

**Wendy Clevenger Cory**  
<http://coryw.people.cofc.edu>

## **Academic Background**

Doctor of Philosophy, 1997  
University of Florida, Gainesville, FL  
Analytical Chemistry  
Environmental Engineering concentration  
Graduate Research Advisor: Dr. James Winefordner  
Dissertation: "Ultratrace Detection of Mercury Using Resonance Ionization Spectroscopy"  
Bachelor of Science, 1993  
University of Tennessee at Chattanooga, Chattanooga, TN  
Chemistry  
Undergraduate studies, 1988 –1990  
Furman University, Greenville SC

## **Appointments**

*2016-present.* William Marion Mebane Distinguished Teaching Chair in Chemistry  
*2015-2017.* Associate Chair, C of C, Department of Chemistry and Biochemistry  
*2014.* Sabbatical Research Appointment  
*2013-present.* Associate Professor, C of C, Department of Chemistry and Biochemistry  
*2007-2013.* Assistant Professor, C of C, Department of Chemistry and Biochemistry  
(3-year break from career to welcome and care for daughter)  
*2001-2004.* Senior Research Scientist, Pfizer Global Research and Development, Groton CT  
*1998-2001.* Assistant Professor, University of Tennessee at Chattanooga, Department of Chemistry  
*1997-1998.* Visiting Assistant Professor, C of C, Department of Chemistry and Biochemistry

## **Honors and Awards**

*2016.* Norrine Noonan Award, SSM, C of C  
*2015.* William V. Moore Teacher-Scholar Award, C of C  
*2015.* Outreach Volunteer of the Year, SC American Chemical Society  
*2014.* Outstanding Faculty Award for SSM, ExCEL Award, C of C  
*2013.* Gordon E. Jones Distinguished Achievement Award, SSM  
*1996, 1997.* Environmental Protection Agency STAR Fellow  
Phi Beta Kappa  
Golden Key National Honor Society  
Gamma Sigma Epsilon, National Chemistry Honor Society  
National Merit Scholar

## **Grant Activity at C of C**

### **External Funding as Principal Investigator (PI)**

*2008-2018,* Total External Funding Awarded as PI: \$701,251

- 2016-2017.* NASA, National Institute of Aerospace (NIA) award. "Analysis of Degradation of Pharmaceuticals Stored on the International Space Station," \$25,788.

2. 2012-2016. NSF grant CBET 1236266. "Photochemical Degradation, Soil Sorption, and Environmental Fate of Pharmaceutically Active Compounds in Simulated and Natural Water Samples," \$334,539. Co-PI: Vijay Vulava (Geology). This grant included undergraduate research stipends for 20+ students over four years.
3. 2012-2015. NSF grant CHEM 1229559. "Acquisition of an Ultra High Pressure Liquid Chromatograph – Mass Spectrometer for Interdisciplinary Undergraduate Research and Teaching in Chemistry and Related Fields," \$277,191. Co-PIs: Marcello Forconi (Chemistry), Jennifer Fox (Chemistry), Brooke Van Horne (Chemistry), Vijay Vulava (Geology).
4. 2011. Corporate grant, Pfizer Global Research and Development. "Sildenafil Citrate for Forensic Analysis," material grant of 1 g sildenafil citrate, valued at \$5,800.
5. 2010. Private grant, Terressentia LLC. "Phase I-Gas Chromatography and Mass Spectrometry Analysis of Terressentia Vodkas," \$10,000.
6. 2008-2011. NSF grant CHEM 0821426. "Acquisition of HPLC with Diode Array Detection for Pharmaceutical and Forensic Chemistry at the College of Charleston," \$63,773.

#### **External Funding as co-PI**

2014-2017, Total External Funding Awarded as Co-PI: \$339,851

7. 2014-2017. NSF Grant CHEM 1429308. "MRI: Acquisition of a 400 MHz Nuclear Magnetic Resonance Spectrometer with a Multinuclear Probe and a Sample Changer," \$319,800. PI: Justin Wyatt. Co-PIs: myself, Marcello Forconi, Brooke Van Horn, Tim Barker (all in chemistry).
8. 2014-2016. South Carolina Water Resources Council. "Effects of Pharmaceutical Photodegradation Products in Freshwater on Local Amphibians," \$20,051 awarded, reduced to 60% due to federal government budget sequestration. PI: Allison Welch. Co-PI: myself.

