Curriculum Vita

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Education

2007 – 2009	*Postdoctoral Research* at the Forensic Science Center, Lawrence Livermore National Laboratory
2003 – 2007	*Doctor of Philosophy* in Agricultural and Environmental Chemistry, University of California, Davis. Dissertation title: *Red Blood Cell Folate: Quantitation, Correlation with Intake, and Effect of Single Nucleotide Polymorphisms*. Major Professor: Distinguished Professor Andrew J. Clifford
1999 – 2003	*Bachelor of Science* in Chemistry with Honors, *summa cum laude*, Southwestern University

Professional Experience

2025 – present	Assistant Dean of the Graduate School, University of Colorado Colorado Springs
2024 – present	Professor, University of Colorado Colorado Springs
2024 – 2025	Faculty Fellow for Graduate Student Success, UCCS Graduate School
2016 – present	Associate Chair, Department of Chemistry & Biochemistry, University of Colorado Colorado Springs
2016 – 2024	Associate Professor, University of Colorado Colorado Springs
2018 – 2023	Graduate Program Director, Department of Chemistry & Biochemistry, University of Colorado Colorado Springs

2009 – 2016	Assistant Professor, University of Colorado Colorado Springs
2007 – 2009	Postdoctoral Research Staff Member at the Forensic Science Center, Lawrence Livermore National Laboratory
2003 – 2007	Graduate Research Assistant, University of California, Davis
2005 – 2006	Teaching Assistant, University of California, Davis
2002 – 2003	Official Course Tutor (General and Organic Chemistry), Southwestern University

Refereed Publications (*Undergraduate and #Graduate student co-authors)

1. #Rivera Lemon EN, Lowe LE, Lazzelle, SM, Tvrdy KC Owens JE. "SNaP-C: Development of a Silver Nanoparticle Antioxidant Assay for the Selective Quantitative Analysis of Vitamin C in Beverages." *ACS Omega*, **2025**, doi: 10.1021/acsomega.4c09746

2. #Rivera Lemon EN, Lowe LE, Owens JE. "SNaP-C: Validation of a novel, selective silver nanoparticle antioxidant capacity assay for Vitamin C content in beverages." *Food Chemistry*, **2024**, *457*, 140112. DOI: 10.1016/j.foodchem.2024.140112

3. #Schachterle ML, Lowe LE, #Butler CR, Schoffstall AM, Owens JE. "Micro-extraction method for the analysis of flame retardants in dust collected from air filters from HVAC systems." *MethodsX*, **2024**, *12*, 102693. DOI: 10.1016/j.mex.2024.102693

4. #Schachterle ML, Lowe LE, Owens JE. "Exploring the residential exposome: Determination of hazardous flame retardants in air filter dust from HVAC systems." *Environmental Research*, **2024**, *248*, 118223. DOI: 10.1016/j.envres.2024.118223

5. Owens JE, Lowe LE. "Headspace versus direct injection for the quantitation of methanol, ethyl acetate, and fusel oils in distilled spirits by gas chromatography-flame ionization detection." *MethodsX*, **2023**, *11*, 102387. DOI: 10.1016/j.mex.2023.102387

6. #Quezada Davalos JC, #Michaud MA, Lowe LE, *Hanson EN, #Gaulke EP, Owens JE. "Dataset of surveyed PFAS in water, sediment, and soil of Fountain Creek Watershed, Colorado, USA." *Data in Brief*, **2023**, *49*, 109280. DOI: 10.1016/j.dib.2023.109280

7. #Quezada Davalos JC, #Michaud MA, Lowe LE, *Hanson EN, Owens JE. "Per- and Polyfluoroalkyl Substances (PFASs) in the Fountain Creek Watershed, Colorado

Springs, CO, USA: A Yearlong Investigation of PFAS Levels in Water, Soils, and Sediments." *ACS ES&T Water*, **2023**, *3*, 96-105. DOI: 10.1021/acsestwater.2c00440

8. Mooney E, #Mullins M, #Den Uyl J, Trail S, #Nguyen P, Owens J, *Godtfredsen E, Heschel S. "Early snowmelt reduces aphid abundance (*Aphis asclepiadis*) by creating water-stressed host plants (*Ligusticum porteri*) and altering interactions with ants." *Arthropod-Plant Interactions*, **2021**, *15*, 33-46. DOI: 10.1007/s11829-020-09793-2

9. #Nguyen PK, Owens JE, Lowe LE, Mooney EH. "Analysis of sugars and amino acids in aphid honeydew by hydrophilic interaction liquid chromatography – mass spectrometry." *MethodsX*, **2020**, *7*, 101050. DOI: 10.1016/j.mex.2020.101050

10. Mooney E, *Davidson B, #Den Uyl J, #Mullins M, *Medina E, #Nguyen P, Owens J. "Elevated temperatures alter an ant-aphid mutualism." *Entomologia Experimentalis et Applicata*, **2019**, *167*, 891-905. DOI: 10.1111/eea.12839

11. *Smith B, Lowe L, Owens J, Mooney E. "Chemotypic variation in osha (*Ligusticum porteri*) in Colorado, USA." *Journal of Applied Research on Medicinal and Aromatic Plants*, **2018**, *10*, 34-40. DOI: 10.1016;j.jarmpa.2018.05.001

12. *Bukovsky-Reyes SER, Lowe LE, *Brandon WM, Owens JE. "Measurement of antioxidants in distilled spirits by a silver nanoparticle assay." *Journal of the Institute of Brewing*, **2018**, *124*, 291-299.

13. Owens JE, Zimmerman LB, *Gardner MA, Lowe LE. "Analysis of Whiskey by DLLME-GC/MS: An Upper Division Analytical Chemistry Experiment Guided by Green Chemistry." *Journal of Chemical Education*, **2016**, *93*, 186-192.

14. Barrett CA, *Orban DA, *Seebeck SE, Lowe LE, Owens JE. "Development of Low Density Solvent Dispersed Liquid-Liquid Microextraction-Gas Chromatography-Mass Spectrometry Method for the Quantitation of Tetrabromobisphenol-A from Dust." *Journal of Separation Science*, **2015**, *38*, 2503-2509.

15. *Gardner MA, Sampsel S, Jenkins WW, Owens JE. "Analysis of fentanyl in urine by DLLME-GC/MS." *Journal of Analytical Toxicology*, **2015**, *39,* 118-125.

16. #Kahrilas G, Haggren W, *Read RL, #Wally LM, #Fredrick SJ, Hiskey M, Prieto A, Owens JE. "Investigation of antibacterial activity of microwave-assisted syntheses of silver nanoparticles using reducing agents soluble starch, dextrose, and arabinose." *ACS Sustainable Chemistry & Engineering*, **2014**, *2*, 590-598.

17. #Marle PD, Decker L, Taylor V, Fitzpatrick K, Khaliqi D, Owens JE, Henry RM. "CSI-Chocolate Science Investigation and the Case of the Recipe Rip-Off: Using Forensic Chemistry to Engage High School Students." *Journal of Chemical Education*, **2014**, *91*, 345-350.

18. #Kahrilas G, #Wally LM, #Fredrick SJ, Hiskey M, Prieto AL, Owens JE. "Microwave-assisted synthesis of silver nanoparticles using orange peel extract." *ACS Sustainable Chemistry & Engineering*, **2014**, *2*, 367-376.

19. *Di Napoli-Davis G, Owens JE. "Quantitation of Tetrabromobisphenol-A from Dust Sampled on Consumer Electronics by Dispersed Liquid-Liquid Microextraction." *Environmental Pollution*, **2013**, *180*, 274-280.

20. Clifford AJ, Rincon G, Owens JE, Medrano JF, Moshfegh AJ, Baer DJ, Novotny JA. "Single Nucleotide Polymorphisms in *CETP*, *SLC46A1*, *SLC19A1*, *CD36*, *BCMO1*, *APOA5*, and *ABCA1* are Significant Predictors of Plasma HDL in Healthy Adults." *Lipids in Health and Disease*, **2013**, *12* (66), doi: 10.1186/1476-511X-12-66.

21. Clifford AJ, Chen K, McWade L, Rincon G, Kim SH, Holstege DM, Owens JE, Liu B, Mueller HG, Medrano JF, Fadel JG, Moshfegh AJ, Baer DJ, Novotny JA. "Gender and single nucleotide polymorphisms in *MTHFR, BHMT, SPTLC, CRBP2, CETP,* and *SCARB1* are significant predictors of plasma homocysteine (normalized by red blood cell folate concentrations) in healthy adults." *Journal of Nutrition*, **2012**, *142*, 1764-1771.

