

Ryan A. Allen, PhD

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Pensacola, FL 32514

Education

Emory University, Atlanta, GA May 8th, 2023
Doctor of Philosophy: Chemistry
Villanova University, Villanova, PA
Bachelor of Science: Chemistry May 18th, 2018
Second Major in Biochemistry
Minor in Spanish Literature and Language

Professional Experience

Assistant Professor of Chemistry August 8th, 2026-Present
University of West Florida, Department of Chemistry—Pensacola, FL
Allen Lab Research Focus: Understanding the Effects of Tetrapyrroles in Health and Disease

Postdoctoral Research Fellow—Reddi Lab June 1st, 2023-July 24th, 2026
Georgia Institute of Technology, Department of Chemistry and Biochemistry—Atlanta, GA
Project: Development of novel hemoproteomic strategies and evaluation of heme's role in diabetes development

Graduate Student—Wuest Lab December 9th, 2018-May 8th, 2023
Emory University, Department of Chemistry—Atlanta, GA
Projects: Total synthesis and biological evaluation of pyrrole-containing antimicrobial natural products
Antimicrobial activity of and mechanisms of resistance to quaternary ammonium compounds

Research Assistant—Christmann Lab May 15th-July 31st, 2017
Freie Universität Berlin, Institute of Chemistry and Biochemistry—Berlin, Germany
Project: Optimization of a Wittig-type fragmentation towards the total synthesis of the spongidines

Research Assistant—Minbiole Lab June 1st, 2016-May 18th, 2018
Villanova University, Department of Chemistry—Villanova, PA
Project: Synthesis of biodegradable quaternary ammonium compounds

Research Assistant—Palenchar Lab February 2nd, 2015-May 31st, 2016
Villanova University, Department of Chemistry—Villanova, PA
*Project: Determining the role of β -hydroxybutyrate dehydrogenase in *Trypanosoma brucei* and *cruzi**

Awards and Achievements

Georgia Tech School of Chemistry and Biochemistry Research Faculty High-Impact Communication Award	2025
Georgia Tech School of Chemistry and Biochemistry Research Faculty High-Impact Communication Award	2024
NIH TL1 ATLANTIS Postdoctoral Research Fellow	2023-2025
NSF-GRFP Honorable Mention	2020
Laney Fellowship, Emory University Laney Graduate School	2018
American Chemical Society Division of Organic Chemistry Undergraduate Award in Organic Chemistry	2018
Fulbright Alternate Candidate, U.S. State Department Fulbright Student Grant, Germany	2018
DAAD-RISE Scholar	2017
Recipient of the Polyed Outstanding Achievement in Organic Chemistry Award	2016
Recipient of a Villanova Summer Undergraduate Research Fellowship	2016
Recipient of the Match Research Program for First Year Students Award	2015