#### **External Funding currently submitted as Co-PI**

9. 2018. Submitted, NSF. "MRI: Acquisition of an Orbitrap Q Exactive High-Resolution LC-MS Instrument for Research and Training at College of Charleston," \$528,315." PI: Jay Forsythe. Co-PIs: myself, Jennifer Fox, Michael Giuliano, Kate Mullaugh.

#### **External Funding to be submitted as PI**

10. 2018-2020. NASA Translational Research Institute for Space Health, Biomedical Research Advances for Space Health (Announcement BRASH 1801). "Analysis and Forced Degradation of Pharmaceuticals to Assess Expiration Dates," amount TBD but up to \$800,000 for 2 years. Step 1 Proposal due April 16, 2018.

#### **Grant Proposals Submitted, not funded**

11. 2015. Dreyfus Foundation, PI. ORGA ID 2015-126. "Investigations of Pharmaceutical Phototransformation Products in the Aquatic Environment," \$60,000.
12. 2015. Beckman Scholars Program, Co-PI.
13. 2014. NASA Space Grant, PI. ORGA ID 2014-109. "Expiration Dating and Shelf Life Extension of Pharmaceuticals for NASA," \$24,896.
14. 2014. Beckman Scholars Program.
15. 2011. NSF-RUI, Co-PI. ORGA ID 2011-057. "RUI: Photochemical Degradation & Environmental Fate of Pharmaceutically Active Compounds in Simulated & Natural Waters," \$ 268,539.
16. 2009. NIH-Ro1, Co-PI, ORGA ID 2009-125, Co-PI. "Analysis of Glucosinolates," \$ 90,324.

### Internal Grant Activity

- 2009-present. Co-PI, 23 student RPG (URCA) grants
- 2009-present. Co-PI, 24 student HHM and INBRE internal grants
- 2008-present. Co-PI, 6 student SURF (URCA) grants
- 2008. 1 Faculty Research and Development Grant, 2008

### Peer-Reviewed C of C Publications

(Undergraduate co-authors underlined, MES graduate student co-author denoted by \*)

1. A. Welch, W. Cory, Jessica Hinson, Sylvia Davila, "Persistence and Toxicity of Naproxen and its Phototransformation Products," in final preparation for submission to *Environmental Toxicity and Chemistry*, Spring 2018.
2. V.M. Vulava, W. Cory, V. Murphey, C. Ulmer, "Influence of Organic Matter on Sorption and Photodegradation Behavior of Naproxen and Ibuprofen in Soils and Water," *Science of the Total Environment*, 565 (2016) 1063-1070. doi:10.1016/j.scitotenv.2016.05.132.
3. L.P. Herbert, D.B. Becker-Krail, W.C. Cory, "Persistent Phototransformation Products of Vardenafil (Levitra) and Sildenafil (Viagra)," *Chemosphere*, 134 (2015) 557-562. doi:10.1016/j.chemosphere.2014.12.011
4. Z.J. Stansell\*, M.W. Farnham, D. Coulliard, W. Cory, "Collard Landraces are Novel Sources of Glucoraphanin and Other Aliphatic Glucosinolates," *Plant Breeding*, 134 (2015) 350-355. doi: 10.1111/pbr.12263.
5. T. Henson\*, W. Cory, M. Rutter, "Extensive Variation in Cadmium Tolerance and Accumulation among Natural Populations of *Chamaecrista fasciculata*," *PLoS ONE* 8(5) (2013): e63200. doi:10.1371/journal.pone.0063200.
6. W.C. Cory, R.E. Patterson, P.J. Mabe, E.N. Mitchell, "Development of a User-Friendly ESI-LC-MS Method for the Identification of Sildenafil and Vardenafil in Seized Evidence," *Forensic Science International*, 222 (2012) 83-88.
7. W. Cory, C. Harris, S. Martinez, "Accelerated Degradation of Ibuprofen," *Pharmaceutical Development and Technology*, 15 (2010) 636-643.

