Anthony Carpi

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PROFESSIONAL EXPERIENCE

Associate Provost and Dean of Research 8/12-present
John Jay College, the City University of New York (Interim 8/12-6/14)
Major Accomplishments: Established faculty mentoring programs and a research support infrastructure that have contributed to a doubling in the college's external grant portfolio ($14.6 M 2013 to >$30M 2018), and a 45% increase in scholarly works produced by our faculty in 5 years. Integrated strategic and outcomes-based planning into the office portfolio; expanded the dissemination and visibility of the college's research agenda to a national audience.

Chair, Department of Sciences 12/09-01/11
John Jay College, CUNY (Deputy Chairperson: 2007-2009)
Major Accomplishments: Led a renaissance in Departmental operations that improved student graduation rates by 300%, increased available research space 4-fold, expanded external funding by over 1000%, enlarged the Department operating budget by 80%, and shifted faculty demographics from 29% to 48% female. Integrated student-focused outcomes assessment into the Department's mission and classes, implemented strategic enrollment projections into course planning.

Professor of Environmental Chemistry & Toxicology 9/97-present
John Jay College, CUNY (Tenured: 2002; Associate: 2003; Full: 2009)
Major Accomplishments: Mentored 59 students to date including 35 undergraduates, 21 of whom are from underrepresented groups and 23 of whom of female; 23 of these students have moved on to post-graduate study, 9 of whom have already earned a Ph.D. Top grant winner in department, and among top 1% at college. Completely revised course and laboratory components of the science general education curriculum to focus on skills rather than information using free Open Education Resources.

Founder and Director 9/06-present
PRISM – The Program for Research Initiatives in Science and Math - https://youtu.be/8Lt4Oyv1t7Q
Major Accomplishments: Established the first undergraduate STEM mentoring program at the college using 100% external funding. Program has contributed to a 10-fold increase in the number of students, and a >20-fold increase in minority students moving on to STEM degrees. PRISM is now recognized by CUNY, National Science Foundation, National Academy of Sciences, and the White House as a model of excellence for minority STEM achievement.

Founder and President 6/99-present
Visionlearning, Inc. - http://www.visionlearning.com
Major Accomplishments: Created a nationally recognized, bilingual, open education resource for STEM education. Utilized by over 200 classrooms across the country and 100,000 users per month.

EDUCATION

Ph.D. Environmental Toxicology, 1997 — Cornell University
Mercury Chemistry at the Soil/Atmosphere Interface, U.S. EPA Fellow

MS Environmental Toxicology, 1993 — Cornell University
Biological Monitoring for Airborne Mercury Pollution, NIH Fellow

BS Chemistry, 1986 — Boston College
Honors Thesis: Gas-Phase Reaction Kinetics of Organofluorides

AWARDS & HONORS

Closing the Equity Gap: Revitalizing STEM Education and Workforce Readiness Programs in the Nation's Minority-Serving Institutions (2018), Workgroup Committee Member, The National Academies of Sciences, February 2017 - November 2018.

PAESMEM - Presidential Award for Excellence in Science, Math & Engineering Mentoring (2011)
The White House/National Science Foundation - presented for excellence in mentoring students underrepresented in STEM fields and assuring their "educational enrichment and personal growth," Presented by President Barack Obama, January 27, 2011.

Fulbright Scholar (2011)
U.S. Department of State – awarded to study the effect of slash and burn deforestation on the emission of mercury from Amazonian soils and its impact on human health. Host: Anne Helene Fostier, University of Campinas, Campinas, Brazil, August 2011 – February 2012.

Outstanding Mentor Award (2011)
John Jay College - awarded to an individual who has provided exemplary leadership in student mentoring.

Outstanding Service to Students Award (2009)
John Jay College - awarded to an individual who has provided exemplary leadership in their service to students.

Science and Engineering Visualization Challenge Award (2006)
NSF & AAAS – Honorable mention for Interactive Educational Material: *Dalton's Playhouse*.

FUNDED GRANT AWARDS

Carpi, A., Mann, E. *Determination of Mercury Reduction and Volatilization Mechanisms for Soil at the Oak Ridge Y-12 National Security Complex*, 9/16-9/17. $271,976
U.S Department of Energy, through Savannah River Nuclear Solutions, # 0000272362
Expected Accomplishments: Identify the mechanisms of reduction of $Hg(NO_3)_2$ and HgS towards providing remediation recommendations.

Carpi, A., Szur, K. *Developing the Foundations of Post-Graduate Success: Engaging Hispanic Students in Experiential Learning and Career Planning,* 10/16-9/21. $2,621,979
U.S Department of Education, Title V Institutional Development Program, # P031S160176
Expected Accomplishments: Improve persistence and post-graduate enrollment of Hispanic students by developing a Sophomore Success Program, expanding the College's Office of Undergraduate Research, and creating new STEM majors.

Carpi, A., Sanabria-Valentin, E. *Fostering Retention of Junior Scholars in Science*, 7/15-8/20. $1,297,145
New York Education Department, Collegiate Science and Technology Entry Program Project #0537162003; Contract #C402575
Expected Accomplishments: Expand our successful undergraduate mentoring program to the first two-years by creating a PRISM Junior Scholars program.

Carpi, A., Brown, G. *A mechanistic investigation of the reduction and volatilization of mercury contaminants in soil at the OakridgeY-12 National Security Complex*. 8/15-8/16. $254,848
U.S Department of Energy, through Savannah River Nuclear Solutions, # 0000217397
Major Accomplishments: Identified the mechanisms of reduction of $HgCl_2$ and HgO towards providing remediation recommendations.

Carpi, A., Szur, K. *A Success Pipeline for Hispanic Students: Cohort Identity and Learner-Centered Curriculum,* 10/14-9/19. $3,068,261
U.S Department of Education, Title V Cooperative Development Program w/Queensborough Community College and Borough of Manhattan CC, Award #P031S140088
Expected Accomplishments: Create joint resources to support student cohort identity and academic progress, and a shareable learner-centered curriculum for developing research skills.

Carpi, A., Lents, N. *Creating Hispanic Scientists: A Model Science Articulation Program between Hispanic-Serving Institutions,* 10/11-9/16. $3,834,727
U.S Department of Education, HSI-STEM Program, Award #P031C110174
Accomplishments: Developed a series of resources to improve instruction in chemistry and biology; built a virtual advisement system for supporting science transfers; initiated a series of activities to engage transfer students toward promoting retention and articulation.

Carpi, A., Szur, K. *Success through Engagement: Promoting undergraduate research and first-year experience toward increasing student persistence,* 10/10-9/15. $3,223,337
U.S Department of Education, Title V Institutional Development Program, #P031S100038
Accomplishments: Developed lower level course curriculum to focus on critical thinking and reasoning skills; promote a college-wide undergraduate research experience; expand a first-year transition experience program.

Lents, N., Carpi, A. *Program for Research Initiatives for Science Majors,* 10/10-9/13. $599,411
U.S Department of Education, MSEIP Program, Award #P120A100006
Accomplishments: Expanded a highly successful undergraduate research mentoring program.

Carpi, A., Friedland, D., Lents, N. *A 2-yr/4-yr College Partnership in Science,* 10/08-9/10. $608,815
U.S Department of Education, CCRAA w/Borough of Manhattan Community College.
Accomplishments: Supported expansion of the Forensic Science Justice Academy through course development and curriculum transfer.

Carpi, A., Egger, A. *Teaching the Process of Science*, 10/06-9/10. $599,870
U.S. Department of Education, Fund for the Improvement of Postsecondary Education
Accomplishments: Created a nationally recognized program for instruction in the nature and process of science. Developed a series of free web and print resources for instructional support.

Carpi, A., Szur, K., Kobilinsky, L., McCullough, D. *A Program for Articulating Community College Students to B.S. Degrees in Science*, 10/06-9/11. $3,464,660
U.S. Department of Education, Title V Cooperative w/Queensborough Community College, Award #P031S060030
Accomplishments: Established a Forensic Science articulation program that was institutionalized and expanded via the creation of the CUNY Justice Academy. Revised and aligned curriculum in the foundation science courses, developed a series of advisement materials to support student retention, expanded undergraduate research, expanded peer mentoring activities.