22. Owens JE, Koester C. "Quantitative analysis of chemical warfare agent degradation products spiked into beverages by liquid chromatography tandem mass spectrometry." *Journal of Agricultural and Food Chemistry*, **2009**, *57*, 8227-8235.

23. Owens JE, Hok S, Alcaraz A, Koester C. "Quantitative analysis of tetramethylenedisulfotetramine ("tetramine") spiked into beverages by liquid chromatography tandem mass spectrometry with validation by gas chromatography mass spectrometry." *Journal of Agricultural and Food Chemistry*, **2009**, *57*, 4058 - 4067.

24. Owens JE, Koester C. "Quantitation of abrine, an indole alkaloid marker of the toxic glycoproteins abrin, by LC/MS/MS when spiked into various beverages." *Journal of Agricultural and Food Chemistry*, **2008**, *56*, 11139 - 11143.

25. Owens JE, Clifford AJ, Bamforth CW. "Folate in beer." *Journal of the Institute of Brewing*, **2007**, *113*, 243 - 248.

26. Owens JE, Holstege DM, Clifford AJ. "High-throughput method for the quantitation of total folate in whole blood using LC-MS/MS." *Journal of Agricultural and Food Chemistry*, **2007**, *55*, 3292 - 3297.

27. Owens JE, Holstege DM, Clifford AJ. "Comparison to two dietary intake instruments and their validation by RBC folate." *Journal of Agricultural and Food Chemistry*, **2007**, *55*, 3737 - 3740.

28. Owens JE, Niemeyer ED. "Analysis of chemical contamination within a canal in a Mexican border colonia." *Environmental Pollution*, **2006**, *140*, 506 - 515.

29. Owens JE, Holstege DM, Clifford AJ. "Quantitation of total folate in whole blood using LC-MS/MS." *Journal of Agricultural and Food Chemistry*, **2005**, *53*, 7390 - 7394.

Non-Refereed Publications

1. Bradley K. Esser, Janel E. Owens, Alexander K. Vu, and Roald Lief. "California GAMA Special Study: Analysis of Carbamazepine, Oxcarbazepine, and Metabolites as Wastewater Tracers in Water Resource Studies." Technical Report. Lawrence Livermore National Laboratory, **2010**, LLNL-TR-450502, 36 pages.

2. Owens JE, Vu A, Koester C. "Analysis of Phosphonic Acids: Validation of Semi-Volatile Analysis by HPLC-MS/MS by EPA Method MS999." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR-408554.

3. Owens JE, Vu A, Koester C. "Analysis of Ethanolamines: Validation of Semi-Volatile Analysis by HPLC-MS/MS by EPA Method MS888." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR-408180.

4. Owens JE, Koester C. "Analysis of Thiodiglycol: Validation of Semi-Volatile Analysis by HPLC-MS/MS by EPA Method MS777." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR-405944.

5. Owens JE, Koester C. "Analysis of Carbamate Pesticides: Validation of Semi-Volatile Analysis by HPLC-MS/MS by EPA Method MS666." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR- 403969.

6. Owens JE, Koester C. "Analysis of Abrine, an Alkaloid Marker of the Toxic Protein Abrin, in Beverages by Liquid Chromatography Coupled with Mass Spectrometric Detection." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR-402148.

7. Owens JE**,** Hok S, Koester C. "Analysis of Tetramethylenedisulfotetramine ("Tetramine") in Beverages." Technical Report. Lawrence Livermore National Laboratory, **2008**. LLNL-TR-402144.

8. Clifford AJ, Owens JE, Liu BT, Müller HG, Medrano JF, Fadel JG, Moghaddam B. "Effects of folate-relevant genetic polymorphisms on RBC folate and homocysteine." *Mathematical Modeling in Nutrition*, Virginia Tech University, August **2007**.

9. Owens JE, Niemeyer ED. "Chemical analysis of industrial water pollution in a border *colonia*." Southwestern University Brown Working Papers in the Arts and Sciences. Vol 2, **2002**.

Publications and Presentations in Preparation, Under Review, or In Revision (Names with * indicate undergraduate co-authors and # graduate co-authors)

1. #Gertner JL, Cook J, Owens JE, Morgenstern A. "Elucidating the Mechanistic Pathway of (-)ESI-induced Fragmentation of the Highly Toxic Rodenticide Tetramethylenedisulfotetramine: A Theoretical and Experimental Approach." Under revision for re-submission, **2025**.

Presentations and Posters in Meetings and Seminars Presented (Names with * indicate undergraduate co-authors and # graduate co-authors)

1. #Wessels AJ, Lowe LE, Tully A, Owens JE. "Experimental comparison of toxicological methods for the analysis of fentanyl and fentanyl related compounds." ACS National Meeting & Exposition, Denver, CO, August 16 - 22, **2024**. [Poster presentation]

2. #Gertner JL, Owens JE, Morgenstern A. "Elucidating the mechanistic pathway of electrospray-induced fragmentation of dimerized tetramine: A theoretical and experimental approach." ACS National Meeting & Exposition, Denver, CO, August 16 - 22, **2024**. [Poster & SciMix presentation]

3. Klocko AD, Owens JE, Kovacs JM, Quezada C. "Interdisciplinary assessment of, and developing remediation strategies for, perfluorinated compound contamination in Colorado Springs," Peak Area Leadership in Science (PALS), UCCS Department of Chemistry and Biochemistry, Colorado Springs, CO. April 15, **2023**. [Presentation]

4. *Johnson M, #Schachterle M, Lowe L, Owens JE, "What are we wearing? The accumulation of flame retardants in dryer lint." Mountain Lion Research Day, UCCS, December **2022**. [Poster]

5. #Schachterle M, Lowe L, Owens JE, "Dangerous dust: Determining levels of hazardous flame retardants in furnace filter dust." Mountain Lion Research Day, UCCS, December **2022**. [Poster]

6. *Hanson EN, Lowe LE, Klocko AL, Owens JE, "Assessing levels of perfluorinated chemicals in the Fountain Creek Watershed: the case of the missing PFOA." Mountain Lion Research Day, UCCS, December **2021**. [Poster]

7. *Peaux A, *Royal M, Lowe LE, Wolkow TD, Owens JE, "Can isomerized alpha acid concentrations at early stages accurately predict finished product bitterness (as IBU)?" Mountain Lion Research Day, UCCS, December **2021**. [Poster]

8. Rivera EN, Lowe LE, Owens JE, "It's in the Juice: Development of a Silver Nanoparticle Assay for Quantitation of Vitamin C in Beverages." Mountain Lion Research Day, UCCS, November **2020**. [Virtual presentation]

9. #Michaud MA, Lowe LE, Owens JE. "Analysis of Perfluorinated Chemicals (PFCs) in the Fountain Creek Watershed by LC/MS/MS." Graduate School Research Showcase, UCCS, May **2019**. [Poster]

10. #Gaulke EP, Lowe LE, Owens JE. "A Three-Month Snapshot of PFC Concentrations in Soil at Venetucci Farm." Graduate School Research Showcase, UCCS, May **2019**. [Poster]

11. #Nguyen PK, Owens JE, Mooney E, "Sugar and Amino Acid Analysis in Aphid Honeydew by HILIC Chromatography." Graduate School Research Showcase, UCCS, May **2019**. [Poster]

12. *Lemon EN, #Lazzelle S, Lowe LE, Owens JE. "It's in the Juice: Measuring Vitamin C Levels by Silver Nanoparticle Assay." Colorado Springs Undergraduate Research Forum, UCCS, April 6, **2019**. [Poster]

13. *Gaulke E, Butler CR, Schoffstall A, Lowe LE, Owens JE. "Quantitative analysis of tetrabromobisphenol-A and tribromobisphenol-A in dust from consumer electronics." 253rd ACS National Meeting & Exposition, San Francisco, CA, April 2-6, **2017**. [Poster and Sci-Mix]

14. Owens JE. "Team-based learning in two upper-division chemistry elective courses: Mass spectrometry and environmental chemistry." 253rd ACS National Meeting & Exposition, San Francisco, CA, April 2-6, **2017**. [Oral presentation]

15. *Hunt MA, *Morrison WJ, *Muir LD, Tully A, Jenkins WW, Lowe LE, Owens JE. "Forensic quantitative analysis of opiates in post-mortem blood and brain:

Application of DLLME-LC/MS/MS." 253rd ACS National Meeting & Exposition, San Francisco, CA, April 2-6, **2017**. [Poster]