Publications

10. Sanchez, C.A., Vargas-Cuebas, G.G., Michaud, M.E., **Allen, R.A.**, Morrison-Lewis, K.R., Siddiqui, S., Minbiole, K.P.C., Wuest, W.M. "Highly Effective Biocides against *Pseudomonas aeruginosa* Reveal New Mechanistic Insights Across Gram-Negative Bacteria" *ACS Infect. Dis.* **2024**, *10*, 3868-79.
9. **Allen, R.A.**, McCormack, C.E.M., Wuest, W.M. "Deriving Novel Quaternary Ammonium Compound Disinfectant Scaffolds from a Natural Product: Mechanistic Insights of the Quaternization of Ianthelliformisamine C" *ChemMedChem*, **2023**, *18*, e202300253.
8. **Allen, R.A.** and Wuest, W.M. "Total Synthesis and Biological Investigation of Mindapyrroles A and B" *ChemMedChem*, **2023**, *18*, e202300235.
7. Michaud, M.E., **Allen, R.A.**, Morrison-Lewis, K.R., Sanchez, C.A., Minbiole, K.P.C., Post, S.J., Wuest, W.M. "Quaternary Phosphonium Compound Unveiled as a Potent Disinfectant against Highly Resistant *Acinetobacter baumannii* Clinical Isolates" *ACS Infect. Dis.* **2022**, *8*, 2307-14.
6. Feliciano, J.A., Leitgeb, A.J., Schrank, C.S., **Allen, R.A.**, Wuest, W.M., Minbiole, K.P.C., Carden, R.G. "Trivalent Sulfonium Compounds (TSCs): Tetrahydrothiophene-based amphiphiles exhibit similar antimicrobial activity to analogous ammonium-based amphiphiles" *Bioorg. Med. Chem. Lett.* **2021**, *37*, 127809.
5. Sommers, K., Bentley, B.S., Carden, R.G., Post, S., **Allen, R.A.**, Kontos, R., Black, J., Wuest, W.M., Minbiole, K.P.C. "Metallocene QACs: The Incorporation of Ferrocene Moieties into monoQAC and bisQAC Structures" *ChemMedChem*. **2021**, *16*, 467.
4. Ongwae, G.M., Morrison, K.R., **Allen, R.A.**, Kim, S., Im, W., Wuest, W.M., Pires, M.M. "Broadening Activity of Polymyxin by Quaternary Ammonium Grafting" *ACS Infect. Dis.* **2020**, *6*, 1427-1435.
3. Leitgeb, A.J., Feliciano, J.A., Sanchez, H., **Allen, R.A.**, Morrison, K.R., Sommer, K.J., Carden, R., Wuest, W.M., Minbiole, K.P.C. "Further Investigations into Rigidity-Activity Relationships in BisQAC Amphiphilic Antiseptics" *ChemMedChem*. **2020**, *15*, 1510.
2. Morrison, K.R., **Allen, R.A.**, Minbiole, K.P.C., Wuest, W.M. "More QACs, more questions: recent advances in structure activity relationships and hurdles in understanding resistance mechanism" *Tetrahedron Lett.* **2019**, *60*, 150935.
1. **Allen, R.A.**, Jennings, M.C., Mitchell, M.A., Al-Khalifa, S., Wuest, W.M., Minbiole, K.P.C. "Ester- and Amide-containing MultiQACs: Exploring Multicationic Soft Antimicrobial Agents" *Bioorg. Med. Chem. Lett.* **2017**, *27*, 2107-12.

Teaching Experience

CHEM 4601: Chemistry Seminar , Instructor of Record Georgia Institute of Technology, Atlanta, GA	Spring 2026
CHEM 4601: Chemistry Seminar , Instructor of Record Georgia Institute of Technology, Atlanta, GA	Fall 2025
GT 1000: First Year Seminar-Academic Research Focus , Instructor of Record Georgia Institute of Technology, Atlanta, GA	Summer 2024
SIRE 299R: Introduction to Academic Chemistry Research , Instructor of Record Emory University, Atlanta, GA	Spring 2022
CHEM 202: Principles of Reactivity Lecture , Graduate Student Instructor Emory University, Atlanta, GA	Spring 2021
CHEM 203: Advanced Reactivity Lecture , Graduate Student Instructor Emory University, Atlanta, GA	Fall 2020
CHEM 202L: Principles of Reactivity , Graduate Student Instructor Emory University, Atlanta, GA	Spring 2020
CHEM 204L: Macromolecules Laboratory , Graduate Student Instructor Emory University, Atlanta, GA	Spring 2019
CHEM 203L: Advanced Reactivity Laboratory , Graduate Student Instructor Emory University, Atlanta, GA	Fall 2018, Fall 2019
Organic Chemistry II Laboratory , Teaching Assistant Villanova University, Villanova, PA	Spring 2018
General Chemistry I Laboratory , Teaching Assistant Villanova University, Villanova, PA	Fall 2017
Organic Chemistry I Laboratory , Teaching Assistant Villanova University, Villanova, PA	Fall 2016