Carpi, A., Frei, A. *The Terrestrial Mercury Cycle and Climate: Measuring and Modeling the Impact of Global Change*, 8/05-7/07. $66,010
Research Foundation of CUNY, Collaborative Research Incentive Award
Accomplishments: Started a field monitoring site for mercury cycling at the Blackrock Research Forest. Three publications and five peer-reviewed presentations.

Carpi, A. *Visionlearning: Building a National Web-Learning Community for Interdisciplinary Science Education*, 3/02-2/05. $498,000
National Science Foundation, Division of Undergraduate Education
Accomplishments: Created a freely available collection of materials for interdisciplinary science teaching now used nationally.

Kobilinsky, L., Carpi, A., Rothchild, R., Flores, N. *Promoting the Success of Students in Science*, 10/01-9/06 $2,150,000
U.S. Department of Education, Office of Postsecondary Education, Award # P031S010021
Accomplishments: Created the *Math & Science Resource Center* – the first science tutoring program at the College, since institutionalized as a result of its success in improving retention.

Kobilinsky, L., Carpi, A., Rothchild, R. *Improving Undergraduate Retention*, 10/01-10/04 $285,336
U.S. Department of Education, Minority Science & Engineering Improvement Program

Carpi, A. *Proof of a Textbook-Free Learning Community: Visionlearning*, 12/00-11/01 $75,000

National Science Foundation, Division of Undergraduate Education

Carpi, A. *Instrumentation for Mercury Analysis*, 12/99 $43,790
Research Foundation of CUNY, Research Development Award

Carpi, A. *An Assessment of Mercury in Municipal Sewage Sludge Applied to Land*, 9/95 $54,000
U.S. Environmental Protection Agency, STAR Research Grant

New York State, Graduate Research & Technology Equipment Grant Initiatives

Carpi, Rauceo "Analytical Equipment for Gene Expression Research," 8/16	$298,500
Carpi, Concheiro-Guissan "An LCMS for Trace Toxicological Research," 8/15	$95,000
Carpi, Lents "HPLC Capabilities for Trace Substance Analysis," 8/14	$269,450
Carpi, Yaverbaum, Lents "Equipment for Enhancing Physics Pedagogy," 8/12	$271,700
Carpi, Lents, Cheng, Reffner "New Methods in Microscopy and Trace Analysis," 8/11	$275,657
Carpi, Kobilinsky "Structural Determination Analysis Techniques," 8/10	$301,150
Carpi, Kobilinsky, Grose-Fifer "Outfitting New Labs for Scientific Research," 8/09	$250,000
Carpi, Kobilinsky, Proni "Development of Cell Culture Research Facility," 8/08	$150,000
Carpi, Kobilinsky "Development of a Mobile Lab for Climate Change Research," 8/07	$109,501
Carpi, Kobilinsky, Salane "Trace Speciation of Environmental Pollutants," 8/06	$124,725
Carpi, Kobilinsky, Salane "Solid State Chemistry," 7/05	$81,995
Carpi, Kobilinsky, Salane "Improving Forensic Toxicology Capabilities," 6/04	$127,299
Carpi, Kobilinsky, Salane "ICP-MS for Trace Elemental Analysis," 7/03	$163,200
Rothchild, Carpi, Kobilinsky, Salane "Science & Technology Instrumentation," 7/02	$161,689
Carpi, Rothchild, Kobilinsky "Improvements in Web-Based Instruction," 8/01	$6,005
Carpi "Mercury Transport and Deposition in New York State," 6/00	$18,299
Kobilinsky, Rothchild, Carpi "Instrumentation for Forensic Analysis" 5/99	$83,060

Professional Staff Congress of CUNY, Research Award

Carpi "Detecting Estrogenic Compounds in Drinking Water," 6/02-6/03	$4,498
Carpi "Mercury Deposition to Critical Waters in New York State," 6/00-6/02	$10,498
Carpi "Microsporidia in Drinking Water: Methods for Analysis," 2/98-6/00	$10,133

COURSE DEVELOPMENT & TEACHING EXPERIENCE

Origins: A Trek through 13.7 Billion Years of History (SCI 101) - John Jay College. (2010-2012)
Designed original curriculum for the core, non-major, general education science course at the College. The course introduces basic chemical and biological principles in context of the origins of the universe, Earth, and life, and focuses on the process of scientific discovery.

Undergraduate Research Internship (FOS 402) – John Jay College. (2006-present)
Created a faculty-mentored, capstone research course for STEM mentoring.

Introduction to Science in Society (NSC 107) - John Jay College. (1999-2009)
Completely rewrote the curriculum for a large, non-major, lecture/lab science course that introduces scientific process, and basic chemical and biological principles. Produced a series of web-based tutorials that resulted in a significant reduction in course attrition rates (Carpi, *J. Chem. Ed.* 78:1709), and led to a national program for interdisciplinary teaching.

Forensic Investigations in the Environmental Sciences (FOS 806) - John Jay College. (2002, 04, 08)
Developed a novel graduate-level course in environmental forensics.

Life Under the Microscope: The Intersection of Science & Social Science (TSP5) - John Jay College.
Co-created (w/A. Stein) an honors-level, non-major science course that discussed the philosophy of scientific breakthroughs and the psychology of scientific thought.

General Chemistry I (CHE 101) - John Jay College. (2008)
Modernized curriculum in freshman majors course.

Principles of Environmental Science (ENV 108) - John Jay College. (1998-2005)
Completely rewrote the curriculum (w/M. Zedeck) of a non-major, core lecture and laboratory science course to focus it on modern toxicological concepts.

Science Department Research Seminar Series - John Jay College. (1999-2006)
Created, organized and self-funded a biweekly, research seminar series for seven years that was later institutionalized at the College.

Analytical Toxicology (TOX 416) - John Jay College. (2004)
Taught advanced undergraduate science majors laboratory course.

Toxicology of Environmental and Industrial Agents (TOX 313) - John Jay College. (2000-2002)
Modernized the curriculum of an undergraduate science majors course.

Mountaineering/Canoeing – Cornell University Outdoor Education Department. (1994-1996)
Co-developed (w/I. Saxer) an outdoor education course still taught at the University.

PREVIOUS RESEARCH/EDUCATION APPOINTMENTS

Founder & Director – John Jay College Math & Science Resource Center 2002-2007
- Established the first STEM tutoring program at the college.

Educational Coordinator – Hispanic Educational Technology Services 10/98-10/01
- Founding executive member of a multi-university, Hispanic education community (hets.org).

Environmental Chemistry Research Fellow – Oak Ridge National Laboratory 3/95-9/95
- Trained in ultra-clean, field sampling and analytical techniques for inorganic and methyl-mercury.

Risk Assessment Research Fellow – U.S. Environmental Protection Agency 5/93-8/93
- Trained in current methods for human and ecological health risk assessment.

Air Pollution Control Engineer – Connecticut Department of Environmental Protection 1/88-8/90
- Enforced state & federal air pollution regulations through industry inspection and engineering studies.

Biochemistry Research Assistant – U. Connecticut Medical Center 6/81-8/81
- Investigated the response of mice T-cell Leukemia lines to inhibitory drugs.

OTHER ACTIVITIES

College Service: College Personnel & Budget Committee (2009-2011, 2012-present), Chair - Associate Provost for Institutional Effectiveness Search Committee (2009), College General Education Taskforce (2007-2011), Science Coordinator – Forensic Science Partnership Program (2006-2009), Departmental P&B Committee (2003-2008), Technology/Education Technology Committees (1999-2009), College Honors Program Committee (2006-2007), John Jay Institutional Review Board (1999-2003), College Curriculum Committee (2000-2003), Faculty Senate (1998-2000).

Editorial Board: *Environmental Forensics*, Academic Press, Harcourt, Inc. (2000-2002).

Reviewer: National Science Foundation PAESMEM Program, National Science Foundation Division of Undergraduate Education, U.S. Civilian Research grant program, *Air Quality & Environmental Health*, *Atmospheric Environment*, *Environmental Science & Technology*, *Journal of Environmental Quality*, *Pedosphere*, *Science of the Total Environment*, *Water, Air, & Soil Pollution, Chemosphere*.

Professional Memberships: Council on Undergraduate Research, American Chemical Society, American Association for the Advancement of Science, NY Academy of Sciences, Society of Environmental Toxicology and Chemistry, National Science Teachers Association.

