

Patricia R. Calvo (Bachler), Ph.D.

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Professional Positions

2023-present	Assistant Professor Department of Chemistry, Kansas State University, Manhattan, KS
2018-2023	Assistant Professor Department of Chemistry & Physics, Nova Southeastern University, Fort Lauderdale, FL
2017-2018	Chemistry Lecturer Department of Natural Sciences, Texas A&M University San Antonio, TX
2016-2017	Research Scientist Rochal Industries LLC, San Antonio, TX

Education

2012-2016	Ph.D., University of Florida, Gainesville, FL Organic and Polymer Chemistry, GPA: 3.97/4.0 <i>Advisors: Prof. Kenneth B. Wagener, Prof. Brent S. Sumerlin</i>
2009-2012	B.S., Lindenwood University, St. Charles, MO Chemistry (<i>summa cum laude</i>), GPA: 4.0/4.0

Selected Awards and Recognition

1. ACS PRF New Directions Award (**2025**)
2. BioPACIFIC MIP CAPS Fellowship (**2025**)
3. **Scialog Fellow**, Mitigating Zoonotic Threats, RCSA (**2023**)
4. **The Academy of Medicine, Engineering and Science of Texas (TAMEST) Protégée (2017)**, selected by Joseph C. Salamone (NAE)
5. **Procter and Gamble Award for Excellence in Research (2015)**
6. **NSF travel grant (2014)**: awarded to 8 of over 400 students who participated in the controlled radical polymerization symposium at the 248th ACS National Meeting
7. **Townes R. Leigh Prize (2013)**, University of Florida: recognizes outstanding academic achievement during the first year of graduate studies in chemistry
8. **Grinter Fellowship (2012-2015)**, University of Florida: recognizing outstanding incoming graduate students
9. **Easton Award (2012)**, Lindenwood University: given to 1 of over 2000 female students, recognizing academic excellence, leadership and community service
10. **Presidential Academic Excellence Award (2012)**, Lindenwood University: Award given to varsity athletes who complete their degree with a perfect 4.0 GPA
11. **LindenLeader Award (2012)**, Lindenwood University: Award given to students showing outstanding campus leadership

Publications

1. Brown, J.; **Calvo, P. R.**; Julakanti, P.; Mohiuddin, F.; Khan, A.; Julien, K.; Natarajan, V.; Maya, L.; Keith, K.; De Caprio, A. P.; Hollingsworth, R.; Benso, F.; Smith, R. P. "The effect of gamma irradiation on the stability of vitamin D in select finfish species", *ACS Food Sci & Tech*, **2024**, submitted (under review)
2. **Calvo, P. R.**; Hochberg, J; Sparks, C; Wagener, K. B.; Sumerlin, B. S. "Hyperbranched aminobisphosphonate polymers via self-condensing vinyl polymerization and post-polymerization multicomponent reactions", *Macrom. Rapid Commun.*, **42**, 200057, **2021**
3. Kuliasha, C. C.; Fedderwitz, R. L.; **Calvo, P. R.**; Sumerlin, B. S.; Brennan, A. B. "Tailoring the surface properties of poly(dimethyl siloxane) utilizing aqueous RAFT photografting of acrylate/ methacrylate monomers" *Macromolecules*, **2018**, *51*, 306-317
4. **Bachler, P. R.**; Forry, K. E.; Sparks, C.; Schulz, M. D.; Wagener, K. B.; Sumerlin, B. S. "Modular segmented hyperbranched copolymers" *Polym Chem*, **7**, 4155-4159, **2016**
5. Alfurhood, J., Sun, H., **Bachler, P. R.**, Sumerlin, B.S. "Hyperbranched poly(N-(2-hydroxypropyl) methacrylamide) via RAFT self-condensing vinyl polymerization", *Polym. Chem.*, **7**, 2099-2104, **2016**
6. Alfurhood, J., **Bachler, P. R.**, Sumerlin, B. S. "Hyperbranched polymers via RAFT self-condensing vinyl polymerization", *Polym. Chem.*, **7**, 3361-3369, **2016**
7. **Bachler, P. R.**; Schulz, M. D.; Sparks, C.; Wagener, K. B.; Sumerlin, B. S. "Aminobisphosphonate polymers via RAFT and a multicomponent Kabachnik-Fields reaction" *Macrom. Rapid Commun.*, **36**, 828-833, **2015**
 - Featured on the back cover of Macromolecular Rapid Communications
8. **Bachler, P. R.**; Wagener, K. B. "Functional precision polymers via ADMET polymerization" *Monatshefte Chemie-Chemical Monthly*, **146**, 1053-1061, **2015**