16. Mooney E, Owens JE, *Smith B, Lowe LE. "Variation in secondary metabolites of the medicinal plant *Ligusticum porteri* associated with light environment." *Society for Economic Botany*, Harlan, KY. July 19, **2016**. [Oral presentation]

17. Burke SC*, Owens JE, Windom BC. "Derived measurement of the enthalpy of vaporization of complex fuels using a reduced pressure distillation curve approach." *19th Symposium on Thermophysical Properties*, Boulder, CO, June 21-26, **2015**. [Poster]

18. Patz BJ*, Owens JE, Windom BC. "Azeotropic Volatility of Hydrous Ethanol Gasoline Mixtures." *19th Symposium on Thermophysical Properties*, Boulder, CO, June 21-26, **2015**. [Presentation]

19. Orban DA*, Wagner E*, Goolsby CN*, Read B*, Steward T*, Merz Jr., K*, Barnes S*, Haggren W, Owens JE. "Using HPLC to Quantitate Indole Production as a Marker of Stress Response in Bacterial Communities." *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 3, **2015** and *Colorado Springs Undergraduate Research Forum*, USAFA, April 4, **2015**. [Poster]

20. Bukovsky-Reyes S*, Owens JE. "Microwave-assisted green synthesis of silver nanoparticles for the assessment of total antioxidant capacity in fruits." *American Chemical Society National Meeting*, Denver, CO, March 22-26, **2015**. [Presentation and 2nd Place Award Winner, Division of Agricultural and Food Chemistry Undergraduate Competition]; *Colorado Springs Undergraduate Research Forum*, USAFA, April 4, **2015**. [Poster]

21. Doverspike JC*, Radford C*, Lowe LE, Owens JE. "Determination of chlorogenic acid and caffeic acid in fruits with evaluation of pesticide concentrations." *American Chemical Society National Meeting*, Denver, CO, March 22-26, **2015**. [Poster]

22. Owens JE, Zimmerman LB, Gardner MA*, Lowe LE, Orban DA*, Goolsby CN*, "Analysis of aroma compounds in whiskey by DLLME-GC/MS." *American Chemical Society National Meeting*, Denver, CO, March 22-26, **2015** and *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 3, **2015**. [Poster]

23. Barrett CA, Orban DA*, Seebeck SE*, Lowe LE, Owens JE. "Development of low density solvent DLLME-GC/MS method for quantitation of tetrabromobisphenol-A from dust." *American Chemical Society National Meeting*, Denver, CO, March 22-26, **2015**; and *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 3, **2015**. [Poster]

24. Tully AK*, Johnson S*, Owens JE, Jenkins WW. "Analysis of synthetic cannabinoids by GC/MS and HPLC." *Mountain Lion Research Day*, UCCS, April 11, **2014**; *Colorado Springs Undergraduate Research Forum*, USAFA, April 12, **2014**. [Poster]

25. Seebeck S*, Orban D*, Barrett C, Owens JE. "Dispersed liquid-liquid microextraction with matrix solidification for the analysis of tetrabromobisphenol-A (TBBPA)." *Mountain Lion Research Day*, UCCS, April 11, **2014**; *Colorado Springs Undergraduate Research Forum*, USAFA, April 12, **2014**. [Poster]

26. Read RL*, Haggren W, Owens JE. "Antibacterial effects of silver nanoparticles prepared by microwave-assisted synthesis." *Mountain Lion Research Day*, UCCS, April 11, **2014**. [Poster]

27. Kim E*, Owens JE. "Headspace liquid-phase microextraction analysis of putative hydraulic fracturing compounds." *Mountain Lion Research Day*, UCCS, April 11, **2014**; *Colorado Springs Undergraduate Research Forum*, USAFA, April 12, **2014**. [Poster]

28. Bukovsky-Reyes S*, Buxton KE*, Owens JE. "Comparative study of chlorogenic acid concentrations in foods: fresh fruit, canned fruit, fruit juices, and coffee." *American Chemical Society National Meeting,* Dallas, TX, March 16-20, 2014; *Mountain Lion Research Day*, UCCS, April 11, **2014**; *Colorado Springs Undergraduate Research Forum*, USAFA, April 12, **2014**. [Poster]

29. Gardner M*, Sampsel S, Jenkins WW, Owens JE. "Fast forensic toxicology: Quantitative Analysis of Fentanyl by DLLME and GC/MS." *American Chemical Society National Meeting,* Dallas, TX, March 16-20, 2014; *Mountain Lion Research Day*, UCCS, April 11, **2014**; *Colorado Springs Undergraduate Research Forum*, USAFA, April 12, **2014**. [Poster]

30. Braun-Sand SB, Schoffstall AM, Owens JE, Ruminski R, Weiss D, Henry R. "NSF REU: Green Chemistry in Colorful Colorado." *Council on Undergraduate Research: Research Experiences for Undergraduates Scholarships Conference,* Faculty Division, Arlington, VA, October 27-28, **2013**. [Poster]

31. Bukovsky-Reyes S*, Buxton KE*, Owens JE. "Comparative study of chlorogenic acid concentrations in canned fruit, fresh fruit, and fruit juices." *Council on Undergraduate Research: Research Experiences for Undergraduates Scholarships Conference*, Arlington, VA, October 27-28, **2013**. [Poster]

32. Owens JE, "Quantify This: _____; A research story from an analytical/environmental/food/forensic/green chemist." *CHEM 1060 Honors Class*

Presentation for Prof. David Weiss, University of Colorado Colorado Springs, May 3, **2013**. [Presentation]

33. Bukovsky-Reyes, S* and Owens JE, "Dispersed Liquid-Liquid Microextraction of Chlorogenic Acid from Peach Juice." *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 5, **2013**. [Poster] and *Colorado Springs Undergraduate Research Forum*, University of Colorado Colorado Springs, April 13, **2013**. [Poster]

34. Gardner, M* and Owens JE, "Dispersed Liquid-Liquid Microextraction of Fentanyl from Aqueous Solution." *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 5, **2013**. [Poster] and *Colorado Springs Undergraduate Research Forum*, University of Colorado Colorado Springs, April 13, **2013**. [Poster]

35. Kim E* and Owens JE, "Hydraulic Fracturing: Developing and Efficient Technique for Analysis of Possible Chemicals Found in Hydraulic Fracturing Fluids." *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 5, **2013**. [Poster] and *Colorado Springs Undergraduate Research Forum*, University of Colorado Colorado Springs, April 13, **2013**. [Poster]

36. Ortega, C* and Owens JE, "Analysis of Pharmaceuticals by Dispersed Liquid-Liquid Microextraction." *Mountain Lion Research Day,* University of Colorado Colorado Springs, April 5, **2013**. [Poster] and *Colorado Springs Undergraduate Research Forum*, University of Colorado Colorado Springs, April 13, **2013**. [Poster]

37. Owens JE, "Food Chemistry: Organic vs. Conventional Methods." *Peak Area Leadership in Science: Professional Development Activities for Science Teachers in the Pikes Peak Region*, Hub meeting for March 6, **2013**. Palmer High School. [Presentation]

38. Di Napoli-Davis, G* and Owens JE, "Development of Dispersed Liquid-Liquid Microextraction (DLLME) Method for the Quantitative Analysis of the Brominated Flame Retardant Tetrabromobisphenol-A on Consumer Electronics." *Colorado Springs Undergraduate Research Forum*, Colorado College, April 28, **2012**, and *Mountain Lion Research Day*, University of Colorado Colorado Springs, April 5, **2012**. [Poster]

39. Ortega, C* and Owens JE, "Determination of Carbamazepine, 17α-Ethynyl estradiol, and Diclofenac Bioaccumulation in Plants Using High Performance Liquid Chromatography with UV-Vis Detection." *Colorado Springs Undergraduate Research Forum*, Colorado College, April 28, **2012**, and *Mountain Lion Research Day*, University of Colorado Colorado Springs, April 5, **2012**. [Poster]

40. Di Napoli-Davis G* and Owens JE, "Development of Dispersed Liquid-Liquid Microextraction (DLLME) Method for the Quantitative Analysis of the Brominated Flame Retardant Tetrabromobisphenol-A on Consumer Electronics." *Federation of Analytical Chemistry and Spectroscopy Societies Conference*, October **2011**. [Poster]

41. Hasbrouck C*, Fox-Rivera M*, and Owens JE. "Hydraulic Fracturing: Development of a Headspace Liquid Phase Micro-Extraction Method for Chemical Fingerprinting of Fracturing Chemicals by Gas Chromatography-Mass Spectrometry." *Federation of Analytical Chemistry and Spectroscopy Societies Conference,* October **2011**. [Poster]