### Non Peer-Reviewed C of C Publications (Undergraduate co-authors underlined)

1. W.C. Cory, R.E. Patterson, P.J. Mabe, E.N. Mitchell, "Combating Counterfeit Drugs, Forensic Analysis Using LC-MS: Forensic Determination of Sildenafil and Vardenafil in Seized Evidence," Invited article, *The Column (LCGC)* 7 (2011) 2-7.
2. W. Cory, A. DeSantis and C. Ulmer, "Photodegradation of Naproxen and Ibuprofen and the Formation of Ecotoxic Photoproducts in Natural Water Samples," Conference Proceedings, the 4th IWA Specialty Conference on Natural Organic Matter, July 27-30 2011, Costa Mesa CA.

### External Research Presentations while at CofC (Undergraduate co-authors underlined)

1. 2018. Accepted, "Photochemical Fate of Pharmaceuticals in the Aquatic Environment," Wendy Cory\*, ASMS Conference on Mass Spectrometry and Applied Topics, San Diego CA.
2. 2018. At Johnson Space Center
3. 2017. "Analysis of the Degradation of Pharmaceuticals Stored on the International Space Station (ISS)," Wendy Cory\*, Virginia James, Alisha Lamas, Katrina Mangiaracina, Jessica Moon, At NASA Human Research Program Investigator's Workshop, Galveston TX.
4. 2016. "Pharmaceutical Analysis CURE – Classroom Undergraduate Research Experience – in the General Chemistry Laboratory," Wendy Cory\*, Southeast Regional Meeting of the American Chemical Society (SERMACS), Columbia SC, invited.

5. 2014. "When Pharmaceuticals Degrade in the Environment," Wendy Cory\*, Southeast Regional Meeting of the American Chemical Society (SERMACS), Nashville TN.
6. 2014. "Monitoring Solar Photodegradation of Pharmaceuticals in Environmental Samples: Analytical and Environmental Chemistry Research at the College of Charleston," Wendy Cory\*, National Meeting of the American Chemical Society, San Francisco CA, invited.
7. 2014. "Investigation of Photochemical Degradates of Pharmaceuticals in Water Samples," Wendy Cory\*, Jessica Ramirez, Logan Herbert, Adam Jenkins, Allison Welch, Jonathan Brown, and Sarah Turner, Society of Environmental Toxicology and Chemistry (SETAC) Europe, Basel, Switzerland.
8. 2014. "When Pharmaceuticals Degrade in the Environment," Wendy Cory\*, Analytical Division Seminar, Department of Chemistry, University of Florida, Gainesville FL, invited.
9. 2013. "Photochemical Degradation and Environmental Fate of Pharmaceutically Active Compounds in Simulated Natural Water Samples," Wendy Cory\*, Southeast Regional Meeting of the American Chemical Society (SERMACS), Atlanta GA.
10. 2011. "Photodegradation of Naproxen and Ibuprofen and the Formation of Ecotoxic Photoproducts in Natural Water Samples," Wendy Cory\*, Andrea DeSantis, and Candice Ulmer, 4th IWA Specialty Conference on Natural Organic Matter (NOM), Costa Mesa CA.
11. 2009. "Pharmaceutical Analysis in the Quant Lab: The Potency and Degradation of Aspirin," Wendy Cory\*, Southeast Regional Meeting of the American Chemical Society (SERMACS), San Juan PR.
12. 2008. "Undergraduate Research in Drug Development: Forced Degradation of Ibuprofen," Wendy Cory\*, Pittsburgh Conference on Analytical Chemistry, New Orleans LA.