Patents

9. Wagener, K. B., Schulz, M. D., Sumerlin, B. S., Batich, C. D., Sparks, C. S., Bolch, W. E., Milner, R., Smith, S., Kwan, M., **Bachler, P.** "Amino-bis-phosphonate-containing polymers via RAFT polymerization." Provisional patent filed 13 March 2014. Application No. 61/952,681.
10. Schulz, M. D., Wagener, K. B., Sumerlin, B. S., Batich, C. D., Sparks, C. S., Bolch, W. E., Milner, R., Smith, S., Kwan, M., **Bachler, P.**, Popwell, S. "Polymeric metal chelators based on linear polyethyleneimine." Provisional patent filed 18 November 2014. Application No. 62/081,049.

Grants (awarded)

- **Calvo, P.R.** (Role: PI) "A modular approach to complex precision macromolecular architecture via ADMET polymerization" ACS PRF New Directions, \$125,000, awarded, **09/01/2025-08/31/2027**
- **Calvo, P.R.**; Hickey, R. J. (Role: PI) "High-Throughput Synthesis of ABA Block Polymers: Elucidating the Effect of Polymer Chemistry and Block Sequence on Hierarchically Ordered Hydrogel" BioPACIFIC MIP (NSF user facility), access to equipment and \$10,000 for travel (CAPS fellowship), 01/01/2025-12/31/2025
- Li, J. *et al* (Role: Senior Personnel) "Research Infrastructure: MRI: Track 1 Acquisition of an Advanced X-ray Diffraction System for Cross-Disciplinary Research at Kansas State University and Beyond". National Science Foundation (NSF), \$701,714, awarded, **08/01/2024-07/31/2027**

- **Calvo, P.R.**; Miller, L. (Role: PI) "Polymeric immunoradiotherapy agents for treatment of rhabdomyosarcoma", Johnson Cancer Research Center, \$48,501, awarded, **07/01/2024-06/30/2025**
- **Calvo, P.R.**; Dada, N.; McGregor, B. (Role: PI) "Novel insecticide delivery and formulation for resistance management in zoonotic disease vectors". RCSA Scialog Mitigating Zoonotic Threats, \$50,000 per PI (total \$150,000), awarded, **01/01/2024-6/30/2025**
- **Calvo, P.R.** "Novel insecticide delivery and formulation for resistance management in zoonotic disease vectors". RCSA Scialog Mitigating Zoonotic Threats, \$25,000 supplement, awarded, **01/01/2025-6/30/2025**
- Smith, R.; Brown, J.; **Calvo, P.** "Investigating the effects of irradiation on vitamin D stability in select finfish species". National Fisheries Institute Seafood Industry Research Fund (NFI SIRQ), \$43,294, awarded **January 2021**
- **Calvo, P.R.** "Metal-Binding Polymers for Water Purification". Nova Southeastern University President's Faculty Research and Development Grant (PFRDG), \$13,350, awarded **May 2019**

Grants (pending)

- Tree, D.; **Calvo, P.**; Hickey, R.; Kwon, J.; Phillip, W. (Role: Co-PI) "Collaborative Research: DMREF: Accelerating the Discovery of Materials with Nonequilibrium Microstructures using Hybrid Physics-Based and Machine Learning Models". National Science Foundation, \$2,000,000, under review, submitted **February 2025**
- Amana, P. *et al* (Role: Senior Personnel) "Equipment: MRI: Track 1 Acquisition of a NanoRaman/SPM Hybrid System for Materials Characterization". National Science Foundation, \$1,034,576, under review, submitted **November 2024**