42. Owens JE and Braun-Sand S. "Examination of tetramine stability in aqueous solutions through computational methods." *Federation of Analytical Chemistry and Spectroscopy Societies Conference*, October **2011**. [Presentation]

43. Owens JE, "Skeleton notes, cooperative learning, and active learning: features of a special topics course in mass spectrometry." *American Chemical Society, 242nd Meeting, Denver, Colorado*, Division of Analytical Chemistry, *Innovations in Teaching Analytical Chemistry*, August **2011**. [Presentation]

44. Damian K* and Owens JE, "Development of 'green' extraction techniques for the analysis of diclofenac in plants to study bioaccumulation of a pharmaceutical." *American Chemical Society 242nd National Conference*, Chemical Education Division, August **2011**. [Poster]

45. Mobley E*, Jones K*, and Owens JE, "Development of 'green' extraction techniques for the analysis of chlorogenic acid in peaches." *American Chemical Society 242nd National Conference*, Chemical Education Division, August 2011. [Poster]

46. Quintero C* and Owens JE, "Analysis of Pharmaceuticals in Plants Using Dispersive Liquid-Liquid Microextraction." *Colorado Springs Undergraduate Research Forum*, U.S. Air Force Academy, April 30, **2011**. [Poster]

47. Jones K*, Mobley E*, Owens JE, "Quantitative Analysis of Chlorogenic Acid in Peaches using Solid Phase Extraction, UV/Vis Absorption Spectroscopy, and High Performance Liquid Chromatography." *Mountain Lion Research Day*, University of Colorado Colorado Springs, April 1st, **2011** and *Colorado Springs Undergraduate Research Forum*, U.S. Air Force Academy, April 30, **2011**. [Poster]

48. Damian K*, Owens JE, "Development of 'Green' Extraction Techniques for the Analysis of Diclofenac and Ibuprofen from Plants." *Mountain Lion Research Day*, University of Colorado Colorado Springs, April 1st, **2011** and *Colorado Springs Undergraduate Research Forum*, U.S. Air Force Academy, April 30th, **2011**. [Poster]

49. Owens JE, "Green Environmental Analytical Chemistry: Research Projects at UCCS." *General Chemistry 1060 Honors*, Prof. Renee Henry, April 20th, **2011**. [Presentation]

50. Owens JE, "Food Forensics: Is Our Food Safe?" *Café Scientifique*, University of Colorado Colorado Springs, February 8th, **2011** and Retired Faculty Luncheon, University of Colorado Colorado Springs, April 11th, **2011**. [Presentation]

51. Owens JE, "Food Forensics: Applications of Mass Spectrometry." *Sigma Xi Scientific Society*, Colorado College, November 7th, **2010**. [Presentation]

52. Owens JE, "Toxins and Dinner Plates." *Gallery of Contemporary Art: Hypothesis Lecture Series*; University of Colorado at Colorado Springs, October 21st, **2010**. [Presentation]

53. Owens JE, "Food, Pharmaceuticals, Personal Care Products, and Nanoparticles: A Research Story Involving Chemistry, Environmental Transformations, Environmental Toxicology, and Forensics." *General Chemistry CHEM 106 Honors*; Prof. Renee Henry, April **2010**. [Presentation]

54. Owens JE, "Food Forensics, Environmental Pharmaceutical Analysis and a Focus on New Applications of Mass Spectrometry." *Senior Seminar Course CHEM 495*; Prof. James Eberhart, September **2009**. [Presentation]

55. Owens JE, Koester C. "Quantitative Analysis of Chemical Warfare Degradation Products Spiked into Beverages by Liquid Chromatography Tandem Mass Spectrometry." *Federation of Analytical Chemistry and Spectroscopy Societies* conference, **2009**. [Poster]

56. Owens JE, Koester C. "Quantitative Analysis of Abrine, an Indole Alkaloid Marker of the Toxic Glycoproteins Abrin, by LC/MS/MS. *Federation of Analytical Chemistry and Spectroscopy Societies* conference, **2008**. [Presentation]

57. Clifford AJ, Owens JE, Liu B, Müller HG, Medrano JF, Fadel JG, Moghaddam B. "Effects of eight folate-relevant polymorphisms on human blood folate and homocysteine." *Federation of American Societies in Experimental Biology*, **2007**, *21*, A121. [Presentation]

58. Owens JE, Holstege DM, Clifford AJ. "A comparison of a high-throughput LC-MS/MS method and two dietary intake survey instruments for erythrocyte folate status." *Federation of American Societies in Experimental Biology*, **2007**, *21*, A705. [Poster]

59. Clifford AJ, Owens JE, Medrano JF. "Kinetic Modeling to Link Polymorphisms with Metabolic Pathways in Folate Metabolism." The Biostatistics Graduate Group Brown Bag Seminar, University of California, Davis. April **2006**. [Presentation]

60. Owens JE, Holstege DM, Clifford AJ. "High-throughput adaptation for the quantitation of total folate in human red blood cells by LC-MS/MS." *Federation of American Societies in Experimental Biology*, **2006**, *20*, A601. [Poster]

61. Owens JE, Holstege DM, Clifford AJ. "Determination of total folate in human red blood cells by internally standardized HPLC-tandem mass spectrometry detection." *Federation of American Societies in Experimental Biology*, **2005**, *19*, A420. [Poster]

62. Owens JE, Holstege DM, Clifford AJ. "Determination of total folate in human red blood cells by internally-standardized HPLC-tandem mass spectrometry detection." *American Chemical Society*, Division of Analytical Chemistry, 187. San Diego, CA. March **2005**. [Poster]

63. Nelson BA, Owens JE, Wood S. "Geochemistry of Acid Mine Drainage in the Pine Creek Basin, Northern Idaho." *Geological Society of America*, Aqueous Geochemistry Division. Seattle, WA. September **2003**. [Poster]

64. Owens JE, Niemeyer ED. "Analysis of industrial water pollution within a Mexican Colonia." *American Chemical Society*, Division of Chemical Education, 224. Boston, MA. August **2002**. [Poster]

Grants and Scholarship

Funding Awarded:

1. $22,960**,** April 2025, UCCS – Green Action Fund. "Toxic Legacies: PFAS Contamination, Community, and Culture in Colorado and Canada." Project Co-PI with Project PI Christine Biermann and Co-PI David Havlick, Department of Geography & Environmental Studies.

2. $14,980, April 2025. UCCS – Committee on Research and Creative Works, "Toxic Legacies: PFAS Contamination, Community, and Culture in Colorado and Canada." Project Co-PI with Project PI Christine Biermann and Co-PI David Havlick, Department of Geography & Environmental Studies.

3. $47,333.49, June 2023. United States Air Force, "United States Air Force Education Partnership Agreement (EPA) between Air Force Research Laboratory/Air Force

Technical Applications Center and UCCS for the Donation of Equipment." Project PI.

4. $5500.00, July 2022. UCCS – Project Crest ADVANCEment Grant for Mid-Career Women. Project PI.

5. $7500.00, May 2022. UCCS – Committee on Research and Creative Works, "Dangerous dust: Determining levels of flame retardants in furnace filter dust." Project PI.

6. $845.00, February 2020. Colorado Native Plants Society, "How Native Host Plant Variation Shapes a Facultative Ant-Butterfly Mutualism." Project Senior Personnel with Dr. Emily Mooney (PI).

7. $125,000.00, May 2018. College of Letters, Arts, and Sciences Dean's Research Initiative (internal). "The Environmental PFC Impact Collaboration (EPIC) in the Fountain Creek Watershed: Determining the Environmental, Ecological, and Societal Impact of PFCs." Project PI. (Other collaborators: Drs. Kevin Tvrdy, Co-PI, and Cerian Gibbes, Co-PI, and Senior Personnel: Drs. Wendy Haggren, Emily Mooney, Amy Klocko, Andy Klocko, James Kovacs, David Weiss, and Allen Schoffstall).

8. $143,705.00, August 2, 2016. National Science Foundation, Division of Environmental Biology. "SG RUI: Snow melt-induced changes in phenology as direct and indirect drivers of herbivore abundance." Dr. Emily Mooney (PI, Department of Biology, UCCS) and Dr. Janel Owens (Project Senior Personnel).