Professional Meetings and Presentations

10. **Sometimes All You Need is a Little HeLP: Heme Labeling by Proximity Unveils Heme Regulation of the Insulin Receptor**
 - a. *Invited Oral Presentation at:* Georgia Institute of Technology School of Chemistry and Biochemistry 2026 Spring Symposium, May 2026, Atlanta, GA.
 - b. *Invited Oral Presentation at:* Georgia Institute of Technology School of Chemistry and Biochemistry 2025 Spring Symposium, April 2025, Atlanta, GA.
Award: Georgia Tech 2025 Research Faculty High-Impact Communication Award
 - c. *Invited Flash Talk Presented at:* National Kidney, Urology, and Hematology Research Training Network Annual Meeting, June 2025, Atlanta, GA.
 - d. *Poster Presented at:* National Kidney, Urology, and Hematology Research Training Network Annual Meeting, June 2025, Atlanta, GA.
 - e. *Invited Flash Talk Presented at:* 2025 Advancing Mass Spectrometry for Biophysics and Structural Biology, July 2025, Atlanta, GA.
 - f. *Poster Presented at:* 2025 Advancing Mass Spectrometry for Biophysics and Structural Biology, July 2025, Atlanta, GA.
 - g. *Invited Oral Presentation at:* Gordon Research Conference on the Cell Biology of Metals, August 2025, Portland, ME.
 - h. *Poster Presented at:* Gordon Research Conference on the Cell Biology of Metals, August 2025, Portland, ME.
9. **Heme Labeling by Proximity (HeLP): Identifying Heme Binding Proteins via “Probe-Free” Proteomics**
 - a. *Poster Presented at:* Gordon Research Seminar on the Chemistry and Biology of Tetrapyrroles, July 2024, Newport, RI.
 - b. *Poster Presented at:* Gordon Research Conference on the Chemistry and Biology of Tetrapyrroles, July 2024, Newport, RI.
 - c. *Poster Presented at:* National Kidney, Urology, and Hematology Research Training Network Annual Meeting, August 2024, Cleveland, OH
8. **Sometimes All You Need is a Little HeLP: Probe-Free Proteomics to Identify Heme Binding Proteins**
 - a. *Invited Oral Presentation at:* Georgia Institute of Technology School of Chemistry and Biochemistry 2024 Spring Symposium
Award: Georgia Tech 2024 Research Faculty High-Impact Communication Award
 - b. *Invited Oral Presentation at:* Gordon Research Seminar on the Chemistry and Biology of Tetrapyrroles, July 2024, Newport, RI.
7. **Detecting Heme Regulatory Proteins throughout Erythropoiesis via Probe-Free Proteomics**
Poster Presented at: ATLANTIS Annual Symposium, March 2024, Atlanta, GA.
6. **Synthetic Design of Pyrrolyl Natural Products**
 - a. *Poster Presented at:* Gordon Research Conference on Heterocyclic Compounds, June 2022, Newport, RI.
 - b. *Invited Oral Presentation at:* Gordon Research Conference on Heterocyclic Compounds, June 2022, Newport, RI.
5. **Complimentary Approaches to Combating Disinfectant Resistance through Amphiphilic Novelty.**
Poster Presented at: American Chemical Society National Meeting and Exposition, Fall 2021, Atlanta, GA.
4. **Investigations of Iron-Binding Natural Products and their Antimicrobial Activity.**
 - a. *Poster Presented at:* Cottrell Scholar Regional Meeting, Spring 2019, Atlanta, GA.
 - b. *Poster Presented at:* Greater Atlanta Chemical Biology Symposium, Spring 2019, Athens, GA.
3. **Ester- and Amide-Containing MultiQACs: Exploring Multicationic Soft Antimicrobial Agents.**
Oral Presentation at: American Chemical Society National Meeting and Exposition, Spring 2018, New Orleans, LA.
2. **Steps Towards the Total Synthesis of the Spongidine Family.**
Poster Presented at: Villanova Undergraduate Research Symposium, Fall 2017, Villanova, PA.
1. **A Scaffold-Hopping Approach to the Development of Antiseptic Cationic Amphiphiles.**
Poster Presented at: American Chemical Society National Meeting and Exposition, Fall 2016, Philadelphia, PA.

Leadership Experience

2025 ad hoc Research Faculty Awards Committee , School of Chemistry and Biochemistry, Georgia Institute of Technology	2025-Present
KUHR-TN Trainee Steering Committee-Research Subcommittee , ATLANTIS TL1, National Institute of Diabetes, Digestive and Kidney Diseases	2024-2025
Gordon Research Seminar Co-Chair , Chemistry and Biochemistry of Tetrapyrroles, GRC	2024-Present
Subgroup Coleader , Wuest Lab, Emory University	2022
Vice President of Service , Pi Alpha Chemical Society, Emory University	2020-2021
President , Pi Alpha Chemical Society, Emory University	2019-2020

President, Villanova Chemical Society, *Villanova University*

2015-2018

Memberships

Sigma Xi, The Scientific Research Honor Society	2020-Present
Pi Alpha Chemical Society , Emory University	2018-2023
Association for Women in Science , Emory University	2018-2023
National Society of Collegiate Scholars , Villanova University	2018-Present
Rho Upsilon Chapter of Beta Beta Beta National Biological Honor Society , Villanova University	2018-Present
American Chemical Society	2015-Present