Selected Presentation- presenting author listed first

1. **Calvo, P. R.** "Post-polymerization functionalization via the Kabachnik-Fields multicomponent reaction", ACS National Meeting, San Diego, March **2025** (invited)
2. **Calvo, P. R.** "Biomedical Applications of Polymers-Interplay of Structure, Functionality and Sequence", Department of Chemical Engineering, Kansas State University, March **2025** (invited)
3. University of Nebraska at Kearney, November **2024** (invited)
4. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", University of Nebraska at Kearney, November **2024** (invited)
5. **Calvo, P.R.** "Hyperbranched functionalized polymers via RAFT polymerization" ACS National Meeting, Denver, August **2024** (invited)
6. **Calvo, P. R.** "Branched polymers via RAFT polymerization-controlling degree of branching and functionality", ACS National Meeting, New Orleans, March **2024**
7. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", ACS Southwest Regional Meeting, Oklahoma City OK, November **2023**
8. **Calvo, P. R.** "Polymers in Cancer Therapy", Johnson Cancer Research Center, Kansas State University, November **2023** (invited)
9. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", ACS Midwest Great Lakes Regional Meeting, St. Louis MO, October **2023**

10. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", Department of Biochemistry and Molecular Biophysics, Kansas State University, September **2023** (invited)
11. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", Department of Chemistry, Pittsburg State University, September **2023** (invited)
12. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", Department of Chemical Engineering, Kansas State University, August **2023** (invited)
13. **Calvo, P. R.** "Synthesis and Applications of Chelating Polymers", FAME, Tampa, June **2023** (invited)
14. **Calvo, P. R.** "Synthesis of Metal-Binding Polymers", ACS National Meeting, Indianapolis, March **2023**
15. **Calvo, P. R.** "Biomedical Applications of Polymers—A Bottom-up Approach", Kansas State University December **2022** (invited),
16. **Calvo, P. R.** "Synthesis of Metal-Binding Polymers for Water Purification", Western Michigan University November **2022** (invited),
17. **Calvo, P. R.** "Synthesis of Metal-Binding Polymers for Water Purification", University of West Florida. November **2022** (invited),
18. **Calvo, P. R.** "Synthesis of Metal-Binding Polymers", University of Florida, November **2022**
19. **Calvo, P. R.** "Synthesis of Metal-Binding Polymers for Water Purification", San Juan PR, October **2022**
20. **Calvo, P. R.** "Biomedical Applications of Polymers-a bottom-up approach", NSU Honors College, September **2021**
21. **Calvo, P. R.** "Sticky-Business- the chemistry of glues and adhesives" -NSU chemistry club, October **2020**
22. **Calvo, P. R.** "Well-defined functional polymers" NSU chemistry seminar, February **2020**
23. **Calvo, P. R.**, Wagener, K.B., Sumerlin, B.S. "Thermoresponsive hyperbranched block copolymers via RAFT self-condensing vinyl polymerization" 255th ACS National Meeting, New Orleans, LA, March **2018**
24. **Calvo, P. R.**, Wagener, K.B., Sumerlin, B.S. "Hyperbranched bisphosphonate functional polymer via RAFT self-condensing vinyl polymerization and post-polymerization functionalization" 255th ACS National Meeting, New Orleans, LA, March **2018**
25. **Bachler, P. R.**; Gaines, T., Wagener, K. B. "Functional precision polyolefins via ADMET," 251st ACS National Conference, San Diego, CA, March **2016**
26. **Bachler, P. R.**; Sparks, C. A.; Hochberg, J.; Wagener, K. B.; Sumerlin, B. S. "Hyperbranched phosphonic acid polymers via RAFT SCVP," 251st ACS National Conference, San Diego, CA, March **2016**
27. **Bachler, P. R.**; Sumerlin, B. S.; Wagener, K. B. "Development of chelating polymers for treatment of osteosarcoma." Graduate Student Research Day, University of Florida, October **2015**
28. **Bachler, P. R.**; Sumerlin, B. S.; Wagener, K. B. "Hyperbranched chelating polymers via RAFT and a multicomponent Kabachnik-Fields reaction" UF SMART symposium, December **2015**
29. **Bachler, P. R.**; Schulz, M. D.; Sparks, C.; Wagener, K. B.; Sumerlin, B. S. "Aminobisphosphonate polymers via RAFT and a multicomponent Kabachnik-Fields reaction" Florida Annual Meeting and Exposition - FAME 2015 (ACS), May **2015** (Poster)
30. **Bachler, P. R.**; Sparks, C. A.; Sumerlin, B. S.; Wagener, K. B. "Hyperbranched modular polymers via RAFT polymerization," 248th ACS National Conference, San Francisco, CA, August **2014**
31. **Bachler, P. R.**; Schulz, M. D.; Sparks, C. A.; Smith, S., Sumerlin, B. S.; Wagener, K. B. "Well-defined bisphosphonic acid-containing polymers for treatment of osteosarcoma." Graduate Student Research Day, University of Florida, October **2014**

Selected Presentation (Mentor Role)- presenting author listed first; * indicates undergraduate student.

