

JENNIFER M. LYNCH
(previously Jennifer M. Keller)
Curriculum Vitae

National Institute of Standards & Technology
 Located at Hawaii Pacific University's [Center for Marine Debris Research](#)
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Objective

To improve and conserve the marine environment by performing excellent, timely, and applied marine environmental science, publicizing scientific results and implications of the conclusions, and educating students and adults to raise awareness and motivate them towards positive change.

Education

Ph.D. Duke University, Durham, NC 1997-2003
 Nicholas School of the Environment and Earth Sciences, Durham, NC
 Division of Coastal Systems Science and Policy, Beaufort, NC
 Integrated Toxicology Program, Durham, NC
 Dissertation title: *Occurrence and Effects of Organochlorine Contaminants in Sea Turtles*
 Degree in Marine Environmental Toxicology

B.S. Indiana University, Bloomington, IN 1993-1997
Major in Biology; minor in Environmental Science

Employment History & Project Highlights

National Institute of Standards & Technology, Charleston, SC and Waimanalo, HI
Co-Director, Center for Marine Debris Research 2019-present
Program Coordinator for the NIST Pacific Islands Expansion 2016-2018
Onsite Representative in Hawaii for NIST Chemical Sciences Division 2014-present
Research Biologist 2013-present
Biologist 2005-2013
National Research Council Post-Doctoral Fellow 2003-2005

- Plastic Marine Debris Chemistry and Organic Analytical Chemistry
 - Develop methods to quantify and characterize plastic polymers in environmental samples
 - Polymer identification using ATR FT-IR, DSC, Raman and FT-IR microscopy
 - Develop methods to measure legacy and emerging environmental pollutants
 - PCBs, pesticides, PBDEs, HBCDs, and PFASs
 - In blood, eggs, fat, liver, other tissues, sediment, and dust
 - Using ASE, SPE, HPLC, GC/MS, LC/MS/MS,
 - Certify pollutant levels in environmental Standard Reference Materials

- Measure pollutant levels in marine animal tissues
 - Coordinate research with marine animal health and toxicology studies
- NIST Biorepository
 - Lead of the sea turtle biorepository project: Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST) (2011-present)
 - Archive ingested plastics and tissues (blood, scute, eggs, necropsies) from sea turtles for spatial and temporal contaminant and health monitoring

Hawaii Pacific University, College of Natural and Computational Sciences, Waimanalo, HI
Co-Director, Center for Marine Debris Research 2019-present
Affiliate Faculty Member 2012-present

- Served on the graduate committee of eleven Master's students
- Facilitated NIST grants to support collaborative research
- Successfully awarded additional research funding

University of Hawaii, Natural Resources and Environmental Management, Honolulu, HI
Affiliate Faculty Member 2014-2019

- Served on the thesis committee of one Master's student and one undergraduate
- Facilitated NIST grants to support collaborative research

College of Charleston, Grice Marine Laboratory, Graduate Program in Marine Biology, Charleston, SC
Adjunct Faculty Member 2004-2016

- Served on graduate committees of nine Master's students (major advisor of 3)
- Taught Aquatic Toxicology, a master's level lab and lecture course, for 3 years
- Taught Field Studies in Coral Reef Biology, an undergraduate course

Marine Science & Nautical Training Academy (MANTA)
Vice President & Instructor 2007-2010

- Co-created a 501(c)3 marine education and research non-profit organization
- Ran three sailing, diving, and marine science education programs for high school and college students aboard 50-foot catamarans in the British Virgin Islands
 - Lead of science projects, including fish surveys, coral cover and health assessments, fecal coliform and water quality tests, land use measurements, and human surveys

Duke University Marine Laboratory, Beaufort, NC
Ph.D. student and Teaching Assistant 1997-2003

- Graduate research on the accumulation and effects of organic pollutants in sea turtles
- Teaching Assistant for six environmental science or marine biology courses

Beaufort Biological, Beaufort, NC ***Owner 1998-2001***

- Collected and sold marine invertebrates, primarily sea urchins, for research

Woods Hole Oceanographic Institution, Woods Hole, MA ***Summer Research Fellow 1996***