Other: Father: John - Feb. 2006, Carina - Mar. 2008, Aidan – July 2013, Cycling/hiking enthusiast, Avid Web Developer.

KEYNOTES, PLENARYS AND CHAIRMANSHIPS

Carpi, A., Mann, E. *Session Chairs, Sources and cycling of mercury in terrestrial ecosystems*, 13th Annual Conference on Mercury as a Global Pollutant, Providence, RI, July 16-21, 2017.

Carpi, A., Lents, N., Rauceo, J., Cheng, S.Y. "Undergraduate Research Mentoring: Best Practices," Keynote Session at CUNY Research Development Workshop, New York, NY, January 13, 2016.

Carpi, A. "The Scholarship of Teaching and Learning: Research to Improve Teaching Effectiveness," Inaugural Research Conference, Hostos Community College, Bronx, NY, March 21, 2014

Carpi, A. "Deep Mentoring of Undergraduate Researchers: PRISM," Inaugural CUNY Undergraduate Research Council Luncheon, New York, NY, March 7, 2014.

Carpi, A. "The Scholarship of Teaching and Learning," 9th Annual CUE Conference – Transformations in Teaching & Learning, CUNY, New York, NY, May 10, 2013.

Carpi, A. "From Science Fair to Scientist: Meandering to the Amazon," Keynote Speaker: New York City Science & Engineering Fair, American Museum of Natural History, NY, March 27, 2012.

Carpi, A. "Mercury Rising: Global Mercury Levels and the Amazon," Serving Science –CUNY Science Café, New York, NY, March 5, 2012.

Carpi, A. "Science Content vs. Practice: Overcoming Misconceptions about Science in the Classroom," Plenary Speaker: Science Education in the 21st Century Special Conference, City University of New York, New York, NY, April 23, 2010.

Egger, A., Carpi, A., Manduca, C. Teaching the Process of Science. Co-Chair, U.S. Department of Education FIPSE program and NSF, Carleton College, Northfield, MN, July 14-16, 2009.

Carpi, A. "Did Goldilocks Kill the 3 Bears: The Use of Forensic Science in Investigating Environmental Crimes," Keynote Speaker: Long Island Chemical Society Annual Meeting, Nassau Community College, Garden City, NY, December 4, 2008.

Carpi, A., Kobilinsky, L. Forensic Chemistry. Session Chairs, Mid-Atlantic Meeting of the American Chemical Society, Queens, NY, May 18, 2008.

PUBLICATIONS

Espinosa, L., McGuire, K., Bertin, J., Carpi, A., Ericsson, A.J., Hames, L., Harris, W.L., Higginbotham, E., Manson, S.M., Minor, J.T., Morales, L., Nunez, A.M., Poodry, C., Spriggs, W., Tam, V., Villalobos, C., Yancy, D.C., Young, L.S. (2018) Minority Serving Institutions: America's Underutilized Resource for Strengthening the STEM Workforce, Board on Higher Education and Workforce Policy, The National Academy of Sciences, National Academies Press, Washington, DC.

Carpi, A., Ronan, D.M., Falconer, H.M., Lents, N.L. (2017) "Cultivating Minority Scientists: Undergraduate Research Increases Self-Efficacy and Career Ambitions for Underrepresented Students in STEM," *Journal of Research in Science Teaching*, 54(2):169-194.

Carpi, A., Ronan, D. (2014) "Do Not Neglect the Ladder of Opportunity at Minority-Serving Colleges," *The Chronicle of Higher Education, §Commentary*, November 24, 2014.

Carpi, A., Fostier, A.H., Santos, J.C., Gittings*, M., Orta*, O.R. (2014) "Mercury emissions from soil following the loss of forest cover in the United States and Brazil," *Atmospheric Environment*, 96:423-429. http://www.sciencedirect.com/science/article/pii/S1352231014005962.

Melendez-Perez, J.J., Fostier, A.H., Carvalho, J.A., Winmoller, C.C., Santos, J.C., Carpi, A. (2014) "Soil and biomass mercury emissions during a prescribed fire in the Amazonian rain forest," *Atmospheric Environment*, 96:415-422. http://www.sciencedirect.com/science/article/pii/S1352231014004786

Carpi, A., Lents, N.L. (2013) "Research by Undergraduates Helps Underfinanced Colleges as well as Students," *The Chronicle of Higher Education, 60*(9), B30-B31, *§Diversity in Academe*, October 28.

Carpi, A., Ronan, D.M., Falconer, H.M., Boyd, H.H., Lents, N.L. (2013) "Development and Implementation of Targeted STEM Retention Strategies at a Hispanic-Serving Institution," *Journal of Hispanic Higher Education*, 12(3):280-299.

* Denotes student co-author.

Egger, A. E. and Carpi, A., (2013) *Revealing data in science: Using and teaching about data-based graphics for analysis and display*, pg. 211-238, in Finson, K. D. and Pederson, J., eds., Visual Data and its Use in Science Education; Charlotte, NC: Information Age Publishing

Carpi, A., Schweighardt*, A. (2012) *Environmental Forensic Chemistry*, in Kobilinsky, L. (ed.) (2012) Forensic Chemistry Handbook. J. Wiley, Hoboken, NJ.

Quinones*, J.L., Carpi, A. (2011) "An investigation of the kinetic processes influencing mercury emissions from sand and soil samples of varying thickness," *Journal of Environmental Quality*, 40:647-652.

Lents NH, Cifuentes OE, and Carpi A. (2010) "Teaching the Process of Molecular Phylogeny and Systematics: A Multi-part Inquiry-based Exercise." *CBE: Life Sciences Education* 9(4):513:523.

Mauclair*, C., Layshock*, J., Carpi, A. (2008) "Quantifying the Effect of Humic Matter on the Suppression of Mercury Emissions from Soil," *Applied Geochemistry,* 23(3):594-601.

Carpi, A., Frei, A., Cocris*, D., McCloskey*, R., Contreras*, E., & Ferguson*, K. (2007) Analytical artifacts produced by a polycarbonate chamber compared to a Teflon chamber for measuring surface mercury fluxes, *Analytical & Bioanalytical Chemistry,* 388(2):361-365.

Moore*, C., Carpi, A. (2005) "Mechanisms of the emission of mercury from soil: The Role of UV radiation," *Journal of Geophysical Research*, 110(24):D24302.

Haidermota*, U.S., Nguyen, P.V, Smalligan, M.J, Carpi, A. (2004) "The effect of trees (*Poplar nigra*) on soil mercury fluxes," *Materials and Geoenvironment*, 51(2):897-900.

Carpi, A., Mikhailova, Y. (2003) "The Visionlearning Project: Evaluating the Design and Effectiveness of Interdisciplinary Science Web Content," *J. College Science Teaching* 23(1):12-15.

Carpi, A. (2003) "Designing Effective Instructional Web Pages," in Simon, E. J. (ed.) *Teachers Using Technology: Practical Ideas from the Classroom*, Kluwer Academic, New York.

Carpi, A., Chen*, Y. (2002) "Gaseous Elemental Mercury Fluxes in New York City," *Water, Air & Soil Pollution* 140(1-4):371-379.

Carpi, A., Chen*, Y. (2001) "Gaseous Elemental Mercury as an Indoor Air Pollutant," *Environmental Science & Technology* 35(21):4170-4173.

Carpi, A. (2001) "Improvements in Undergraduate Science Education Using Web-Based Instructional Modules: The Natural Science Pages," *J. Chemical Education* 78(12):1709.

Carpi, A., Mital*, J. (2000) "The Expanding Use of Forensics in Environmental Science," Feature Article – *Environmental Science and Technology* 34(11):262A-266A.

Carpi, A., Lindberg, S.E. (1998) "Application of a Teflon Dynamic Flux Chamber for Quantifying Soil Mercury Flux: Tests and Results over Background Soil," *Atmospheric Environment* 32(5): 873-882.

Carpi, A., Lindberg, S.E. (1997) "The Sunlight Mediated Emission of Elemental Mercury from Soil Amended with Municipal Sewage Sludge," *Environmental Science and Technology* 31(7): 2085-2091.