9. $8,700.00, February 26, 2014. Summer Undergraduate Research Fellowship (SURF) Program, National Institutes of Standards and Technology (2014-NIST-SURF-01). "Summer Undergraduate Research Fellowship (SURF) Program. Project Co-PI. (Award for undergraduate student Santiago Bukovsky-Reyes to complete undergraduate research at NIST – Boulder with Dr. Thomas Bruno).

10. $5,567,501.00, August 1, 2014 – July 7, 2019. National Institute of Standards and Technology PREP Program. "Professional Research Experience Program: Undergraduate/Graduate Student and Post-doctoral Research Program at the National Institutes of Standards and Technology." Project Co-PI with Bret Windom (PI) and Rebecca Webb (Co-PI).

11. $204,047.00, August 1, 2014 – July 31, 2017. National Science Foundation, Major Research Instrumentation Program, NSF 13-517. “MRI: Acquisition of High Performance Liquid Chromatography Tandem Mass Spectrometry Instrumentation to Support Research and Undergraduate Education in Southern Colorado.” Project PI.

12. $7,500.00, May 4, 2012. Committee on Research and Creative Works, University of Colorado Colorado Springs. “Development of a Headspace Liquid-Phase Microextraction Method and Spectral Library for the Determination of Hydraulic Fracturing Fingerprint Chemicals.” Project PI.

13. $300,000.00, August 24, 2011. National Science Foundation, Research Experiences for Undergraduates (REU) Program, NSF 09-598. “Research Experiences for Undergraduates: Green Chemistry in Colorful Colorado.” Project Senior Personnel.

14. $71,500.00, July 19, 2011. Shimadzu Equipment Grants for Research, Mass Spectrometry Program for Year 2010 – 2011. “Acquisition of Shimadzu LC/MS 8030 Instrumentation.” Project PI.

15. $7,500.00, March 25, 2010. Committee on Research and Creative Works, University of Colorado Colorado Springs. “Development of “Green” Solvent-Limited Sample Preparation Protocols versus Solid Phase Extraction for the Quantitative Determination of Environmental Contaminants,” Project PI.

16. $1,298.00, March 2005. Jastro-Shields Research Scholarship for laboratory equipment, Agricultural and Environmental Chemistry Graduate Group, University of California, Davis.

17. $1,350.00, March 2004. Jastro-Shields Research Scholarship for laboratory equipment, Agricultural and Environmental Chemistry Graduate Group, University of California, Davis.

18. November 2002. National Science Foundation Graduate Research Fellowship for graduate studies at the University of California, Davis. Awarded funding for tuition and stipend covering three years.

Proposals Submitted:

1. $19,000.00, February 7, 2018. Summer Undergraduate Research Fellowship (SURF) Program, National Institutes of Standards and Technology (2018-NIST-SURF-01). "Summer Undergraduate Research Fellowship (SURF) Program. Project PI. ***Denied funding.***

2. $6,738,082.00, Submitted in 2017. "Professional Research Experience Program: Research Opportunities for Undergraduate/Graduate/Post-Doctoral Research Fellowships at National Institutes of Standards and Technology" sponsored by NIST. Project Co-PI. ***Denied funding.***

3. $589,803.00, September 30, 2016. Department of the Army, Technology Integration and Outreach Division. "Nuclear Magnetic Resonance Spectrometer/Microimager for Education and Research at UCCS." Project Senior Personnel. ***Denied funding.*** (Dr. Janusz Hankiewicz, BioFrontiers, PI)

4. $316,706.00, August 26, 2015. National Science Foundation, Research Experiences for Undergraduates, NSF 13-542. "REU Site Renewal: Green Chemistry in Colorful Colorado." Project Senior Personnel. ***Denied funding.***

5. $309,134.00, October 31, 2014. National Science Foundation, Chemical Measurement and Imaging, PD 09-6880. "RUI: Sustainable Microextraction Sample Preparation Techniques for Complex Matrices." Project PI. ***Denied funding.***

6. $396,945.00, August 27, 2014. National Science Foundation, Research Experiences for Undergraduates. "REU Site: Explorations in Sustainable Chemistry." Project Senior Personnel. ***Denied funding.***

7. $7,500.00, March 31, 2014. UCCS Committee on Research and Creative Works. "The Role of Indole-Signaling in the Bacterial Response to Silver Nanoparticles." Project PI. ***Denied funding.***

8. $24,000.00, February 28, 2014. PhosAgro/UNESCO/IUPAC Green Chemistry for Life Award. "The Greening of Analytical Chemistry: Dispersed Liquid-Liquid Microextraction with Matrix Solidification (DLLME-MaS) for Isolation of Analytes from Complex Matrices." Project PI. ***Denied funding.***

9. $151,058.00, October 31, 2013. National Science Foundation, Chemical Measurement and Imaging, PD 09-6880. “RUI: Dealing with Complex Matrices by Employing Microextraction Techniques.” Project PI. ***Denied funding*.**

10. $198,583.00, May 28, 2012. National Science Foundation, TUES Program, NSF 10-544. “Incorporating Sustainability and Green Chemistry in the Chemistry Curriculum through Inquiry Experiments.” Project PI. ***Denied funding*.**

11. $194,275.00, January 26, 2012. National Science Foundation, Major Research Instrumentation (MRI) Program, NSF 10-529. “MRI: Acquisition of High Performance Liquid Chromatograph Tandem Mass Spectrometer to Support Research at an Undergraduate Institution.” Project PI. ***Denied funding*.**

12. $45,000.00, November 14, 2011. Single-Investigator Cottrell College Science Award, Research Corporation for Science Advancement. “Use of micro-scale quantitative analytical methods for the analysis of tetrabromobisphenol A to study environmental fate and transformation.” Project PI. ***Denied funding*.**

13. $250,000.00, October 28, 2011. Herman Frasch Fund for Chemical Research. “Investigation of Biochar Amendment on the Mobility of Pharmaceuticals, Personal Care Products, and Household Chemicals in Agricultural Soils.” Project PI. ***Denied Funding*.**

14. $198,395.00, May 26, 2011. National Science Foundation TUES Program, NSF 10-544. “Discovery Experiments Using Microwave Technology in the Chemistry Curriculum.” Project Co-PI. ***Denied funding***.

15. $539,878.00, January 27, 2011. National Science Foundation, Major Research Instrumentation (MRI) Program, NSF 10-529. “MRI: Acquisition of a 500 MHz Multi-nuclear FT-NMR for Enhanced Undergraduate, Graduate, and Faculty Research Opportunities,” Project Co-PI. ***Returned without review*.**

16. $45,000.00, November 8, 2010, Single-Investigator Cottrell College Science Award, Research Corporation for Science Advancement. “Development of Microscale Analytical Approaches for the Quantitative Analysis of Tetrabromobisphenol-A in Complex Samples,” Project PI. ***Denied funding*.**

17. $345,770.00, August 25, 2010. National Science Foundation, Research Experiences for Undergraduates, NSF 09-598. "REU Site: Green Chemistry in Colorful Colorado," Senior Personnel. ***Denied funding*.**

18. $199,259.00, May 26, 2010. National Science Foundation TUES Program, NSF 10-544. "Guided Inquiry Laboratories to Implement Green Chemistry Practices Across the Curriculum," Project PI. ***Denied funding*.**

19. $295,173.00, April 16, 2010. National Science Foundation Major Research Instrumentation (MRI) Program, NSF 10-529. "MRI: Acquisition of Ultrahigh Pressure Liquid Chromatography Tandem Mass Spectrometry Instrumentation to Support Leading Edge Research at an Undergraduate Institution" Project PI. ***Denied funding*.**

20. $298,783.00, March 3, 2010. National Science Foundation, Environmental Impacts of Emerging Technologies Program, PD 10-1179. "Investigation of the Abiotic Factors Affecting Dissolution and Aggregation of Silver Nanoparticles Powered by Novel Sensor Technologies" Project PI. ***Denied funding*.**

21. $7,000.00, January 14, 2010. AAUW, "One Year Community Action Grant: Career Exploration Day at UCCS," Project PI. ***Denied funding*.**

22. $459,396.00, November 30, 2009. National Science Foundation Environmental Chemistry Program, PD 09-6882. "Elucidating the Effects of Climate Change on the Photodegradation of Aqueous Pharmaceuticals and Household Chemicals," Project PI. ***Denied funding*.**

23. $423,759.00, October 2009. National Science Foundation Research Experiences for Undergraduates, NSF 09-598. "REU Site: Green Chemistry in Colorado," Senior Personnel. ***Denied funding***.