- Studied liver biotransformation (cytochrome P4501A1 enzyme) of PCBs in various marine organisms

Indiana University, Bloomington, IN ***Undergrad. Teach. Assistant & REU Student 1994-1997***

- Studied the effects of metals on sea urchin development
- Studied the growth and reproduction of the mayapple, a forest floor plant

- Teaching Assistant for BIO L112

Publications

H-Index: 32 (Calculated Jul 2, 2020 using Google Scholar)

i10-Index: 50 (Calculated Jul 2, 2020 using Google Scholar)

Book Chapters:

1. Vander Pol S.S., Kucklick J.R., **Lynch J.M.**, Pugh R.S., Ragland J.M., Reiner J.L., Trevillian J., Schantz M.M. 2016. Lessons learned from monitoring organic contaminants in three decades of marine samples from the Pacific basin archived at the USA's Marine Environmental Specimen Bank. In: *Persistent Organic Chemicals in the Environment: Status and Trends in the Pacific Basin Countries II*. Loganathan et al. (Eds.) ACS Symposium Series; American Chemical Society, Washington, DC. Pgs. 19. DOI 10.1021/bk-2016-1244.ch001.
2. **Keller J.M.** 2013. Exposure to and Effects of Persistent Organic Pollutants. In: *The Biology of Sea Turtles Volume III*. Wyneken, J. et al. (Eds.). CRC Press, Boca Raton, USA. Pg. 285-328. ISBN 978-1-4398-7307-6.
3. **Keller J.M.**, Peden-Adams M.M., Aguirre A.A. 2006. Immunotoxicology and implications for reptilian health. In: *New Perspectives: Toxicology and the Environment: Toxicology of Reptiles*. Gardner S.C., Oberdörster E. (Eds.). CRC Taylor & Francis, Boca Raton. Pg. 199-240. ISBN 978-0849327155.

Refereed Journal Articles:

1. Townsend, K., Ness, J., Hoguet, J., Stacy, N.I., Komoroske, L.M., **Lynch, J.M.** in press. Testing the stability of plasma protein and whole blood RNA in archived blood of loggerhead sea turtles, *Caretta caretta*. Biopreservation and Biobanking.
2. Cowger, W., Brander, S., Rochman, C., Thaysen, C., Primpke, S., Booth, A., Lusher, A. L., Devriese, L., **Lynch, J. M.**, Vaz, V., Dehaut, A., Liboiron, M., Athey S., Nel, H., Steele, C., Moore, S., Jones, O. A.H., Gray, A., Sanches, A., Munno, K., Hermabessiere, L., Hamilton, B., De Frond, H. 2020. Reporting guidelines to increase the reproducibility and comparability of research on microplastics. *Applied Spectroscopy*. DOI 10.1177/0003702820930292
3. Gove, J.M., Whitney, J.L., McManus, M.M., Lecky, J., Carvalho, F.C., **Lynch, J.M.**, Li, J., Neubauer, P., Smith, K.A., Phipps, J.E., Kobayashi, D.R., Balagso, K.B., Contreras, E.A., Manuel, M.E., Merrifield, M.A., Polovina, J.J., Asner, G.P., Maynard, J.A., Williams, G.J. 2019. Prey-sized plastics are invading larval fish nurseries. *Proceedings of the National Academy of Science*. 116(48):24143-24149. DOI 10.1073/pnas.1907496116.
4. Brignac K.C., Jung M.R., King C., Royer S.-J., Blickley L., Lamson M.R., Potemra J.T., **Lynch J.M.** 2019. Marine Debris Polymers on Main Hawaiian Island Beaches, Sea Surface, and Seafloor. *Environmental Science and Technology*. 53(21):12218-12226. DOI 10.1021/acs.est.9b03561.
5. Currie J., Stack S., Brignac K.C., **Lynch J.M.** 2019. Nearshore sea surface macro marine debris in Maui County, Hawaii: distribution, drivers, and polymer composition. *Marine Pollution*