Carpi, A., Lindberg, S.E., Prestbo, E.M., Bloom, N.S. (1997) "Methyl Mercury Contamination and Emission to the Atmosphere from Soil Amended with Municipal Sewage Sludge," *Journal of Environmental Quality* 26(6): 1650-1654.

Carpi, A. (1997) "Mercury from Combustion Sources: A Review of the Chemical Species Emitted and Their Transport in the Atmosphere," *Water, Air and Soil Pollution* 98:241-254.

Opsomer, J.D., Agras, J., Carpi, A., Rodriques, G. (1995) "An Application of Locally Weighted Regression to Airborne Mercury Deposition around an Incinerator Site," *Environmetrics*, 6(2):205-219.

Carpi, A., Ditz, D.W., Weinstein, L.H. (1994) "Bioaccumulation of Mercury by Sphagnum Moss near a Municipal Solid Waste Incinerator," Feature Article - *Journal of the Air and Waste Management Association*, 44(5): 669-672.

Carpi, A., Ditz, D.W., Waldman, J., Greenberg, A., Weinstein, L.H. (1992) "Biological Monitoring Around a Municipal Solid Waste Incinerator in Rural New Jersey", the proceedings of the *85th Annual Meeting of the Air and Waste Management Association*.

Ditz, D.W., Carpi, D., Weinstein, L.H. (1991) "Interpreting Biological and Ambient Air Monitoring Data near Municipal Solid Waste Incinerators", the proceedings of the *84th Annual Meeting of the Air and Waste Management Association*.

BOOKS

Carpi, A., Egger, A. (2011). The Process of Science. Lulu Press, New York, NY.

Carpi, A., Egger, A., Rosenberger, A. (2009) Natural Science, Kendall-Hunt, Dubuque, IA.

Carpi, A., Bailey, W. (2005) Natural Science Laboratory Manual. Kendall-Hunt, Dubuque, IA.

PEER-REVIEWED PUBLICATIONS FEATURING WORK

MacLachlan, E.S., Caplan, A.J. (2015) "Fostering resources for undergraduate research at the City University of New York," *New Directions for Higher Education*, 2015(169):73-83. http://onlinelibrary.wiley.com/doi/10.1002/he.20124/full

ORAL PRESENTATIONS & ABSTRACTS

Mann, E., Khusial*, R. Carpi, A. "Mechanism of the Abiotic Reduction of Mercury (II) Chloride on Surfaces," the 13th International Conference on Mercury as a Global Pollutant, Providence, RI, July 16-21, 2017.

Peralta*, R., Mann, E., Carpi, A. "Utilización de Musgo como Bio Monitor para Detectar Fuentes Atmosféricas de Mercurio (Use of Moss as a Biomonitor for the Detection of Atmospheric Mercury)," Outstanding Undergraduate Researcher Presentation, PRISM Annual Research Symposium, John Jay College, NY, NY, May 4, 2017.

Carpi, A. "Cultivating Minority Scientists: Changes in Self-Efficacy and Career Intentions Resulting from STEM Mentoring," invited speaker *PAESMEM STEM Mentors Meeting*, sponsored by NSF & AAAS, Washington, DC, April 5-7. 2017.

Carpi, A. "The Potential of Undergraduate Research," facilitated session at *Maximizing the Undergraduate Student Experience*, Farleigh Dickinson University, March 22, 2017.

Mann, E., Khusial*, R. Carpi, A. "A Mechanistic Investigation of the Reduction and Volatilisation of Mercury in Soil," 250th Annual Meeting of the American Chemical Society, San Diego, CA, March 15, 2016.

Ronan, D., Carpi, A. "Undergraduate Research Experience and Changes in Career Ambitions for Underrepresented Students in STEM," Annual Meeting of the National Association for Research in Science Teaching, Baltimore, MD, April 17, 2016.

Brown, G., Carpi, A. "Overview of the biogeochemical cycling of mercury in environment sources," NOAA-Center of Excellence in Remote Sensing Science and Technology, The City College of New York, New York, NY, November 3, 2014.

Carpi, A. "Open, Global, and Mobile Learning: Online Science Resources for a Changing Technology Landscape," Online Learning Consortium Annual Conference, Orlando, Fl, October 29, 2014.

Falconer, H., Lents, N.L., Carpi, A. "Adapting to student needs in the science classroom: The Visionlearning Project," HETS 2014 Best Educational Practices Showcase, San Juan, Puerto Rico, January 16, 2014.

Falconer, H., Carpi, A. "Addressing Student and Teacher Needs in the Science Classroom: The Visionlearning Project," Association for Science Teacher Education, Northeast Regional Meeting, Cornwall, NY, October 18, 2013.

Orta*, O., Fostier, A. H., Carpi, A. "Deforestation Leads to Chronic Soil Mercury Emissions," 11th International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 28 - August 2, 2013.

Carpi, A., Lents, N. L., Falconer, H. "Creating Hispanic Scientists: Increasing Minority Engagement in the Sciences," Higher Education Programs (HEP) Project Directors' Meeting, U. S. Department of Education, Washington, DC, March 26-28, 2013.

Carpi, A. "Understanding the Role of Soil Chemistry on the Cycling of Mercury in the Environment" Invited Lecture, Lehman College, Bronx, NY, March 4, 2013.

Carpi, A., Ho*, A., Frei, A. "Temporal and regional variation in mercury deposition in New York State and implications for climate-related changes," 2nd Catskill Environmental Research & Monitoring Conference, Highmount, NY, October 26, 2012.

Carpi, A., Falconer, H., Lents, N.H. "Science Education in a Complex World: Adapting to Changes in Student Use of Online Material - the Visionlearning Project," 18th Annual Sloan Consortium Conference, Lake Buena Vista, FL, October 12, 2012.

Carpi, A., Lents, N.H. "The Scholarship of Teaching and Learning: Making the Classroom a Laboratory of Learning," John Jay College Faculty Development Day Workshop, NY, NY, August 24, 2012.

Lents, N.H., Carpi, A. "A Better Way to Teach Science," 14th Annual International Conference on Education, Athens Institute for Education and Research, Athens, Greece, May 22, 2012.

Lents, N.H., Cifuentes, O.E., Carpi, A. "Visionlearning: Un Recurso Gratis para Enseñar la Ciencia que es Mejor que Usar Libros de Texto," Semanas Internacionales (International Seminar Series), Universidad Cooperativa de Colombia, Bogotá, Columbia, March 14, 2012.

Lents, N.H., Carpi, A. "Promoting Success in Science Courses by Replacing Textbooks with Free Online Content," Second Annual Best Practices Showcase, Hispanic Educational Technology Services (HETS), San Juan, Puerto Rico, February 16, 2012.

Carpi, A. "Understanding the Role of Soil Chemistry on the Cycling of Mercury in the Environment" Institute of Chemistry Seminar Series, University of Campinas, Campinas, Brazil, October 13, 2011.

Lents, N.H., Carpi, A. "A Federally-funded Free Science Education Resource with Modular Functionality, Mobile Apps, and More." Lilly Conference on College and University Teaching, Traverse City, MI; September 24, 2011.

Ho*, A., Carpi, A. "Mechanisms of the Reduction of Divalent Mercury," 10th International Conference on Mercury as a Global Pollutant, Halifax, Nova Scotia, July 24-29 2011.

Lents, N.H., Carpi, A. "Visionlearning: A Free E-Resource for Science Education From The Process Perspective," The Clute Institute International Academic Conference; New Orleans, LA; March 14, 2011.

Carpi, A., Lents, N. "Transforming a Technical Science Curriculum into a Major Research Program for Preparing Hispanic Scientists," Creating a Culture of Research on Campus workshop, sponsored by CUR & Council of Colleges of Arts & Sciences, College of William & Mary, Williamsburg, VA October 16, 2010.

Egger, A., Carpi, A., Klemperer, S. "Teaching the Process—Not Just the Content—of Geoscience at All Levels," International Geoscience Education Organization Conference, Johannesburg, South Africa, August 30, 2010.

Carpi, A., Lents, N. "Creating Hispanic Scientists: Transformation of a Technician-oriented Science Program through Undergraduate Research," 13th National Meeting of the Council on Undergraduate Research (CUR), Ogden, UT, June 20, 2010.

