 2023
University of Maryland Medical Center

Fibrinolytics for the Management of ST-Elevation Myocardial Infarction in Patients with Confirmed or Suspected COVID-19 2020
University of Maryland Medical Center

Eptifibatide Utilization and Cost Analysis 2017
University of Maryland Medical Center

Professional Affiliations, Leadership, and Service

Affiliations

National

American Association of Colleges of Pharmacy (AACP) 2016 – Present
American College of Cardiology (ACC) 2015 – Present
American College of Clinical Pharmacy (ACCP) 2011 – Present
American Society of Health-Systems Pharmacists (ASHP) 2011 – Present

State & Regional

Maryland Society of Health-Systems Pharmacists 2016 – 2023
Kentucky Society of Health-Systems Pharmacists 2012 – 2016

Honorary Organizations

Rho Chi Academic Honor Society 2011 – 2014
Phi Lambda Sigma Pharmacy Leadership Society 2012 – 2014

Leadership & Service Contributions

National

American Association of Colleges of Pharmacy (AACP)
Member, Council of Faculty, Scholarship of Teaching and Learning Committee 2023 – 2024
Member, Task Force on Professionalism and Social Media 2021 – 2022

American College of Clinical Pharmacy (ACCP)
Secretary/Treasurer, Cardiology PRN 2020 – 2021
Chair, Cardiology PRN Budget and Finance Committee 2020 – 2021
Chair, Cardiology PRN Student & Resident Committee 2019 – 2020
Member, Cardiology PRN Student & Resident Committee 2016 – 2019

Team Based Learning Collaborative (TBLC)
Member, Scholarship & Research Committee 2020 – Present

American Society of Health-System Pharmacists (ASHP)
Member, New Practitioner Forum 2014 – 2016
Member, Community and e-Communications Advisory Group 2012 – 2013

Local and Regional

University of Maryland School of Pharmacy

Co-Chair, Curriculum Redesign Task Force 2022 – 2023
Delegate, SOP representative for AACP 2021 – 2022
Chair, Therapeutics Task Force 2020 – 2022
Member, Curriculum Committee 2020 – 2022

<i>President, Faculty Assembly</i>	2019 – 2020
<i>President-Elect, Faculty Assembly</i>	2018 – 2019
<i>Co-Chair, Cardiology Residency Program Advisory Committee</i>	2017 – 2020
<i>Member, Experiential Learning Committee</i>	2016 – 2018
<i>Member, Strategic Planning Education Committee</i>	2016 – 2018
<i>Member, Preceptor Development Committee</i>	2016 – 2018

University of Kentucky College of Pharmacy

<i>Member, Honor Code Committee</i>	2012 – 2014
<i>Delegate, Kentucky Pharmacists Association</i>	2013
<i>President, Christian Pharmacists Fellowship International</i>	2013
<i>Vice President, Christian Pharmacists Fellowship International</i>	2012

Community Service

Orange County Recreation U-8 Sports Coach	2023 – Present
Emmorton Recreation U-6 Sports Coach (soccer, basketball, basketball)	2020 – 2023
Salvation Army Clinic	2014 – 2016
Ronald McDonald House Volunteer	2012 – 2014
God’s Food Pantry Volunteer, Lexington, KY	2010 – 2012
Faith Pharmacy, Lexington, KY	2010 – 2011
Operation Christmas Child Local Organizer, Lexington, KY	2011 – 2013
Habitat for Humanity Volunteer	2011
Elementary School Mentor, Lexington, KY	2010