6. **Lynch J.M.** 2018. Quantities of marine debris ingested by sea turtles: Global meta-analysis highlights need for standardized data reporting methods and reveals relative risk. *Environmental Science and Technology*. 52:12026-12038. DOI 10.1021/acs.est.8b02848.
7. Jung M.R., Balazs G.H., Work T.M., Jones T.T., Orski S.V., Rodriguez C. V., Beers K.L., Brignac K.C., Hyrenbach K.D., Jensen B.A., **Lynch J.M.** 2018. Polymer Identification of Plastic Debris Ingested by Pelagic-phase Sea Turtles in the Central Pacific. *Environmental Science and Technology*. 52:11535-11544. DOI 10.1021/acs.est.8b03118
8. Stacy N.I., **Lynch J.M.**, Arendt M.D., Avens L., Braun-McNeill J., Cray C., Day R.D., Harms C., Lee A.M., Peden-Adams M.M., Thorvalson K., Segars A.L., Norton T.M. 2018. Chronic Debilitation in Stranded Loggerhead Sea Turtles (*Caretta caretta*) in the Southeastern United States: Morphometrics and Clinicopathological Findings. *Plos One*. 13(7): e0200355. DOI 10.1371/journal.pone.0200355.
9. Jung M.R., Horgen F.D., Orski S.V., Rodriguez C. V., Beers K.L., Balazs G.H., Jones T.T., Work T.M., Brignac K.C., Royer S-J., Hyrenbach K.D., Jensen B.A., **Lynch J.M.** 2018. Validation of ATR FT-IR to identify polymers of plastic marine debris, including those ingested by marine organisms. *Marine Pollution Bulletin*. 127:704-716. DOI 10.1016/j.marpolbul.2017.12.061.
10. **Lynch J.M.**, Ragland, J.M., Reagen, W.K., Wolf, S.T., Malinsky, M.D., Ellisor, M.B., Moors, A.J., Pugh R.S., Reiner J.L. 2018. Feasibility of using the National Marine Mammal Tissue Bank for retrospective exploratory studies of perfluorinated alkyl acids. *Science of the Total Environment*. 624:781–789. DOI 10.1016/j.scitotenv.2017.11.299.
11. Clukey K.E., Lepczyk C.A., Balazs G.H., Work T.M., Li Q.X., Bachman M.J., **Lynch J.M.** 2018. Persistent Organic Pollutants in Fat of Three Species of Pacific Pelagic Longline Caught Sea Turtles: Accumulation in Relation to Ingested Plastic Marine Debris. *Science of the Total Environment*. 610-611:402-411. DOI 10.1016/j.scitotenv.2017.07.242.
12. Clukey K.E., Lepczyk C.A., Balazs G., Work T., **Lynch J.M.** 2017. Investigation of Plastic Debris Ingestion by Four Species of Sea Turtles Collected as Bycatch in Pelagic Pacific Longline Fisheries. *Marine Pollution Bulletin*. 120(1-2):117-125. DOI 10.1016/j.marpolbul.2017.04.064.
13. Schantz M.M., Cleveland D., Heckert N.A., Kucklick J.R., Leigh S.D., Long S.E., **Lynch J.M.**, Murphy K.E., Olfaz R., Pintar A.L., Porter B.J., Rabb S.A., Vander Pol S.S., Wise S.A., Zeisler R. 2016. Development of Two Fine Particulate Matter Standard Reference Materials (<4 µm and <10 µm) for the Determination of Organic and Inorganic Constituents. *Analytical Bioanalytical Chemistry*. 408:4257–4266. DOI 10.1007/s00216-016-9519-7.
14. Reiner J.L., Becker P.R., Gribble M.O., **Lynch J.M.**, Moors A.J., Ness J., Peterson D., Pugh R.S., Ragland T., Rimmer C., Rhoderick J., Schantz M.M, Trevillian J., Kucklick J.R., 2016. Organohalogen contaminants and vitamins in Northern Fur Seals (*Callorhinus ursinus*) collected during subsistent hunts in Alaska. *Archives of Environmental Contamination and Toxicology*. 70(1):96-105. DOI 10.1007/s00244-015-0179-y.
15. Bachman M.J., Foltz K., **Lynch J.M.**, West K., Jensen B.A. 2015. Using cytochrome P4501A1 expression in liver and blubber to understand effects of persistent organic pollutant exposure in stranded Pacific Island cetaceans. *Environmental Toxicology and Chemistry*. 34(9):1989-1995.