**External Mentored UG Student Research Presentations** while at CofC (Undergraduate co-authors underlined, presenter name starred)

2017. Southeast Regional Meeting of the American Chemical Society (SERMACS), Charlotte NC
1. "Degradation of Sertraline and Aspirin in Space," Virginia James\*, Wendy Cory
2017. Pittsburgh Conference on Analytical Chemistry, Chicago IL
2. "Degradation of Sertraline in Space," Virginia James\*, Wendy Cory
  3. "Investigating the Potential Degradation of Levofloxacin Following Exposure to Space," Alisha Lamas\*, Wendy Cory
  4. "Investigation into the Stability and Potency of Ibuprofen Stored Aboard the International Space Station," Katrina Mangiaracina\*, Wendy Cory
  5. "Chemical Analysis of Potency and Purity of Phenytoin Capsules Stored on the International Space Station," Jessica Moon\*, Wendy Cory
2016. Pittsburgh Conference on Analytical Chemistry, Atlanta GA
6. "Photodegradation of Bupropion and Gabapentin," Neha Muppala\*, Kristina Tran, Wendy Cory
  7. "Photodegradation and Ecotoxicity Studies of Sertraline, Fluoxetine, and their Photodegradants," Sylvia Davila\*, Jessica Hinson, Allison Welch, Wendy Cory
2015. Pittsburgh Conference on Analytical Chemistry, New Orleans LA
8. "Solar Photodegradation of Diphenhydramine and Ranitidine in Simulated Natural Waters," Aliya Dumas\*, Omorose Aighewi\*, Wendy Cory
  9. "Solar Photodegradation of Antidepressants in the Aquatic Environment," Taylor Domenick\*, Lisa Kasprzak\*, Caitlin Purvis\*, Wendy Cory – first runner up for best undergraduate poster presentation
2014. Southeast Regional Meeting of the American Chemical Society (SERMACS), Nashville TN
10. "Method Development for Metabolomic Analysis by LC-MS," Elizabeth Blankenship\*, Wendy Cory, Jennifer Fox
2013. Southeast Regional Meeting of the American Chemical Society (SERMACS), Atlanta GA

11. "Photodegradation of Diphenhydramine in Simulated Natural Waters," Aliya Dumas\*, Wendy Cory
  12. "Photodegradation Mechanisms of Vardenafil and Sildenafil," Logan Herbert\*, Wendy Cory
  13. "Photodegradation of Loratidine in Natural Water Samples," Adam Jenkins\*, Wendy Cory
  14. "Photodegradation of Naproxen and its Photodegradants in Simulated Natural Water Samples" Jess Ramirez\*, Wendy Cory
  15. "Method Development for Metabolomic Analysis of *Saccharomyces cerevisiae* by LC-MS," Samuel M. Elcik\*, Wendy Cory, Jennifer Fox
2012. Southeast Regional Meeting of the American Chemical Society (SERMACS), Raleigh NC
16. "The Photodegradation of Sildenafil in Simulated Natural Waters," Darius Becker-Krail\*, Wendy Cory
  17. "Photodegradation Mechanism of Vardenafil, the Active Ingredient in Levitra," Logan Herbert\*, Wendy Cory
  18. "Investigation of the Products of Cetirizine Solar Photodegradation," Adam Jenkins\*, Wendy Cory
2012. Pittsburgh Conference on Analytical Chemistry, Orlando FL
19. "Indirect Photodegradation of Naproxen in Simulated Natural Water Systems," Candice Ulmer\*, Wendy Cory
  20. "Forensic Degradation Analysis of Sildenafil Using ESI-LC-MS," Chase Mabe\*, Wendy Cory
  21. "Photochemical Degradation of Cetirizine in Simulated Natural Waters," Danielle White\*, Wendy Cory
2011. Pittsburgh Conference on Analytical Chemistry, Atlanta GA
22. "Photodegradation of Ibuprofen and Naproxen in Natural Water Samples," Andrea DeSantis\*, Wendy Cory
  23. "Chiral Quantification of Naproxen by Electrospray Ionization - Tandem Mass Spectrometry: Kinetic Method," Stephen Ferguson\*, Wendy Cory
  24. "Solid Phase Microextraction and Gas Chromatography/ Mass Spectrometry Analysis of Organoleptic Compounds in Vodka," Chase Mabe\*, Wendy Cory
  25. "Forensic Determination of Erectile Dysfunction Drugs Using Electrospray Ionization - Liquid Chromatography - Mass Spectrometry," Rainey Patterson\*, Wendy Cory
  26. "Photodegradation of Cetirizine in Natural Water Samples," Akal Zeleke\*, Wendy Cory
2009. Southeast Regional Meeting of the American Chemical Society (SERMACS), San Juan PR
27. "Forced Degradation Studies of Cetirizine, Loratidine and Naproxen by HPLC," Andrea DeSantis\*, Wendy Cory
  28. "Development of a Stability Indicating Assay for Ibuprofen Tablets Using HPLC," Corbyn Harris\*, Wendy Cory
  29. "The Analysis of Glucosinolates Using HILIC-ESI-MS," Margaret Thomasson\*, Wendy Cory
2008. Southeast Regional Meeting of the American Chemical Society (SERMACS), Nashville TN
30. "Predicting the Expiration Date of Ibuprofen Tablets: A Forced Degradation Study," Corbyn Harris\*, Wendy Cory