32. Probst, A.*; Afsar, D.; **Calvo, P.R.** "Antimicrobial polymers from AB-alternating copolymers via post-polymerization functionalization" Midwest Regional ACS, Omaha, NE, October **2024** (best poster award)

33. Daily, M.* “Injectable Antimicrobial Microgels for Treatment of Chronic Wounds” Midwest Regional ACS, Omaha, NE, October **2024**
34. Knight, V.*; **Calvo, P. R.** “Phosphorylated chitosan: a polymeric chelator for internal radiation therapy in pediatric osteosarcoma” Midwest Regional ACS, Omaha, NE, October **2024**
35. Afsar, D.; **Calvo, P.R.** “Synthesis and RAFT polymerization of amino-functionalized methacrylic monomers” Midwest Regional ACS, Omaha, NE, October **2024**
36. Knight, V.*; **Calvo, P. R.** “Phosphorylated chitosan: a polymeric chelator for internal radiation therapy in pediatric osteosarcoma” ACS National Meeting, March **2024**
37. Afsar, D; **Calvo, P. R.** “Synthesis and RAFT polymerization of amino-functionalized methacrylic monomers” ACS National Meeting, March **2024**
38. Sultana, E.*; Guillen-Tapia, A.*; **Calvo, P. R.** “Synthesis of polymer-drug conjugates for transdermal delivery of all-trans retinoic acid” ACS National Meeting, March **2023** and NSU Undergraduate Student Symposium April **2023**
39. Pandya, M.*; Castro-Wetzstein, F.*; **Calvo, P. R.** “Synthesis of metal binding polymers via RAFT polymerization of activated ester monomers and post-polymerization functionalization” ACS National Meeting, March **2023** and NSU Undergraduate Student Symposium April **2023**
40. Brandea, A.*; Rodriguez, R.*; **Calvo, P. R.** “Investigating the metal binding properties of chitosan and bisphosphonate functionalized chitosan” ACS National Meeting, March **2023** and NSU Undergraduate Student Symposium April **2023**
41. Contractor, R.*; Kurian, D.*; **Calvo, P. R.** “Synthesis of amino-functionalized methacrylamide monomers” ACS National Meeting, March **2023** and NSU Undergraduate Student Symposium April **2023** (3rd place poster award)
42. Ganti, N.*; Kethireddy, S.*; **Calvo, P. R.** “Synthesis of antimicrobial polymers via RAFT polymerization” ACS National Meeting, March **2023** and NSU Undergraduate Student Symposium April **2023**
43. Julakanti, P.*; Khan, A.*; Mohiuddin, F.*; Calvo, P. R.; Brown, J. S. “Optimization of vitamin D extraction from Salmon using LC/MS” ACS National Meeting, March **2023**
44. Natarajan, V.*; Julien, K.*; Julakanti, P.*; Brown, J.; Smith, R.; **Calvo, P. R.** “Effect of gamma irradiation on vitamin D stability in salmon” ACS National Meeting, March **2022** and NSU Undergraduate Student Symposium, April **2022**
45. Olivares, A.*; Pandya, M.*; Naar, B.*; **Calvo, P. R.** “Synthesis of chelating polymer via RAFT polymerization for Metal Extraction” ACS National Meeting, March **2022** and NSU Undergraduate Student Symposium, April **2022**
46. Pandya, M.*; Olivares, A.*; **Calvo, P. R.** “Investigating polymer-metal chelation via atomic absorption spectroscopy” ACS National Meeting, March **2022** and NSU Undergraduate Student Symposium, April **2022**
47. Polam, S.*; Khouri Sader, B.*; **Calvo, P. R.** “Synthesis of metal-binding polymers for water purification via RAFT” NSU Undergraduate Student Research Symposium, virtual symposium (Best Poster Award) April **2021**.
48. Polam, S.*; Khouri Sader, B.*; **Calvo, P. R.** “Synthesis of metal-binding polymers for water purification via RAFT” Life Sciences South Florida STEM Symposium, 3-minute thesis, May **2021**.
49. Polam, S.*; Khouri Sader, B.*; **Calvo, P. R.** “Synthesis of metal-binding polymers for water purification via RAFT” ACS National Meeting, presented online due to Covid-19, March **2020**
<https://doi.org/10.1021/scimeetings.0c05637>
50. Polam, S.*; Khouri Sader, B.*; **Calvo, P. R.** “Synthesis of metal-binding polymers for water purification via RAFT” NSU Undergraduate Student Research Symposium, accepted but canceled due to Covid-19, April **2020**.
51. Lopez, M.*; Flores, M.*; **Calvo, P. R.**, Del Pilar, J. “Impact of ocean acidification on the composition of marine shells” 255th ACS National Meeting, New Orleans, LA, March 2018