DOI: 10.1002/etc.3018.

16. Reiner, J.L., Blaine, A.C., Higgins, C.P., Huset, C., Jenkins, T.M., Kwadijk, C.J.A.F., Lange, C.C., Muir, D.C.G., Reagen, W.K., Rich, C., Small, J.M., Strynar, M.J., Washington, J.W., Yoo, H., **Keller, J.M.** 2015. Polyfluorinated Substances in Abiotic Standard Reference Materials. *Analytical Bioanalytical Chemistry*. 407:2975-2983. DOI 10.1007/s00216-013-7330-2.
17. **Keller J.M.**, Balazs G.H., Nilsen F., Rice M., Work T.M., Jensen B.A. 2014. Investigating the potential role of persistent organic pollutants in Hawaiian green sea turtle fibropapillomatosis. *Environmental Science and Technology*. 48:7807-7816. DOI 10.1021/es5014054.
18. Bachman, M.J., **Keller, J.M.**, West, K.L., Jensen, B.A. 2014. Persistent organic pollutant concentrations in blubber of 16 species of cetaceans stranded in the Pacific Islands from 1997 through 2011. *Science of the Total Environment*. 488-489:115-123. DOI 10.1016/j.scitotenv.2014.04.073.
19. Schock, T.B., **Keller, J.M.**, Rice, M., Balazs, G.H., Bearden, D.W. 2013. Metabotyping of a Protected Non-Model Organism, Green Sea Turtle (*Chelonia mydas*), using ¹H NMR Spectroscopy and Optimized Plasma Methods for Metabolomics. *Current Metabolomics*. 1:279-290.
20. **Keller J.M.** 2013. Forty-seven days of decay does not change persistent organic pollutant levels in loggerhead sea turtle eggs. *Environmental Toxicology and Chemistry*. 32:747–756. DOI 10.1002/etc.2127.
21. Hoguet, J., **Keller, J.M.**, Reiner, J.L., Kucklick, J.R., Bryan, C.E., Moors, A.J., Pugh, R.S., Becker, P.R.. 2013. Spatial and temporal trends of persistent organic pollutants and mercury in beluga whales (*Delphinapterus leucas*) from Alaska. *Science of the Total Environment*. 449:285-294. DOI 10.1016/j.scitotenv.2013.01.072.
22. Schantz M.M., Gauthier E., Focant J-F., Hamilton C., Heckert N.A., Heltsley R.M., Hoover D., **Keller J.M.**, Leigh S.D., Patterson D.G. Jr, Pintar A.L., Sharpless K.E., Sjödin A., Turner W.E., Vander Pol S.S., Wise, S.A. 2013. Milk and serum Standard Reference Materials for monitoring organic contaminants in human samples. *Analytical and Bioanalytical Chemistry*. 405:1203-1211. DOI 10.1007/s00216-012-6524-3.
23. Reiner J.L., O’Connell S.G., Butt C.M., Mabury S.A., Small J.M., De Silva A.O., Muir D.C.G., Delinsky A.D., Strynar M.J., Lindstrom A.B., Reagen W.K., Malinsky M., Schäfer S., Kwadijk C.J.A.F., Schantz M.M., **Keller, J.M.** 2012. Determination of Perfluorinated Alkyl Acid Concentrations in Biological Standard Reference Materials. *Analytical and Bioanalytical Chemistry*. 404:2683–2692. DOI 10.1007/s00216-012-5943-5.
24. **Keller, J.M.**, Ngai, L., Braun McNeill, J., Wood, L., Stewart, K.R., O’Connell, S.G., Kucklick, J.R. 2012. Perfluoroalkyl contaminants in plasma of five sea turtle species: Comparisons in concentration and potential health risks. *Environmental Toxicology and Chemistry*. 31:1223–1230. DOI 10.1002/etc.1818.
25. DeWitt, J.C., Peden-Adams, M.M., **Keller, J.M.**, Germolec, D.R. 2012. The immunotoxicity of perfluorinated compounds: Recent developments. *Toxicologic Pathology* 40:300-311. DOI 10.1177/0192623311428473.