### Internal Poster Presentations

2009-present. 41 Convocation Day "Celebration of Summer Scholars" Posters

2008-present. 33 SSM Poster Session Posters; three Award of Merit winners

My students have also given invited presentations to the Board of Trustees (1), at the SC Statehouse (1), and at annual SCAMP banquets (5).

## Teaching Initiatives

1. *2008-present*. Advisor/Instructor of independent study courses with undergraduate students and MES graduate students, every semester including each summer (except summer 2018 – writing).

105 sections of independent courses (CHEM 397, 481, 482, 499, 583, EVSS 693, BIOL 499, HONS 499) as instructor of record, some of which included multiple students on different projects registered under one section. (Note: Students began earning CHEM 397 (zero hour) credit for summer independent studies in 2013, no summer sections recorded between 2008-2012, although students conducted independent studies with me during these summers.)

A full list of students for which I have been the primary mentor in independent study projects can be found on my website, [coryw.people.cofc.edu/styled/index.html](http://coryw.people.cofc.edu/styled/index.html) (48 students: 44 undergraduates and 4 MES). Undergraduates I have co-mentored with collaborators Vijay Vulava and Allison Welch at C of C are not included.

I have worked with every summer research student to provide an opportunity to present their research at an external conference. This has included creating a professional research poster and applying for Research Presentation Grants from URCA, along with making all travel plans and arranging all C of C travel paperwork. In most cases, this is the most impactful activity of the independent study research experience for each student.
2. *2015-present*. Developing and implementing a new research-based CHEM 112L, General Chemistry II laboratory course.

Departmental general assessment assignment for CHEM 111/112 sequence is the final report from this semester-long research project. Research project changes every year: 2015-2016, pharmaceutical diphenhydramine; 2016-2017, pharmaceutical acetaminophen; 2017-2018 pharmaceutical cetirizine, 2018-2019 TBD. Medications are chosen based on NASA's needs for astronauts on the ISS.
3. *2013-present*. Developing and implementing changes to the CHEM 421 Instrumental Analysis curriculum.
4. *2012-present*. Developing and implementing changes to the CHEM 421L Instrumental Analysis Laboratory curriculum.

*2018*. Developed and implemented HPLC method development laboratory experiment; considering submission of manuscript to *Journal of Chemical Education*.

*2017*. Implemented Cyclic Voltammetry of Acetaminophen experiment; implemented FT-IR experiment of ibuprofen mixed with cornstarch (pharmaceutical inactive ingredient) based on research program;

*2016*. Implemented FT-IR of Microplastics experiment, based on my outreach activities and Dr. Phil Dustan's research program; implemented HPLC System Suitability experiment based on my research interests and the United States Pharmacopoeia; implemented tandem MS dry lab experiment using ThermoScientific database at mzcloud.com.

*2015*. Implemented HPLC and LC-MS of Diphenhydramine 2-week experiment based on my research program.

*2014*. Implemented experiment Building and Use of a Nanocrystalline Solar Cell; Raman Spectroscopy for Detection of Explosives for Homeland Security; DIY Building a Spectrometer for the Observation of Atomic Emission Lines; 2-week experiment on the Solid Phase Extraction and Detection of Cocaine on US Currency.