Research Experience

Kansas State University

July 2023- present

Principal Investigator

- Supervised and mentored PhD and undergraduate students
- Trained students in organic synthesis, purification, characterization, and polymer synthesis
- Developed project ideas and corresponding grant proposals
- Solely responsible for handling ordering, budgeting, and grant reporting
- Organized weekly research group meetings

Nova Southeastern University, FL

August 2018- June 2023

Principal Investigator

- Supervised up to 10 undergraduate students per semester for independent study research on up to four different research projects
- Trained students in organic synthesis, purification, characterization and polymer synthesis
- Synthesized monomers and polymers for studying polymer-metal binding
- Developed analytical protocols for studying polymer-metal binding via AA and ICP/MS
- Synthesized various antimicrobial monomers and polymers
- Developed protocols to extract Vitamin D from fish and quantify via LC/MS

Rochal Industries LLC San Antonio, TX

May 2016-August 2017

Mentor: Joseph C. Salamone (NAE)

- Synthesized biocompatible polymers and prepared formulations for applications in wound care
- Evaluated biological compatibility and in vitro/in vivo effectiveness of different materials for treatment of chronic wounds (for FDA approval)
- Assessed effectiveness of antimicrobial polymers against different microorganisms and biofilm
- Developed polymer-based gels for use as wound/fillers and cellular scaffolds
- Composed grants (NSF/NIH SBIR) for research/product development
- Prepared regulatory paperwork for FDA approval

University of Florida

August 2012-May 2016

Advisors: Kenneth B. Wagener, Brent S. Sumerlin

- Organic and polymer synthesis and characterization
- Synthesized and developed polymers with pendent chelating ligands for the delivery of radionuclides in veterinary and pediatric osteosarcoma
- Synthesized well-defined highly branched and highly functionalized polymers to evaluate structure activity relationships (using RAFT polymerization)
- Studied the effect of polymer branching on aggregation, thermo responsiveness and gelation.
- Synthesized polymeric linker particles and utilized them to perform tandem polymerizations.

Teaching Experience

Kansas State University-Assistant Professor

August 2023-present

CHM550 (Organic Chemistry 2): F23, F24

- Instructor of record for large lecture courses (50+ students)
- Supervised Graduate Teaching Assistant (TA) to facilitate recitations and help sessions
- Focus on active learning, student engagement, knowledge retention and critical thinking
- Participated in restructuring and redesign of Organic Chemistry labs

CHM965 (Physical Organic Chemistry): S24, S25

- Instructor of record for small graduate level course
- Developed comprehensive course notes and problems sets
- Focus on incorporating current scientific literature and drawing connections between course content and research topics

CHM200 (Frontiers in Chemistry): F24

- Developed new chemistry freshman orientation course focusing on building research skills and learning about university resources

Nova Southeastern University-Assistant Professor

August 2018-June 2023

CHEM1300 (General Chemistry I/Lab), CHEM1310 (General Chemistry II/Lab), CHEM2400 (Organic Chemistry I/Lab), CHEM2410 (Organic Chemistry I/Lab), CHEM4101 (Chemistry Senior Seminar), CHEM4990 (Chemistry Independent Study), BIOL4990 (Biology Independent Study), HONR4990 (Honors Independent Study/Thesis)

- Instructor of record for lectures of 36-48 students and labs of 18 students (4-6 classes per semester)
- Responsible for creating and grading all assignments, exams, and lab reports
- Focus on active learning, student engagement, knowledge retention and critical thinking
- Proficient with numerous online learning platforms including Canvas, Zoom, Mastering Chemistry, ALEKS, Aktiv Learning, WileyPlus
- Developed multiple new lab experiments and adopted a new lab manual for Organic Chemistry
- Supervised Supplemental Instruction (SI) leaders and Laboratory Assistants (LAs)