26. Reiner J.L., Phinney, K.W., **Keller J.M.** 2011. Determination of perfluorinated compounds in human plasma and serum Standard Reference Materials using independent analytical methods. *Analytical and Bioanalytical Chemistry* 401:2899-2907. DOI 10.1007/s00216-011-5380-x.
27. Reiner J.L., O'Connell S.G., Kucklick J.R., Becker P.R., **Keller J.M.** 2011. Spatial and Temporal Trends of Perfluorinated Compounds in Beluga Whales (*Delphinapterus leucas*) from Alaska. *Environmental Science and Technology* 45: 8129–8136. DOI 10.1021/es103560q.
28. Stewart K., **Keller J.M.**, Templeton R., Kucklick J.R., Johnson, C. 2011. Monitoring persistent organic pollutants in leatherback turtles (*Dermochelys coriacea*) confirms maternal transfer. *Marine Pollution Bulletin* 62:1396-1409. DOI 10.1016/j.marpolbul.2011.04.042.
29. Alava, J.J., **Keller, J.M.**, Wyneken, J., Crowder, L., Scott, G., Kucklick, J.R. 2011. Geographical variation of persistent organic pollutants in loggerhead sea turtle (*Caretta caretta*) eggs from Southeastern USA. *Environmental Toxicology and Chemistry* 30(7):1677–1688. DOI 10.1002/etc.553.
30. Ragland J.M., Arendt M.D., Kucklick J.R., **Keller J.M.** 2011. Persistent Organic Pollutants in Blood Plasma of Satellite-Tracked Adult Male Loggerhead Sea Turtles (*Caretta caretta*). *Environmental Toxicology and Chemistry* 30(7):1549-1556. DOI 10.1002/etc.540.
31. Basile E.R., Avery H.W., **Keller J.M.**, Bien W.F., Spotila J.R. 2011. Diamondback terrapins as indicator species of persistent organic pollutants: Using Barnegat Bay, New Jersey as a case study. *Chemosphere* 82:137–144. DOI 10.1016/j.chemosphere.2010.09.009.
32. O'Connell S.G., Arendt M., Segars A., Kimmel T., Braun-McNeill J., Avens L., Schroeder B., Ngai L., Kucklick J.R., **Keller J.M.** 2010. Temporal and spatial trends of perfluorinated compounds in juvenile loggerhead sea turtles (*Caretta caretta*) along the east coast of the United States. *Environmental Science and Technology* 44:5202–5209. DOI 10.1021/es9036447.
33. Swarthout R.F., **Keller J.M.**, Peden-Adams M.M., Landry A., Fair P., Kucklick J.R. 2010. Organohalogen contaminants in blood of Kemp's ridley (*Lepidochelys kempii*) and green sea turtles (*Chelonia mydas*) from the Gulf of Mexico. *Chemosphere* 78:731-741. DOI 10.1016/j.chemosphere.2009.10.059.
34. **Keller, J.M.**, Calafat, A.M., Kato, K., Ellefson, M.E., Reagen, W.K., Strynar, M., O'Connell, S., Butt, C.M., Mabury, S., Small, J., Muir, D., Leigh, S.D. Schantz, M.M. 2010. Determination of perfluorinated alkyl acids in human serum and milk Standard Reference Materials. *Analytical and Bioanalytical Chemistry* 397:439-451. DOI 10.1007/s00216-009-3222-x.
35. Day R.D., **Keller J.M.**, Harms C.A., Segars A.L., Cluse W.M., Godfrey M.H., Lee A.M., Peden-Adams M.M., Thorvalson K., Dodd M., Norton T. 2010. Comparison of Mercury Burdens in Chronically Debilitated and Healthy Loggerhead Sea Turtles (*Caretta caretta*). *Journal of Wildlife Diseases* 46(1)111-117.
36. Moss S., **Keller J.M.**, Richards S., Wilson T.P. 2009. Levels of persistent organic pollutants in plasma from two species of turtle from the Tennessee River Gorge. *Chemosphere* 76:194-204. DOI 10.1016/j.chemosphere.2009.03.054.
37. **Keller J.M.**, Swarthout R.F., Carlson B.K.R., Yordy J., Guichard A., Schantz M.M., Kucklick, J.R. 2009. Comparison of five extraction methods for measuring PCBs, PBDEs, organochlorine

pesticides, and lipid content in serum. *Analytical Bioanalytical Chemistry* 393(2):747-760. DOI 10.1007/s00216-008-2453-6.