*2013*. Implemented Basic Electronics experiment, FT-IR and Raman Spectroscopy for the Identification and Quantitation of Ethanol in Vodka.

*2012*. Implemented Electrospray Ionization – Mass Spectrometry of Proteins experiment.
5. *2009-2012, 2017*. CHEM 111/BIOL 111 Learning Community, "Chemistry and Biology for Pre-Med Students."

6. 2012. Developed and implemented a new CHEM 522 Environmental Chemistry course, focusing on organic environmental contaminants and their analysis.
7. 2010. CHEM 111/ENGL 102 Learning Community, "Thinking and Writing for Success in Science."
8. CHEM 221L, Quantitative Analysis laboratory course, development of lab manual, new laboratory experiments.

### **Other Teaching Responsibilities**

1. 2008-present. Taught undergraduate research courses for 44 undergraduate students – CHEM 481, CHEM 482, CHEM 499, CHEM 397; fall, spring, summer semesters.
2. Mentored undergraduate Bachelor's Essays for 8 undergraduate students.
3. 2015-present. 112L Lab Leader (Research-Based Course). Includes training/professional development for all instructors including adjunct faculty and for teaching assistants. Also involves providing course materials, syllabi, schedules, quizzes, pre-lab powerpoint presentations, and grading rubrics to all instructors, as well as communicating any week-to-week information.
4. 2013-present. 421L/521L Lab Leader. Developed course materials, syllabi, schedule, and grading rubrics. Set up experiments each week, including preparation of solutions, unknowns, standards, and instrumentation.
5. 2013, 2015, 2016. Participated in FYER Freshman Research Rotation. Supervised eight freshmen students for two 3-hr periods on Friday afternoons in lab activities related to my research program.
6. 2015. Participated in upperclassman CHEM/BIOC major Research Rotation. Supervised six students for two 3-hr periods on Friday afternoons in lab activities related to my research program.

### **Professional Development**

2018. Spring Break Writers Retreat hosted by Academic Affairs.
2017. Attended two international scientific conferences, NASA and PittCon.
2016. Attended one regional conference, SERMACS, and one international, PittCon.
2015. Attended one international conference, PittCon.
2014. Attended one regional conference, SERMACS, one national conference, ACS, and one international conference, SETAC in Basel, Switzerland; attended a two-day laboratory training workshop for instrument purchased with 2012 NSF-MRI grant, ThermoScientific Institute, West Palm Beach FL, January 27-30, 2014.
2013. Attended one regional conference, SERMACS.
2012. Attended one regional conference, SERMACS, and one international conference, PittCon.
2011. Attended two international conferences, IWA-NOM and PittCon.
2009. Attended one regional conference, SERMACS.
2008. Attended one regional conference, SERMACS, and one international conference, PittCon.

## Service

### Service to the Department of Chemistry and Biochemistry

1. *2017-present*. Chair, Scholarship and Awards Committee
2. *2017-present*. Recruitment Committee member
3. *2015, 2016, 2017*. Chair, Adjunct Committee. Included classroom evaluations as well as safety evaluations in laboratory courses, coordinating faculty visits to classes, compiling data, and writing evaluation reports.
4. Untenured Faculty Mentoring Committees:  
*2016-present*. Jay Forsythe  
*2014-present*, Chair. Kate Mullaugh  
*2013, 2014; 2015-2017*, Chair. Jenn Fox  
*2013-2015*. Marcello Forconi  
*2015-2016*, Chair. Brooke Van Horn
5. *2013, 2015*. Head of Faculty Search committees.
6. *2010-2017, member. 2010-2013, 2016-2017*, Chair. Safety Committee. Includes conducting lab inspections of laboratory courses and research labs.
7. *2010-2012*, Chair. Instrument Committee.
8. *2013, 2014, 2015, 2016*. SERMACS organizer for undergraduate research travel, with Pam Riggs-Gelasco and Jenn Fox, student travel for SERMACS in Atlanta (21 undergraduate students), in Nashville (22 undergraduate students), in Memphis (19 undergraduate students), in Columbia (30 undergraduate students).
9. *2008-2011*. Created and led departmental summer research meetings, a weekly “group” meeting for 5-8 research groups in our department. Participation in meeting, 2008-present.