24. $1,280,425.00, August 10, 2009. National Science Foundation Major Research Instrumentation Program, NSF 09-561. "Acquisition of a Hyphenated LC-NMR-MS Offers a Powerful Approach to Enhanced Undergraduate Research," Senior Personnel. ***Denied funding*.**

Other Indicators:

1. **Invited Speaker**

Nipissing University, Master of Environmental Studies/Master of Environmental Sciences Spring 2024 Seminar Series. March 15, 2024. Accepted.

University of Colorado Denver, Department of Chemistry and Biochemistry Seminar Series. March 31, 2017. Accepted.

University of Northern Colorado, Department of Chemistry and Biochemistry Seminar Series. (declined participation owing to Excellence in Leadership Program conflicts)

Southwestern University, Inquiry Initiative (funded by Howard Hughes Medical Institute). Fall 2015. Accepted.

Innovations in Teaching Analytical Chemistry, Division of Analytical Chemistry, American Chemical Society Fall 2011 National Meeting, Denver, CO. Accepted.

American Chemical Society Fall 2009 National Meeting, "Global Challenges in Food Analysis" (declined participation due to Fall semester conflicts).

Eastern Analytical Symposium, November 2009 National Meeting, "Contaminants of Food" (declined participation due to Fall semester conflicts).

2. **Facilitated the Donation of Scientific Equipment and Instrumentation**
   Thermo Scientific gas chromatograph with ion trap mass spectrometer from Lawrence Livermore National Laboratory, Livermore, CA. August 2010. (Estimated market value of $33,500.00)

   Varian SpectrAA 220FS atomic absorption spectrophotometer from Ingersoll-Rand, Colorado Springs, CO. April 2011. (Estimated market value of $11,500.00).

   Agilent gas chromatograph with mass spectrometer (estimated market value of $55,000.00), HP gas chromatograph with flame ionization detector, BioRad Acclaim high performance liquid chromatograph with electrochemical detector, and Waters high performance liquid chromatograph with UV-Vis detector from Penrose Toxicology Laboratory, Colorado Springs, CO. May 2011.

   Perkin-Elmer Flexar FX10 UHPLC with Perkin-Elmer SQ300MS, Dionex ICS-3000 Ion Chromatography System, Gasmet Technologies Model DX 4000 FTIR Gas Analyzer,

Applied Separations Speed SFE 1000mL Supercritical Fluid Extractor, and Varian/Cary Bio UV/Visible Spectrophotometer Series II (Estimated purchase price of $367,753.00)

Agilent Technologies gas chromatograph (7820) with mass spectrometer (5977) with estimated market value of $48,000.00.

Courses Taught

Department of Chemistry and Biochemistry at the University of Colorado Colorado Springs (listed by ascending course number) with modality: IP – in person; HF – HyFlex; OL – online asynchronous

1. Freshman Seminar (ID 1010) sect 004, *Undergraduate course*, Fall 2013 (IP), Fall 2012 (IP).

2. General Chemistry I (CHEM 1030/CHEM 1401), *Undergraduate course*, Spring 2022 (HF), Fall 2019 (IP), Spring 2019 (IP), Fall 2018 (IP), Spring 2013 (IP), Spring 2011 (IP).

3. General Chemistry I Laboratory (CHEM 1402), *Undergraduate Course*, Spring 2018 (IP).

4. General Chemistry II (CHEM 1060), *Undergraduate course*, Spring 2012 (IP).

5. General Chemistry II Honors (CHEM 1060)/General Chemistry II for Majors (CHEM 1331 and CHEM 1511), *Undergraduate course*, Spring 2016 (IP), Spring 2015 (IP), Spring 2014 (IP).

6. Environmental Chemistry (CHEM 3410/CHEM 4251/5521), *Undergraduate and graduate course,* Fall 2024 (OL), Fall 2023 (OL), Fall 2022 (OL), Fall 2021 (OL), Fall 2020 (OL), Fall 2019 (OL), Fall 2017 (OL), Fall 2016 (IP), Fall 2015 (IP), Fall 2014 (IP), Fall 2013 (IP), Fall 2012 (IP), Fall pre-term 201 (IP), Spring 2010 (IP).

7. Forensic Chemistry (CHEM 3880), *Undergraduate course*, Fall 2010 (IP). [This has since been re-numbered to CHEM 4511/5511].

8. Instrumental Analysis (CHEM 4011/5011), *Undergraduate and graduate course*, Spring 2025 (IP).

9. Mass Spectrometry Instrumentation and Use (CHEM 4250/5250 renumbered to CHEM 4501/5501), *Undergraduate/graduate course*, Spring 2025 (IP), Spring 2023 (IP), Spring 2021 (HF), Spring 2020 (IP; OL), Spring 2019 (IP), Spring 2018 (IP), Spring 2016 (IP), Spring 2015 (IP), Spring 2014 (IP), Spring 2013 (IP); Winterim 2011 (IP).

10. Analytical Chemistry I (CHEM 4001/CHEM 4170), *Undergraduate course,* Fall 2025, Fall 2024 (IP and OL), Fall 2023 (IP), Fall 2010 (IP), Fall 2009 (IP).

11. Forensic Chemistry (CHEM 4511/5511), *Undergraduate/graduate course*, Spring 2025 (IP), Spring 2023 (IP), Spring 2022 (HF), Spring 2021 (HF), Spring 2020 (IP; OL), Fall 2018 (IP), Fall 2016 (IP), Fall 2015 (IP), Fall 2013 (IP), Fall 2012 (IP), Fall 2011 (IP).

12. Chemistry Seminar (CHEM 4950), *Undergraduate course*, Fall 2013 (IP), Fall 2012 (IP), Fall 2011 (IP).

13. Chemistry Capstone (CHEM 4960; renumbered to CHEM 4911), *Undergraduate course*, Fall 2023 (IP), Fall 2022 (IP), Fall 2021(HF), Fall 2020 (HF), Spring 2016 (IP), Spring 2015 (IP), Spring 2014 (IP), Spring 2013 (IP), Spring 2012 (IP), Spring 2011 (IP), Spring 2010 (IP).

14. Chemistry Research-Undergraduate (CHEM 4990; renumbered to CHEM 4904), *Undergraduate course*, Spring 2010, Fall 2010, Spring 2011, Summer 2011, Fall 2011, Spring 2012, Summer 2012, Fall 2012, Spring 2013, Summer 2013, Fall 2013, Spring 2014, Summer 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024, Spring 2023. Students listed in alphabetical order by last name:
    a. Vanessa Alvarez
    b. Godwin Anyanwu
    c. Samuel Bieber
    d. William M. Brandon
    e. Santiago Bukovsky-Reyes
    f. Katherine Buxton (REU student)
    g. Samantha Coyne
    h. Kristin Damian
    i. Logan Davel
    j. Rubi Diaz-Delgado

k. Gina Di Napoli-Davis
l. Neal Doggrell
m. Caitlin Dougan
n. Joshua Doverspike (REU student)
o. Mitchell Fox-Rivera
p. Michael Gardner
q. Eric Gaulke
r. Skyler Gillespie
s. Christine Goolsby
t. Emily Hanson (AMP)
u. Emma Harvey (AMP)
v. Morgan Hunt
w. Christine Hasbrouck
x. Madison (MJ) Johnson
y. Simon Johnson
z. Kiley Jones
aa. Eun Kim
bb. Carly Kuehl
cc. Taylor Liptack
dd. Eric Mobley
ee. William J. Morrison IV
ff. Lorne Muir
gg. Huy Nguyen
hh. David Orban
ii. Cynthia Ortega
jj. Zachary Pitcher
kk. Constance Quintero
ll. Chris Radford (REU student)
mm. Sadie Rowland
nn. Shannon Seebeck
oo. Morgan Schachterle (AMP)
pp. Lorinda Stambene
qq. Andrea Tully
rr. Nathan Weeks