Egger, A., Carpi, A. "Engaging New Audiences in Research by Teaching the Process of Science," Council on Undergraduate Education National Conference, Ogden, UT, June 20, 2010.

Carpi, A. “Teaching Science: Overcoming Student Misconceptions about Science and Scientific Practice,” Making Teaching Visible and Valued Workshop, Center for the Advancement of Teaching, John Jay College, New York, NY, April 30, 2010.

Carpi, A. “Visionlearning: Building and online resource that focuses on teaching,” Science Education in the 21st Century Special Conference, City University of New York, New York, NY, April 23, 2010.

Carpi, A. “Teaching about Scientific Research and the Process of Science,” National Science Teachers Association National Conference, Philadelphia, PA, March 19, 2010.

Carpi, A., Lents, N. “Teaching to the Nature of Science Content Standards,” Society of College Science Teachers National Meeting, Philadelphia, PA, March 18, 2010.

Carpi, A. “Visionlearning: Building an online resource that focuses on teaching,” Hispanic Education Telecommunication Symposium, Best Practices Showcase, San Juan, PR, January 15, 2010.

Carpi, A., Lents, N. “Mentoring and Undergraduate Research to Increase Retention and Success of Minority Undergraduate Scientists,” 23rd Annual Conference of the Hispanic Association of Colleges & Universities: Championing Hispanic Higher Education Success, Orlando, FL, November 2, 2009.

Carpi, A., Lents, N., Egger, A. “Visionlearning: Building an open online learning environment for promoting the nature and practice of science” 15th Sloan-C International Conference on Online Learning: The Power of Online Learning - Opportunities for Tomorrow, Orlando, FL, October 30, 2009.

Carpi, A. "Teaching the Process of Science Toward Engaging Students in Chemistry," 238th National Meeting of the American Chemical Society, Washington, DC, August 18, 2009.

Carpi, A., Cocris*, D., Ho*, A., Petraco, N. "Mechanisms of the Reduction and Emission of $HgCl_2$ from Surfaces," 238th National Meeting of the American Chemical Society, Washington, DC, August 18, 2009.

Carpi, A. “Assessing student understanding of the nature of science in a non-major science class,” Teaching the Process of Science Workshop, Northfield, MN, July 16, 2009.

Carpi, A., Frei, A. “Pathways of Mercury Transport in the Blackrock Forest Ecosystem,” Sixth Black Rock Forest/Highlands Research Symposium, Cornwall, NY, June 22, 2009.

Lents, N.H., Carpi, A. “Teaching the Process of Science in Evolution, Phylogenetics, and Natural Selection,” 9th Quadrennial Conference of the National Association of Paleontology, Cincinnati, OH; 22-June 2009

Carpi, A. “Adding Scientific Process to Chemistry Instruction” Mid-Atlantic Meeting of the American Chemical Society, Queens, NY, May 18, 2008.

Carpi, A., Egger, A. “Teaching Scientific Process and the Nature of Science” Society of College Science Teaching at the National Science Teachers Association, Boston, MA, March 27, 2008.

Carpi, A. “Predicting the Effect of Climate Change on Global Mercury Transport” Analytical Chemistry Symposium, University of Massachusetts Lowell, Lowell, MA, March 26, 2008.

Lam*, B., He, Y., Carpi, A., Kobilinsky, L. “Determination and Speciation of Arsenic in Vegetables on Sale in New York City Using Inductively Coupled Plasma-Mass Spectrometry,” Eastern Analytical Symposium, Somerset, New Jersey, November 12-15, 2007.

Carpi, A. “Did Goldilocks Kill the 3 Bears: The use of forensic science in investigating environmental crimes,” Invited Speaker: Chemistry Symposium, Queensborough Community College, Bayridge, NY, November 9, 2007

Frei, A., Carpi, A., Filosa*, D., Ferguson*, K., Cherry, J. “Quantifying the Mercury Cycle at Black Rock Forest,” Black Rock Forest / Highlands Research Symposium, Black Rock Forest, Cornwall, New York, USA, June 25-26, 2007.

Cherry, J., Frei, A., Carpi, A., Schuster, B., Smerdon, J., Tremblay, B., Munson, M., Brady, J., Gong, G., “Research Station at Black Rock Forest: long-term monitoring and hydroclimatological research,”

Black Rock Forest / Highlands Research Symposium, Black Rock Forest, Cornwall, New York, USA, June 25-26, 2007.

Cocris*, D., Frei, A., Carpi, A. "Evaluating the Role of Light on the Soil Mercury Emissions Process: A Comparison of the Emission of Divalent and Elemental Mercury," 8th International Conference on Mercury as a Global Pollutant, Madison, Wisconsin, August 5-11, 2006.

Swenson, S., Carpi. A. "Teacher-Friendly Customization of a Science Curricular Website," Enriching the Academic Experience of College Science Students Conference, Ann Arbor, MI, May 17, 2006.

Egger, A., Carpi, A. "Creating a customized, online science classroom: The Visionlearning project," National Meeting of the Society of College Science Teachers, at the National Science Teachers Association Conference, Anaheim, CA, April 9, 2006.

Carpi, A. Egger, A. "Contextualizing Science: Targeting multiple learning styles by integrating research, history, current events and assessment into science education," American Chemical Society National Meeting, Philadelphia, PA, August 22, 2004.

Carpi, A., Haidermota*, U., Nguyen, P., Smalligan, M. "The effect of trees (*Poplar nigra*) and UV radiation on soil mercury flux," 7th International Conference on Mercury as a Global Pollutant, Ljubljana, Slovenia, June 27, 2004.

Carpi, A., Rosenberger, A., Egger, A. "Integrating Research, History, Current Events and Assessment into Interdisciplinary Science Education," National Science Foundation Conference on Invention and Impact: Building Excellence in Undergraduate STEM Education, Arlington, VA, April 16, 2004.

Carpi, A. "Interdisciplinary Science Education: Innovations and Benefits," Brooklyn College Science Seminar Series, March, 2004.

Carpi, A., Rosenberger, A. "Designing Effective Instructional Web Pages," CUNY Technology Forum, New York, NY, Nov. 14, 2003.

Egger, A., Carpi, A. "Effective Use of Web-Based Resources," K-16 Educators Workshop no. 610, GSA (Geological Society of America) Annual Meeting, 2003.

Carpi, A. "The Visionlearning Project: Using standards-based Web content to improve science comprehension," American Chemical Society National Meeting, Boston, MA, August 18-22, 2002.

Carpi, A. "Gaseous Elemental Mercury as an Indoor Air Pollutant," U.S. EPA/NESCAUM 2002 Mercury Pollution Conference, Kennebunkport, ME, June 12-13, 2002.

Carpi, A., Chen*, Y.-F. "Gaseous Elemental Mercury as an Indoor Air Pollutant," *SETAC* National Conference, Baltimore, MD, Nov. 15, 2001.

Carpi, A., Uffen, R. "Proven Strategies for Course Content Development on the Web," *Syllabus* 2001, Boston, MA, November 29, 2001, http://www.syllabus.com.

Carpi, A., Uffen, R, Mikhailova, Y. "The Visionlearning Project: Web-Based Science Education," *SchoolTechExp*, New York, March 28-30, 2001, http://www.schooltechexpo.com/.

Carpi, A. "The Art of Web Design," *Faculty Development Day*, John Jay College, NY, March 30, 2001, http://web.jjay.cuny.edu/~acarpi/design/home.htm

Carpi, A. "Improvements in Science Education Using Web-Based Instructional Lessons," *Syllabus 2000*, Boston, MA November 30 – December 1, 2000 24-27, 2000, http://www.syllabus.com.

Carpi, A. "Mercury: Environmental Cycling and Toxicological Concerns," Fourth Annual Conference on Environmental Issues, Medgar Evers College, Brooklyn, NY, March 13, 1999.

Carpi, A., Lindberg, S.E. "Mercury Emissions from Background and Municipal Sewage Sludge-Amended Soil," *4th International Conference on Mercury as a Global Pollutant*, Hamburg, Germany, August 1996.

Carpi, A. "Soil/Atmosphere Exchange of Elemental and Methylmercury: Mechanisms of Emission," *Environmental Toxicology Seminar Series*, Cornell University, Ithaca, NY, April 1996.