### Service to the College of Charleston

1. *2017-present*, Secretary. Faculty Education and Technology Committee
2. *2016*, Chair; *2017*. Distinguished Teacher-Scholar committee (to award William V. Moore)
3. *2015*. External Panel Member for EHHS T&P committee
4. *2011-present*. SCAMP Advisory Board
5. *2013-2015*. SURF grant reviewer for URCA
6. *2009-2010*. Faculty R&D Committee member
7. *2008-2009*. Faculty Governance Committee member

### Service to the Scientific Community

1. *2010-present*. Journal Article Reviewer – served as ad hoc reviewer for 5-6 journal articles. Water Science and Technology, 2012-present.
2. *2017*. SC Water Resource Council proposal reviewer
3. *2016*. Session leader in Chemical Education, SERMACS, Columbia SC.
4. *2016*. NSF grant proposal reviewer – reviewed proposals in Arlington VA
5. *2014*. Organized and chaired a day-long symposium in honor of Dr. Frank Kinard, SERMACS, Nashville TN, including many prominent alumni from our department.
6. *2013-2014*. NIH grant proposal reviewer – reviewed proposals in Bethesda
7. *2013*. NSF grant proposal reviewer – reviewed proposals in Arlington



## Outreach Service

1. 2015. Haut Gap 5<sup>th</sup> grade Pre-magnet outreach – did hands-on activity involving paper chromatography for ink analysis of “ransom note,” for all 40 5<sup>th</sup> graders. (My daughter has attended Haut Gap in 2015.)
2. 2014. CofC STEM Day at the arena, performed liquid nitrogen magic show on arena floor, February 2014.
3. 2014. STEAM Camp leader, at the School of the Arts for elementary students from Charleston County School District. Developed and led five days of laboratory activities related to *Tracking Trash*.
4. 2014. Organized activities with Lowcountry Hall of Science and Math and Barbara Beckingham from Geology for National Chemistry Week, involving hands-on activities for Charleston area students on topics related to *Tracking Trash*.
5. 2013, 2014. *Tracking Trash* – In collaboration with CofC Literacy Outreach Initiative / Honors Engaged, hosted a day of science activities for area sixth-graders (years 1 and 2, 100 students) from Title I (high poverty) schools on the book *Tracking Trash*, a children’s book about trash found in the ocean, especially the Great Pacific Garbage Patch (funded through NSF grant CBET 1236266).
6. 2012, 2013, 2014. *The Frog Scientist* – In collaboration with CofC Literacy Outreach Initiative / Honors Engaged, hosted a day of science activities for area fifth-graders (year 1, 400, years 2 and 3, 100) from Title I (high poverty) schools on the book *The Frog Scientist*, a children’s book about SC native and world-renowned herpetologist Dr. Tyrone Hayes (funded through NSF grant CBET 1236266). Interviewed Dr. Hayes and produced a short video, in collaboration with former UG research student Andrea DeSantis, answering questions from year 1’s fifth-graders, available at <https://www.youtube.com/watch?v=tpp5OfGr2Xs>
7. 2012, 2013, 2014. Ashley Hall – Worked with junior and senior students at Ashley Hall, gave seminar each year to 1-2 classes to describe my research on the photodegradation of pharmaceuticals in the environment. Provided (on loan) lab equipment so that they could perform studies on their campus related to the effect of pH and salinity on the degradation of pharmaceuticals. I analyzed their samples and helped them with data analysis. They also visited CofC each year and toured my lab. The students made posters describing their work that were hung in their science building at Ashley Hall.
8. 2011-2015. James Island Elementary School outreach – performed “science shows” and did hands-on activities with elementary students, including their “STEM night” festival. (My daughter attended JIES 2010-2015.)
9. 2009-2013, 2015. Beach sweeps with LC students, Service Learning – Participated with FYE LC students in Beach Sweep (cleaning the marsh) at Waterfront Park, in partnership with the SC Sea Grant Consortium as part of learning about ocean gyres and water conservation.