15. Research Methods (CHEM 6010); *Graduate course*, Fall 2025 (IP), Fall 2024 (IP), Fall 2023 (IP), Fall 2022 (IP)

16. Journal Club (CHEM 6020); *Graduate course*, Spring 2023 (IP), Spring 2021 (HF)

17. Chemistry Research – Graduate (CHEM 5990; now renumbered 5904), *Graduate course*, Fall 2011; Spring 2012; Spring 2013; Summer 2013, Fall 2013, Spring 2014, Summer 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024. Students listed in alphabetical order with my role on the committee:
    a. Kayla Allen (MSc, 2015); Committee Chair
    b. Ana Barovic (MSc, 2025; Committee Chair
    c. Christopher Barrett (MSc, 2014); Committee Chair
    d. Justin Case (MSc, 2019); Member
    e. Colin Curtis (MS Engineering, 2016); Member
    f. Eric Gaulke (MSc, 2020); Committee Chair
    g. Jonathan Gertner (MSc, 2024); Member
    h. Joey Hamilton (MSc; current): Committee Chair
    i. Emma Harvey (MSc; current): Committee Chair
    j. Genevieve Kahrilas (MSc, 2012); Committee Chair
    k. Joshua Keith (MSc, 2019); Advisor for non-thesis track
    l. Ericka Lemon (MSc, 2021); Committee Chair
    m. Stacey Lazzelle (MSc, 2021); Committee Chair
    n. Michael Michaud (MSc, 2019); Committee Chair
    o. Phuong Nguyen (MSc, 2019); Committee Chair
    p. Tatum Nierman (left program for personal reasons)
    q. Zach Pitcher (MSc, on leave); Committee Chair
    r. Jose Caleb Quezada Davalos (MSc, 2020); Committee Chair
    s. Caleb Rolsma (MSc, 2017); Member
    t. Dylan Shuster (MSc, 2018); Advisor for non-thesis track
    u. Andrea Tully (MSc, 2018); Committee Chair
    v. Nathan Weeks (MSc, 2019); Member
    w. Amanda Wessels (MSc, 2024); Committee Chair

18. Chemistry Thesis (CHEM 7000), *Graduate Course*
    a. Kayla Allen (MSc, 2015); Committee Chair
    b. Ana Barovic (MSc, 2025); Committee Chair
    c. Christopher Barrett (MSc, 2014); Committee Chair
    d. Eric Gaulke (MSc, 2020); Committee Chair

e. Genevieve Kahrilas (MSc, 2012); Committee Chair
f. Ericka Lemon (MSc, 2021); Committee Chair
g. Stacey Lazzelle (MSc, 2021); Committee Chair
h. Michael Michaud (MSc, 2019); Committee Chair
i. Phuong Nguyen (MSc, 2019); Committee Chair
j. Zachary Pitcher (current); Committee Chair
k. Jose Caleb Quezada Davalos (MSc, 2020); Committee Chair
l. Morgan Schachterle (MSc, 2023); Committee Chair
m. Andrea Tully (MSc, 2018); Committee Chair
n. Amanda Wessels (MSc, 2024; Committee Chair

19. Master's Project (CHEM 7050); *Graduate Course*
    a. Joshua Keith (MSc, 2019); Advisor for non-thesis track
    b. Tisha Mendiola Jessop (MSc, 2023); Advisor for non-thesis track
    c. Dylan Shuster (MSc, 2018); Advisor for non-thesis track

Guest Lectures for UCCS Courses (listed by date)

1. Owens JE. "Organic vs. Conventional Agriculture: A Chemist's Perspective." *UCCS Course: Food, Culture, Community, and Health (HSCI 4090/6040)*; Prof. Nanna Meyer and Judith Rice-Jones, **2010-2018**. [Presentation]

2. Owens JE. "Glyphosate, Dicamba, and GMOs." *UCCS Course: Grain School*; Prof. Nanna Meyer, **2016, 2017, and 2018**. [Presentation]

3. Owens JE. "Nobel Prize in Chemistry." *UCCS Course: Nobel Prize (HUM 3990)*; Profs. Mike Larkin and Barb Headle, **2015, 2016, 2018**. [Presentation]

4. Owens JE. "Quantify This: _____ (Thinking Like an Analytical Chemist)." *UCCS Course: WEST Methods Course*. Prof. Janice Gould, Sept **2016**. [Presentation and chalk talk]

University of California, Davis (listed by date)

1. GC/MS of Toxicants, *Graduate course*, Department of Environmental Toxicology, March 2008. (Guest lecturer)

2. Vitamin and Cofactor Metabolism, *Graduate Course*, Department of Nutrition, May 2007. (Guest lecturer)

3. Instrumental Analysis of Wines and Must, *Graduate Course*, Department of Viticulture and Enology, Spring quarter 2006. (Teaching assistant)

4. Experiments in Nutrition, *Undergraduate Course*, Department of Nutrition, Fall 2005 and 2006. (Guest lecturer)

5. GC/MS of Toxicants, *Graduate Course*, Department of Environmental Toxicology, Winter quarter 2006 (Teaching assistant)

6. Principles and Practices of High Performance Liquid Chromatography, *Graduate Course*, Department of Plant Sciences, Spring quarter 2005. (Teaching assistant)

Recognitions

1. Faculty mentor to Ms. Emily Hanson, Undergraduate Research Academy (2021); $3500.00.

2. Faculty mentor to Mr. Logan Davel, award winner for the UCCS College of Letters, Arts and Sciences Faculty/Student Research/Creative Works Award (2016-2017; $4000.00) and Undergraduate Research Academy (2016-2017; $2500.00).

3. Faculty mentor to Mr. Eric Gaulke, Dean's Summer Research/Creative Activity stipend. Summer 2016. $1200.00

4. Faculty mentor to Mr. Santiago Bukovsky-Reyes, award winner for the American Chemical Society Undergraduate Research Award, Food and Agriculture Division (2015).

5. Faculty mentor to Mr. David Orban and Ms. Shannon Seebeck, award winners for the UCCS College of Letters, Arts, and Sciences Faculty/Student Research/Creative Works Award (2013-2014).

6. Faculty mentor to Ms. Gina Di Napoli-Davis, award winner for the UCCS College of Letters, Arts, and Sciences Undergraduate Scholar award (2011).

7. National Science Foundation Graduate Research Fellowship (2003-2007)

8. Jastro-Shields Graduate Research Scholarship, University of California, Davis (2004, 2005)

9. University of California, Davis, Graduate Scholar Fellowship (2003-2004)

10. Phi Beta Kappa, Southwestern University (2003)

11. Pi Mu Epsilon, Mathematics Honor Society, Southwestern University (2003)

12. Alpha Chi, National Scholastic Society, Alpha Chapter, Southwestern University (2002)

13. President's Scholarship Award, Southwestern University (1999-2003)

14. Welch Foundation Scholarship for Chemistry, Southwestern University (1999-2003)

15. American Chemical Society Award for Outstanding Graduating Senior in Chemistry, Southwestern University (2003)

16. Robert L. Soulen Award for Outstanding Student in Organic Chemistry, Southwestern University (2002)

17. Outstanding General Chemistry Student, Southwestern University (2001)

18. Welch Foundation Summer Internship Award, Southwestern University (2001)

Professional Organizations

1. Certified Chemist in accordance with the Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau (TTB) Procedure 2010-1 for the analysis of distilled spirits for export, certified 2015-2017; 2017-2019; 2019-2021; 2021-2023; 2023-2025.

2. American Chemical Society

3. Analytical Division of the American Chemical Society

Service

Academic

Reviewer (listed in reverse chronological order)

1. Journal Reviewer, *Journal of Forensic Sciences*, 2023, 2024.

2. Journal Reviewer, *Journal of Hazardous Materials*, 2023.

3. Journal Reviewer, *Chemistry Select*, 2020.

4. Journal Reviewer, *Scientific Reports*, 2019.

5. Journal Reviewer, *Journal of Food Science*, 2018.

6. Journal Reviewer, *Photochemistry & Photobiology*, 2018.

7. Journal Reviewer, *Journal of Food Biochemistry*, 2018.

8. Journal Reviewer, *Reviews in Analytical Chemistry*, 2017.

9. Journal Reviewer, *The AAPS Journal*, 2016.

10. Journal Reviewer, *Industrial & Engineering Chemistry Research (American Chemical Society),* 2015.

11. Journal Reviewer, *ACS Sustainable Chemistry & Engineering (American Chemical Society)*, 2014, 2018.

12. Journal Reviewer, *European Journal of Medicinal Chemistry (Elsevier)*, 2014.

13. Journal Reviewer, *International Journal of Hydrogen Energy (Elsevier)*, 2014.

14. Journal Reviewer, *Food Chemistry (Elsevier)*, 2013, 2024.

15. Journal Reviewer, *Environmental Science and Pollution Research (Springer)*, 2013.

16. Journal Reviewer, *Analytical Chemistry (American Chemical Society)*, 2012, 2013.

17. Journal Reviewer, *Journal of Chemical Education (American Chemical Society)*, 2012, 2013, 2014, 2015, 2020.

18. Journal Reviewer, *Journal of Agricultural and Food Chemistry (American Chemical Society)*, 2011, 2012, 2013, 2014, 2015, 2017, 2022.