Carpi, A. "The Fate and Chemistry of Mercury in Background and Municipal Sewage Sludge Amended Soil," *ORNL Environmental Sciences Division Seminar Series*, Oak Ridge National Laboratory, Oak Ridge, TN, August 1995.

Carpi, A., Ditz, D., Weinstein, L. "Mercury Speciation at Municipal Solid Waste Incinerators: Plant Accumulation and Airborne Exposure," *3rd International Conference on Mercury as a Global Pollutant*, Whistler, BC, July 10-14 1994.

Carpi, A. "The Accumulation of Mercury in Sphagnum Moss around a Municipal Solid Waste Incinerator," *Boyce Thompson Institute for Plant Research Seminar Series*, Ithaca, NY, November 1993.

Carpi, A. "The Speciation and Transport of Mercury in the Atmosphere," *U.S. Environmental Protection Agency Seminar Series*, Washington, DC, August 1993.

Carpi, A., Ditz, D., Weinstein, L. "Biological Monitoring Around a Municipal Solid Waste Incinerator in Rural New Jersey," *85th Annual Meeting of the Air & Waste Management Association*, Kansas City, MO, June 1992.

Ditz, D., Carpi, A., Weinstein, L. "Interpreting Biological Monitoring Data Near Municipal Solid Waste Incinerators," *84th Annual Meeting of the Air and Waste Management Association*, Vancouver, BC, June 1991.

POSTERS & ABSTRACTS

Maynard*, D., Mann, E., Carpi, A. (2018) "The Effect of Water on Mercury Flux from Natural Soil Samples," 11th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 2, 2018.

Mustajbasic*, M., Mann, E., Carpi, A. (2018) "Determining the Total Mercury Concentration Present in Different Dried Cat Food Brands," 11th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 2, 2018.

Imtiaz*, F., Mahamud*, F., Mann, E., Carpi, A. (2018) "The Effects of Water Addition and Soil Depth on Mercury Flux", 11th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 2, 2018.

Mann, E., Khusial*, R., Carpi, A. "Abiotic mechanisms of mercury (II) chloride reduction on surfaces," Annual Meeting of the Society of Environmental Toxicology and Chemistry, Minneapolis, MN, November 12-16, 2017.

Kosakowski*, A., Guo*, J., Mann, E., Carpi, A. "The effect of water on mercury flux from mercury (II) chloride spiked substrates and soil samples," Annual Biomedical Research Conference for Minority Students, Phoenix, AZ, November 1- 4, 2017.

Maynard*, D., Urbano-Molina*, K., Mann, E., Carpi, A. "The effect of light on mercury flux from mercury (II) oxide spiked samples," Annual Biomedical Research Conference for Minority Students, Phoenix, AZ, November 1- 4, 2017.

Khusial*, R., Hui, C., Mann, E., Carpi, A. "What causes increased mercury flux from wet soils?" International Conference on Mercury as a Global Pollutant, Providence, RI, July 16- 21, 2017.

Mann, E., Khusial*, R., Carpi, A. "Abiotic mechanisms of mercury (II) chloride reduction on surfaces," International Conference on Mercury as a Global Pollutant, Providence, RI, July 16- 21, 2017.

Peralta*, R., Mendoza*, A., Levin, E., Mann, E., Carpi, A. "Using moss as a biomonitor to detect atmospheric sources of mercury," International Conference on Mercury as a Global Pollutant, Providence, RI, July 16- 21, 2017.

Mann, E., Khusial*, R. Carpi, A. "A mechanistic investigation of mercury reduction and volatilisation in soil," Annual Meeting of the Society of Environmental Toxicology and Chemistry, Orlando, FL, November 6-10, 2016.

Mendoza*, A., Mann, E., Carpi, A. “Detecting an atmospheric mercury pollution source using moss as a biomonitor,” Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Long Beach, CA, October 13-15, 2016.

Guo*, J., Kosakowski*, A., Mann, E., Carpi, A. "The effect of substrate and ozone concentrations on mercury flux from mercury (II) chloride spiked samples," Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Long Beach, CA, October 13-15, 2016.

Peralta*, R., Mann, E., Carpi, A. “Using Moss as a Biomonitor to Detect Atmospheric Sources of Mercury,” Society for the Advancement of Chicanos/Latinos and Native Americans in Science, Long Beach, CA, October 12-15, 2016.

Peralta*, R., Mann, E., Carpi, A. (2016) “Using Moss as a Biomonitor to Detect Atmospheric Sources of Mercury,” 9th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 4, 2016.

Rouse*, D., Carpi, A. (2016) “The Reduction Mechanism of Mercuric Oxide in the Environment,” 9th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 4, 2016.

Peralta*, R., Mann, E., Carpi, A. (2016) “Using Moss as a Biomonitor to Detect Atmospheric Sources of Mercury,” Annual Collegiate Science & Technology Entry Program (CSTEP) Conference, Lake George, NY, April 9, 2016.

Carpi, A., Ronan, D. (2016) “Creating Minority Scientists: How Undergraduate Research Drives Changes in Career Ambitions for Students Underrepresented in STEM Disciplines,” 8th Conference on Understanding Interventions that Broaden Participation in Science Careers, Philadelphia, PA, February 27, 2016.

Peralta*, R., Mann, E., Carpi, A. (2015) “Using Moss as a Biomonitor to Detect Atmospheric Sources of Mercury,” Annual Biomedical Research Conference for Minority Students, Seattle, WA, November 11-14, 2015.

Rouse*, D., Carpi, A. (2015) “The Reduction Mechanism of Mercuric Oxide in the Environment,” Annual Biomedical Research Conference for Minority Students, Seattle, WA, November 11-14, 2015.

Brown, G. Jr., Ho*, A., Khusial*, R., Carpi., A. (2015) "A Mechanism for the Reduction of $HgCl_2$ on Environmental Surfaces," Society of Environmental Toxicology and Chemistry (SETAC) Europe 25th Annual Meeting, Barcelona, Spain, May 3-7.

Khusial*, R., Carpi, A. “The Role of Temperature and UV Light in the Reduction of Mercury (II) Chloride to Elemental Mercury,” 8th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, April 29, 2015

Texeira*, C., Carpi, A. “Determining a Methodology for Quantifying Mercury in the Stems and Barbs of Bird Feathers,” 8th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, April 29, 2015

Khusial*, R., Brown, G., Carpi, A. (2014) “The Role of Temperature and UV Light in the Reduction Of Mercury (II) Chloride to Elemental Mercury,” Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, Texas, November 12-15.

Texeira*, C., McCormick*, C., Carpi, A. (2014) “Using Bird Feathers as Bio-monitors of Mercury in the Environment” Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, Texas, November 12-15.

Yarde*, S., Carpi, A. (2014) “The Role of Water and pH in the Reduction of Mercury (II) Chloride to Elemental Mercury” Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, Texas, November 12-15.

Adlam*, C., Carpi, A. “The Photo-reduction of Soil-bound Mercury Species in the Presence of Water,” 7th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 1, 2014

Scarcella*, M., Carpi, A. "Mechanisms of the Reduction of Mercuric Oxide in the Environment," 7th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 1, 2014

Yarde*, S., Carpi, A. "Soil to Atmosphere Exchange of Mercury," 7th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 1, 2014

Khusial* , R., Carpi, A. "Mercury Transport in the Environment," 7th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 1, 2014.

Falconer, H., Egger, A.E., Carpi, A. "Content for Teaching to the Nature of Science Standards in the NGSS" Society for College Science Teachers Annual Meeting, Boston, MA, April 4, 2014.

Scarcella*, M., Petraco, N., Carpi, A. "Mechanisms of the Reduction of Mercuric Oxide in the Environment," 34th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nashville, TN, November 21, 2013.

Adlam*, C., Carpi, A. "The Photo-reduction of Soil-bound Mercury Species in the Presence of Water," Annual Biomedical Research Conference for Minority Students, Nashville, TN, November 15, 2013.

Adlam*, C., Carpi, A. "The Photo-reduction of Soil-bound Mercury in the Presence of Water," 6th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 3, 2013.

Hui*, C., Cheng, S-Y, Carpi, A. "Effects of mercuric chloride on cell surface expression of dopamine transporter in PC12 cells," 52nd Annual Meeting of the Society of Toxicology, San Antonio, TX, March 10-14, 2013.