Texas A&M University-Lecturer

August 2017-July 2018

CHEM1310 and CHEM1311 (General Chemistry I and II)

- Gave lectures to classes of 36 students,
- Created and graded quizzes, assignments and exams
- Responsible for developing course format with a new textbook

CHEM2325 (Organic Chemistry 2)

- Accelerated 8-week summer course
- Created and graded quizzes, assignments and exams
- Utilized online learning tools to improve student learning

CHEM1310L & CHEM1311L (General Chemistry 1 and 2 Labs)

- Guided students through general chemistry lab procedures
- Taught students how to write a laboratory report
- Developed new lab practical

Organic Chemistry 2 Lab

- Guided students through organic lab procedures
- Taught students spectroscopy (NMR, IR, MS)
- Responsible for the safety of the students throughout the course

University of Florida-Assistant Lecturer

Fall 2015

CHEM4272 (Organic Chemistry of Polymers)

- Gave lectures to class of 40 students on biomedical applications of polymers
- Created exam questions based on lectures given

University of Florida-Teaching Assistant

August 2012-May 2016

CHEM2045L (General Chemistry 1 Lab)

- Guided students through general chemistry lab procedures
- Graded lab reports, lab practical and proctored exams
- Responsible for the safety of the students throughout the course

CHEM2211L (Organic Chemistry Lab)

- Guided students through organic lab procedures
- Taught students spectroscopy (NMR, IR)
- Responsible for the safety of the students throughout the course

University of Florida-Undergraduate Research Mentor

May 2013-May 2016

- Mentored 3 undergraduate students and one visiting graduate student (Germany)
- Taught and supervised chemistry lab procedures and ensured safety of students
- Designed projects and experiments suitable for undergraduate success

UFUTuRES program, University of Florida, Science Content Expert

2013-2016

- Collaborated with middle school science teachers in NSF funded project to improve science education in middle schools
- designed lesson plans to provide science content to middle school teachers
- organized science workshops

University Athletic Association, Head and Content Tutor

2013-2016

- Tutored student athletes in chemistry classes (all levels)
- developed study guides and practice exams
- provided learning strategies and assisted with questions
- supervised and evaluated new tutors

Service, Affiliations and Other Activities

Kansas State University (2023-present)

- POLY Henkel Award Coordinator
- Elected Member at large for ACS POLY (2024-2025)
- Poster judge at national and regional ACS meetings
- Poster judge for campus research presentation
- Judge for 3-minute thesis competition
- Associate Member of Johnson Cancer Research Center
- Reviewer for ACS Macro Letters, Journal of Physical Chemistry, Macromolecules, RSC Applied Polymers
- Department Scribe
- Member of department award committee
- Member of social media committee
- Member of student learning outcomes committee
- Member of graduate recruiting and admissions committee

Nova Southeastern University (2018-2023)

- Lead Instructor for Organic Chemistry 2 Labs (2022- 2023)
- Chair of chemistry instructor hiring committee (2022)
- Member (2020-2023) and chair (2022-2023; appointed by Dean) of NSU Halmos College Interdisciplinary Research and Teaching Initiative Committee
- Chemistry Department Representative for Faculty Advisory Council (2022)
- Reviewer for PFRDG grant proposals (2021-2023)
- Member of NSU Halmos College of Arts and Sciences Research Space Allocation Committee (appointed by Dean) (2020)
- Judge for Health Communication Toolkit Competition (2020)
- Judge for NSU Undergraduate Student Symposium (2020-2023)
- Committee member for peer review of faculty members (2020-2023)
- NSU Honors College affiliate Faculty (2019- 2023)
- Honors College strategic planning committee (2019)
- Reviewer for ACS Macro Letters (2019-2023)

Rochal Industries (2016-2017)

- Member of ACS POLY Industrial Advisor Board (2017)
- Lab Safety Manager (2016-2017)
- Contributed to multiple grant proposals and grant reports (NSF, NIH, DoD)

University of Florida (2012-2016)

- Contributed to multiple grant proposals (NSF, NIH, Army)
- Butler Polymer Research Laboratory Coordinator (2015-16: 100 people)
- Founding member and officer of ACS POLY/PMSE Student Chapter (2012-2016)
- Lab hazardous waste manager and safety manager (2013-2016)
- Assistant Coach for UF women's rugby club (2012-2014)