19. Reviewer for the National Science Foundation, multiple panels (2011, 2012, 2013, 2016, 2017 – two panels).

20. Reviewer, American Chemical Society Books, Summer 2010.

Campus Committees

21. Search Committee member, UCCS Dean of the Graduate School, March 2023 – August 2023.

22. Teaching Committee, College of Letters, Arts & Sciences, Spring 2019, Fall 2019 (Chair), Spring 2020 (Chair), Fall 2020 (Chair), Spring 2021 (Chair), Fall 2021 (Chair).

23. Fees Committee, College of Letters, Arts & Sciences, Fall 2021 – Fall 2024.

24. Member, Research Faculty Advisory Board to Vice Chancellor J. L. Smith, Fall 2021 – present.

25. Sustainability Committee, University of Colorado Colorado Springs, December 2009 - 2017. Committee Chair for AY 2011-2012, AY 2012 – 2013, AY 2013 - 2014.

26. University of Colorado Colorado Springs Diversity Summit Planning Committee, Fall 2012 – Spring 2013; Fall 2015.

27. Dining and Food Services Committee, University of Colorado Colorado Springs, 2011-2013.

Search Committees

28. Search Committee for Analytical Chemistry Instructor (Summer 2023)

29. Search Committee Chair for HR & Finance Professional, Department of Chemistry (Fall 2022)

30. Search Committee Co-Chair for General Chemistry & Introductory Chemistry Instructor positions (two; Spring 2019)

31. Search Committee Chair for Tenure Track Faculty member (Fall 2018) in Chemistry

32. Search Committee Chair for Analytical Chemistry Instructor (Summer 2018) and General Chemistry Laboratory Instructor (Summer 2018).

33. Search Committee member for Occupational Health & Safety technician (Spring 2018).

34. Search Committee Chair for Program Coordinator position for the Center for Excellence in Science (Summer 2015).

35. Search Committee Member for three General Chemistry Instructors, Summer 2015 (Diversity Champion).

36. Search Committee Member for two Introductory Chemistry Instructors, Summer 2014, Summer 2015.

37. Search Committee Member for Assistant Director/Success Coach, Center for Excellence in Mathematics, Summer 2014.

38. Search Committee Member for Sustainability Program Manager, Spring-Summer 2014.

39. Search Committee Member for Retail Dining Manager, Spring-Summer 2014 (Diversity Champion).

40. Search Committee for tenure-track Biochemistry faculty, Fall 2013.

41. Search Committee Member for Director of Food Services and Dining, Fall 2013 (Diversity Champion).

42. Search Committee Member for Writing Center Director, Fall 2012 – Spring 2013.

43. Search Committee Member for General Chemistry Instructor/Laboratory Coordinator, Spring-Summer 2013.

44. Search Committee Member for tenure-track Physical Chemist, Fall 2012 (Diversity Champion).

45. Search Committee for Greenhouse Manager, Fall 2012 (Diversity Champion).

46. Search Committee for Environmental Health & Safety, Diversity Champion, Fall 2011 (Diversity Champion).

47. Search Committee Member for Chemistry Instructor, Spring and Fall 2011 (Diversity Champion).

Department of Chemistry and Biochemistry

48. Graduate Program Director (see Professional Experience); Fall 2018 – Summer 2023.

49. Associate Chair (see Professional Experience); Fall 2016 – present.

50. Major/Minor Fair, 2009, 2010, 2012, 2013, 2014, 2015, 2016, 2018.

51. Participated in all Department of Chemistry and Biochemistry meetings and activities.

Other Service Activities

52. Workshop leader, Summer Bridge Program, University of Colorado Colorado Springs, July 2014, July 2015, August 2018.

53. Session Chair and Session Organizer, *Food Forensics* Program, Federation of Analytical Chemistry and Spectroscopy Societies' Annual Meeting, October 2009 and October 2011.

54. Session Chair, *Food Forensics* Program, Federation of Analytical Chemistry and Spectroscopy Societies' Annual Meeting, October 2008.

55. Poster Judge, Interdisciplinary Graduate Symposium, University of California, Davis, March 10, 2007

56. Student Representative, Agricultural and Environmental Chemistry Graduate Group, University of California, Davis, 2005-2006

57. Social Chair, Agricultural and Environmental Chemistry Graduate Group, University of California, Davis, 2004-2005

58. Organization Committee, Winter Colloquium of the Agricultural and Environmental Chemistry Graduate Group, University of California, Davis, 2003-2004

59. Southwestern University Undergraduate Research & Creative Works Symposium, Co-Chair and Organizer, Southwestern University, 2003.

60. Student Committee Member for Selection of Provost, Southwestern University, Spring 2002.

61. Environmental Studies Intern, Southwestern University, Associated Colleges of the South Consortium, 2001-2002.

62. Treasurer and Member of the Southwestern University Student Chapter of the American Chemical Society, 1999-2003.

Community

1. Special Awards Judge, Pikes Peak Regional Science Fair, University of Colorado Colorado Springs, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021.

2. Presenter with Dr. Kevin Tvrdy, "PFC Research," *Science on Tap,* January 13, 2020; Jack Quinn's, Colorado Springs, CO.

3. Guest Speaker, Colorado American Chemical Society, "Big Steps Workshop," November 10, 2018. Colorado Springs, CO.

4. Presenter, "The Chemistry of Profiling Whiskey and Distilled Spirits." *Science on Tap,* November 14, 2016; Jack Quinn's, Colorado Springs, CO.

5. Presenter, “Kitchen Chemistry” to *Girls in STEM*, February 2018, November 2016, November 2015, November 2014 and November 2013, University of Colorado Colorado Springs.

6. Presenter, “Chemicals: It’s What’s for Dinner. An Analytical Approach to Food.” *Science on Tap*, February 10, 2014; Jack Quinn’s, Colorado Springs, CO.

7. Speaker, “Whiskey and Chemistry” as part of *Prologues*, January 26, 2014, *TheatreWorks,* University of Colorado Colorado Springs.

8. Presenter, “Food Forensics: Is Our Food Safe?” to *Curiosity Unlimited*, February 8, 2013. University of Colorado Colorado Springs.

9. Workshop leader for CSTEME, “The Case of the Crooked Circuit.” University of Colorado Colorado Springs, July 2012.

10. Workshop leader for MindQuest and Pre-Collegiate STEM, “Environmental Forensics: The Case of the Croaking Chinchillas.” University of Colorado Colorado Springs, March 2012 – June 2013.

11. Volunteer, *Care and Share Food Bank*, Colorado Springs. March 2012 – Fall 2013.

12. Mentor to Madison Brim, 7th grade, science fair project (January 7, 2012)

13. Volunteer, *Operation Frontline* and *Cooking Matters*, Colorado Springs. May 2010 – August 2013.

14. Volunteer for Local Food Week at Harrison Urban Gardens, Colorado Springs, September 18, 2011.

15. Workshop leader for Jumpstart STEM Camp: “CSI – Chocolate Science Investigation, The case of the Recipe Rip-off”. University of Colorado Colorado Springs, July 13, 2011.

16. Volunteer at Pikes Peak Earth Day, April 16th, 2011 at Doherty High School, Colorado Springs.

17. Workshop leader, Chemistry Lab Event C, 2011 Regional Science Olympiad, University of Colorado Colorado Springs, March 6, 2011.

18. Presenter, “*Kitchen Chemistry*” to Harris High School students and MindQuest students, University of Colorado Colorado Springs, January and February 2011.

19. Presenter, *Girls' STEM: "Kitchen Chemistry"*, University of Colorado at Colorado Springs, September 17, 2010.

20. Presenter, *STEM in Real Life: "Kitchen Chemistry*," University of Colorado at Colorado Springs, June 8 and 9, 2010.

21. Workshop assistant, *Science Olympiad: Chemistry C*, University of Colorado at Colorado Springs, March 6, 2010.

22. Presenter, *Angel of Death Case*, Lawrence Livermore National Laboratory Family Days, May 2009.

23. Presenter at "CSI Summer School," Charlotte Wood Middle School, Danville, CA. June 2008.

24. "Dinner with a Scientist" Program Participant, GetSet: "Girls exploring technology, science, and engineering together", Amador Valley High School, Pleasanton, CA, April 2008 and 2009.

25. Workshop Presenter, GetSet: "Girls exploring technology, science and engineering together", Amador Valley High School, Pleasanton, CA, December 2007.

26. Workshop Presenter, Expanding Your Horizons: Motivating Young Women in Science and Mathematics, Lawrence Livermore National Laboratory EYH Consortium, Stockton, CA, October 2007.