Santos*, E., Carpi, A. "Decomposition and Flux of Mercury Species from Water," 5th Annual PRISM Undergraduate Research Symposium, John Jay College, NY, May 4, 2012.

Lents, N.H., Carpi, A. "A Federally-funded Free Science Education Resource with Modular Functionality, Mobile Apps, and More," 17th Annual Sloan Consortium International Conference on Online Learning; Orlando, FL; November 9, 2011.

Hui*, C., Carpi, A. "Mercury emissions from soil in response to simulated precipitation events," 10th International Conference on Mercury as a Global Pollutant, Halifax, Nova Scotia, July 24-29 2011.

Gittings*, M., Carpi, A. "Forest Soil Mercury Fluxes Pre and Post Cover-Clearing in Upstate New York,"10th International Conference on Mercury as a Global Pollutant, Halifax, Nova Scotia, July 24-29 2011.

Hui*, C., Carpi, A. "Mercury emissions from soil in response to simulated precipitation events," 4th Annual Prism Undergraduate Science Symposium, John Jay College, New York, NY May 13, 2011.

Mayo-Perez*, A. Carpi, A. "The potential role of silicon dioxide as an oxidizing surface in strong sunlight: studies on Mercury behavior," 4th Annual Prism Undergraduate Science Symposium, John Jay College, New York, NY May 13, 2011.

Egger, A., Carpi, A., Lents, N. "Understanding Theories: Explicitly Teaching the Process of Science to Address Common Student Misconceptions," Geological Society of America National Conference, Denver, CO, October 31, 2010, Abstracts Vol. 42(5):38.

Mayo-Perez*, A., Carpi, A. "The Potential Role of Silicon Dioxide as an Oxidizing Surface in Strong Sunlight: Studies on Mercury Behavior," American Chemical Society Annual Meeting 2010, Boston, MA, August 22-26, 2010.

Mayo-Perez*, A., Carpi, A. "The Potential Role of Silicon Dioxide as an Oxidizing Surface in Strong Sunlight: Studies on Mercury Behavior," 3rd Annual PRISM Undergraduate Research Symposium, John Jay College, New York, NY, May 7th, 2010.

Hui*, C., Carpi, A. "Mercury Emissions from Sand and Soil Surfaces in Response to Precipitation Events," 3rd Annual PRISM Undergraduate Research Symposium, John Jay College, New York, NY, May 7th, 2010.

Mayo-Perez*, A., Carpi, A. "The Potential Role of Silicon Dioxide as an Oxidizing Surface in Strong Sunlight: Studies on Mercury Behavior," 18th Annual CSTEP Conference, Lake George, NY, April 1-3, 2010.

Mano*, S., Carpi, A. "Investigating the Emission of Mercury from Beach Sand vs. Dredged Ocean Sand used for Reclamation Purposes," 2nd Annual PRISM Undergraduate Research Symposium, John Jay College, New York, NY, May 7, 2009.

Quinones*, J., Carpi, A. "Understanding the depth profile of elemental mercury emissions from sand & soil and its relevance to long-range environmental effects," 2nd Annual PRISM Undergraduate Research Symposium, John Jay College, New York, NY, May 7, 2009.

Ho*, A., Carpi, A."Mechanisms of the Reduction and Emission of Mercury in the Environment," 2nd Annual PRISM Undergraduate Research Symposium, John Jay College, New York, NY, May 7, 2009.

Egger, A.E., and Carpi, A. Teaching the Process of Science: A Critical Component of Introductory Geoscience Courses: EOS Transactions AGU, Fall Meeting Supplement, v. 89, Abstract ED34A-01, 2008.

Heslin*, J. Petraco, N., Carpi, A. "Modeling the Reduction of Mercury in Soil using Gaussian Software," 1st Annual PRISM Undergraduate Research Symposium, John Jay College, New York City, NY, May 8, 2008

Quinones*, J., Carpi, A. "Understanding the Depth Profile of Mercury Emissions from Sand and Its Relevance to Long-Range Environmental Effects," LSAMP - Urban University Conference Series 2008, New York City, NY, April 11-12th, 2008

Carpi, A., Egger, A. "An Idealized Curriculum for 1st Semester General Chemistry: What Topics Are Critical?" Invited Presentation to the Gordon Research Conference on Chemistry Education Research & Practice, Bates College, Lewiston, ME, June 24-26, 2007.

Bryant*, E., Carpi, A. "The Effects of Clay on the Emission of Mercury from Soil," LSAMP - Urban University Conference Series 2007, New York City, NY, April 27-28, 2007.

Contreras*, E., Frei, A., Carpi, A. "Developing a Surface-Air Mercury Model (SAMM)" LSAMP - Urban University Conference Series 2007, New York City, NY, April 27-28, 2007.

De La Vega*, H., Carpi, A. "Mercury Emission from Soil: The Role of pH and Salt Concentration," 15th Annual CSTEP Conference, Lake George, NY, April 13-15, 2007.

Orta*, O., Kobilinsky, L., Diaczek, P., Carpi, A. "Identification of 'Asbestos-Like' Fibers Associated with the Construction of the Third NYC Water Tunnel," 15th Annual CSTEP Conference, Lake George, NY, April 13-15, 2007.

Mauclair*, C., Layshock*, J., Carpi, A. "The Effect of Humic Matter on Soil Mercury Emissions," 8th International Conference on Mercury as a Global Pollutant, Madison, Wisconsin, August 5-11, 2006.

McCloskey*, R., Contreras*, E., Carpi, A. "UV Light and Soil Mercury Emissions: Identifying the Wavelength of Light Important in the Process," 8th International Conference on Mercury as a Global Pollutant, Madison, Wisconsin, August 5-11, 2006.

Carpi, A. "Developing an Online Science Learning Environment that Grows with an Instructor's Experience," The Northeast Association for Science Teacher Education, Amherst, MA, Oct. 26, 2005.

Carpi, A., Rosenberger, A., Egger, A. "An Integrated Learning Environment for Science Education," American Association for the Advancement of Science Annual Meeting, Seattle, WA, Feb. 16, 2004.

Egger, A., Carpi, A. "Visionlearning: A Web-based Resource for Teaching and Learning Integrated Science," New Mexico Association of Community Colleges Annual Faculty Conference, Santa Fe, NM, May 18-20, 2003.

Ovando*, B., Roberts*, M., Zedeck, M., Carpi, A. "Analysis of Zinc Accumulation in H. Vulgare," Collegiate Science & Technology Program Conference, Lake George, NY, April 6-8, 2001.

Carpi, A. "Enhancements in Interdisciplinary Science Training Using Web-Based Instructional Lessons," Chemistry & the Internet 2000, Washington, DC, September 24-27, 2000, http://www.chemint.org.

Carpi, A., Lindberg, S.E. "The Contamination and Flux of Methyl Mercury in Background and Sludge-Amended Soil," 4th International Conference on Mercury as a Global Pollutant, Hamburg, Germany, August 1996.

MENTORING

Hamil Patel, Master's Student Researcher, 1/18-present.

Elvin Colon, Undergraduate Researcher 6/18-present.

Andrew Candia, Undergraduate Researcher 9/18-present.

Fatoumata (Fatima) Niangado, Undergraduate Researcher 12/17-present.

Darrien Maynard, B.S., May 2018.
Mechanisms of mercury (II) oxide reduction on surfaces

Merima Mutajbasic, B.S., May 2018.
Determining mercury concentrations in human/animal food products.

Farzana Mahamud, B.S., May 2018.
Mechanisms of mercury (II) oxide reduction on surfaces.

Farnaz Imtiaz, B.S., May 2018.
The effects of water on mercury reduction in and emissions from soil.

Saba Iqbal, Midwood High School, Student Researcher 11/16-12/17.
Moss as a monitor of atmospheric mercury around a municipal sludge incinerator.

Gustave Gottlieb, John F. Kennedy High School, Student Researcher 7/17-8/17.
Mercury (II) chloride reactions in sand.

Lindsey Parmett, Sanford H. Calhoun High School, Student Researcher 6/17-8/17.
Mercury concentrations in chocolate from different geographic regions.

Kevin Urbano Molina, B.S., May 2017.
Mechanisms of mercury (II) oxide reduction in sand.

April Kosakowski, Undergraduate Researcher 3/16-12/17
Mechanisms of mercury (II) chloride reduction on surfaces

Ana Mendoza, B.S., May 2017.
Detecting an atmospheric mercury pollution source using moss as a biomonitor

Erica Levin, Midwood High School, Student Researcher 11/15-7/17.
Moss as a monitor of atmospheric mercury around a municipal sludge incinerator.

Josephine Guo, B.S., May 2017.
Mercury chemistry in soils.

Erin Mann, Postdoctoral Researcher 8/15-1/18.
Mechanisms and reduction of mercury species in soil.

Nicole Fegan, Sanford Calhoun High School, Summer Researcher, 2015.
Analytical support to moss monitoring research, Siemens fellowship applicant.
Subsequent success: Research Report Badge Winner – Intel Science Competition.

Ronal Peralta, B.S., May 2017.
Moss as a monitor of atmospheric mercury around a municipal sludge incinerator.
Subsequent success: Ph.D. Program, U. Pittsburgh

Danielle Rouse, B.S., May 2016.
Kinetics of the reduction and dissociation of mercuric oxide on environmental surfaces.

Richard Khusial, B.S., May 2015.
Mechanisms of the reduction of mercury (II) chloride in soil in the presence of light.
Subsequent success: Ph.D. Program, Mercer University

Carlos Texeira, B.S., May 2015.
The Use of Bird Feathers as Bio-monitors of Mercury in the Environment.

Caitlin McCormick, Manhasset High School, Summer Researcher, 2014
The Use of Bird Feathers as Bio-monitors of Mercury in the Environment.

Garry Brown, Postdoctoral Researcher 6/13-7/15.
Mechanisms and reduction of mercury species in soil.
Subsequent success: J.D. – Lewis and Clark Law School.

Shari Yarde, B.S., May 2015.
Experimental studies of the reduction of hydrated mercury (II) in light.

Faisal Hossain, Townsend Harris High School, Summer Researcher, 2014.
Experimental studies of the reduction of hydrated mercury (II) in light.

Matthew Scarcella, CUNY B.A., May 2014.
Modeling the mechanisms of reduction of HgO.

Chantal Adlam, B.S., May 2014.
Modeling the mechanisms of dissociation of $Hg(OH)_2$.
Subsequent success: Tampa State Police Crime Lab

Michael Gittings, M.S., August 2014.
Effects of deforestation on soil mercury fluxes.

Eva Santos, B.S., May 2012.
The hydrolysis and reduction of mercury in water.
Subsequent success: M.S. program – Science Education, Columbia University – Teacher's College

Christina Hui, B.S., May 2011.
Mechanisms of the enhancement of mercury emissions by precipitation.

Ralph Tran, M.S., May 2011.
Methods for time-course profiling of starvation abuse in dogs.
Subsequent success: D.V.M Program – Mississippi State University

Amora Mayo-Perez, B.S., May 2011.
Oxidation of atmospheric mercury by silicon dioxide surfaces.
Subsequent success: Ph.D. program in neuroscience – University of South Florida

Jason Quinones, B.S., May 2010.
Soil depth profile of light-enhanced metal reduction chemistry.
Subsequent success: **Ph.D. (2016) – SUNY, Stony Brook.**

Elisabeth Contreras, M.S., May 2010.
Modeling the effect of climate change on the global mercury pollution cycle.

Stacy-Ann Mano, B.S., May 2009.
The effect of reclamation projects on coastal mercury emissions.

Anthony Ho, B.S., May 2009.
Solvation and transport of soil mercury.
Subsequent success: Ph.D. program in Biochemistry, Molecular, Cell and Developmental Biology – University of California, Davis

Jaimie Heslin, B.S., May 2008. Metzner Undergraduate Award Winner.
Chemical modeling of the reduction of Hg^{+2} in natural systems.

Deanna Filosa, Masters Researcher 10/06-8/08.
A mass balance of mercury fluxes at the Blackrock Forest, Cornwall, NY.

Eboni Bryant, B.S., May 2007.
The effect of salt concentration on soil mercury flux.

Alison Keenan, B.S., May 2007.
Evaluating student and alumni perception of quality in the Forensic Science major.
Subsequent success: **Ph.D. (2012) – University of California, Davis.**

Ashley Rhodes, M.S., December 2007.
The effect of rainfall and soil moisture on soil mercury emissions.
Subsequent success: New York City Medical Examiner's Office.

Kylie Ferguson, B.S., May 2007, CUNY B.S. Program.
Field validation of laboratory humic acid studies on soil mercury flux.

Hilda De La Vega, B.S., May 2007.
The effect of pH on soil mercury flux.
Subsequent success: New York City Medical Examiner's Office.

Olivia Orta, B.S., May 2007.
Urban sources of outdoor asbestos fibers.
Subsequent success: **Ph.D. (2018) Epidemiology - Harvard University**.

Rachel McCloskey, M.S., December 2007.
Comparisons of UV-A, -B, and -C in the mercury emissions process.
Subsequent success: New York City Medical Examiner's Office.

Conrad Mauclair, B.S., May 2006. Undergraduate Research Award Winner.
Quantifying the role of humic matter on mercury reduction in soil.
Subsequent success: Project Manager, vTuner, Inc.

Daniel Cocris, B.S., May 2006. Metzner Undergraduate Award Winner.
Comparisons of the behavior of elemental and divalent mercury in soil.
Subsequent success: **D.M.D. (2013)**, University of Medicine and Dentistry of New Jersey

Kristin Ferraro, M.S., August 2006.
Mercury contamination in indoor environments.
Subsequent success: New York Police Department Analytical Laboratory

Julie Layshock, B.S., May 2004. McNair Fellow, Metzner Undergraduate Award Winner.
The role of organic matter in soil mercury reduction.
Subsequent success: **Ph.D. (2010) Environmental Toxicology**, Oregon State University. Assistant Professor, Pacific University.

Nancy Ordenana, B.S., May 2004. McNair Fellow, Metzner Undergraduate Award Winner.
DNA purification for pathogen identification.
Subsequent success: Ph.D program – University of Rochester

Umme Haidermota, M.S., May 2004.
Effects of hybrid poplar trees on soil mercury fluxes.
Subsequent success: Indianapolis State Police Crime Laboratory

Chad Moore, M.S., May 2004. Metzner Graduate Research Award Winner.
Effects of temperature and radiation on mercury emissions from soil.
Subsequent success: **Ph.D. (2009) Toxicology**, University of Utah

Theresa Nezezon, M.S., May 2004. U.S. EPA STAR Graduate Fellow
Sources and transport of microsporidia in surface water.
Subsequent success: New Jersey State Police Crime Laboratory

Lisa Evans, B.S., May 2004. McNair Fellow
Phytoremediation of zinc using *Hordeum vulgare*.
Subsequent success: **Ph.D (2010) Molecular Pharmacology**, SUNY Stony Brook

Daneille Coye, M.S., May 2004.
Optimization of HPTLC for identifying fiber dyes.
Subsequent success: Ph.D program – CUNY Graduate Center

Jamie Swaitko, M.S., December 2003.
Trace methods development for the identification of estrogen compounds in water.
Subsequent success: New York City Police Department Crime Laboratory

Bladimir Ovando, B.S., May 2002. McNair Fellow, CSTEP NY Research Award Winner.
Phytoremediation of heavy metal pollution.
Subsequent success: **Ph.D. (2008) Toxicology**, State University of New York at Buffalo.

Marcel Roberts, B.S., May 2002. McNair Fellow, CSTEP NY Research Award Winner.
Phytoremediation of cadmium in soil.
Subsequent success: **Ph.D. (2008) Analytical Chemistry**, Boston College. Assistant Professor, John Jay College.

Yung-fou Chen, M.S., September 2001. Society for Applied Spectroscopy Fellow
Source identification of urban mercury pollution.
Subsequent success: **Ph.D. (2007) Materials Science**, CUNY Graduate Center.

Jeffrey Mital, 2001. U.S. EPA STAR Graduate Fellow
PCR optimization for microsporidia analysis.
Subsequent success: **Ph.D. (2006) Microbiology**, University of Vermont. Associate Professor, Quinnipiac University.