38. Schantz M.M, Christopher S.J., Davis W.C., Day R.D., **Keller J.M.**, Kucklick J.R., Long S.E., Mackey E.A., Point D., Porter B.J., Poster D.L., Sharpless K.E., Turk G.C., Wise S.A. 2009. Spotlighting NIST Standard Reference Materials Fish-Related Standard Reference Materials. *American Laboratory*. 41(2):50.
39. Peden-Adams M.M., Keller, J.M., EuDaly, J.G., Berger, J., Gilkeson, G.S., Keil, D.E. 2008. Suppression of humoral immunity in mice following exposure to perfluorooctane sulfonate (PFOS). *Toxicological Science* 104: 144-154. DOI 10.1093/toxsci/kfn059.
40. DeLorenzo M.E., **Keller, J.M.**, Arthur, C.D., Finnegan, M.C., Harper, H.E., Winder, V.L., Zdankiewicz, D.L. 2008. Toxicity of the antimicrobial compound triclosan and formation of the metabolite methyl-triclosan in estuarine systems. *Environmental Toxicology* 23:224-232. DOI 10.1002/tox.20327.
41. Schantz M.M., **Keller J.M.**, Leigh S., Patterson D.G. Jr., Sharpless K.S., Sjödin A., Stapleton H.M., Swarthout R., Wise S.A. 2007. Certification of SRM 1589a PCBs, Pesticides, PBDEs, and Dioxins/Furans in Human Serum. *Analytical and Bioanalytical Chemistry* 389:1201–1208. DOI 10.1007/s00216-007-1519-1.
42. Schantz M.M., **Keller J.M.**, Kucklick J.R., Poster D.L., Stapleton H.M., Vander Pol, S.S., Wise S.A. 2007. New Standard Reference Material (SRM) 2585 Organic Contaminants in House Dust to Support Exposure Assessment Measurements. *American Lab News* 39:22-28.
43. Stapleton H.M., **Keller J.M.**, Schantz M.M., Kucklick J.R., Leigh S.D., Wise S.A. 2007. Determination of Polybrominated Diphenyl Ethers in Environmental Standard Reference Materials. *Analytical and Bioanalytical Chemistry* 387:2365-2379. DOI 10.1007/s00216-006-1054-5.
44. Wise S.A., Poster D.L., Kucklick J.R., Keller J.M., Vander Pol S.S., Sander L.C., Schantz M.M. 2006. Standard Reference Materials (SRMs) for Determination of Organic Contaminants in Environmental Samples. *Analytical and Bioanalytical Chemistry* 386:1153-1190. DOI 10.1007/s00216-006-0719-4.
45. Alava, J.J., **Keller, J.M.**, Kucklick, J.R., Wyneken, J., Crowder, L., Scott, G.I. 2006. Loggerhead sea turtle (*Caretta caretta*) egg yolk concentrations of persistent organic pollutants and lipid increase during the last stage of embryonic development. *Science of the Total Environment* 367:170-181. DOI 10.1016/j.scitotenv.2006.02.029.
46. Stapleton H.M., Harner T., Shoeib M., **Keller J.M.**, Schantz M.M., Leigh S.D., Wise S.A. 2006. Determination of Polybrominated Diphenyl Ethers in Indoor Dust Standard Reference Materials. *Analytical and Bioanalytical Chemistry* 384:791-800. DOI 10.1007/s00216-005-0227-y.
47. **Keller J.M.**, McClellan-Green P.D., Kucklick J.R., Keil D.E., Peden-Adams M.M. 2006. Effects of organochlorine contaminants on loggerhead sea turtle immunity: Comparison of a correlative field study and *in vitro* exposure experiments. *Environmental Health Perspectives* 114:70-76. DOI 10.1289/ehp.8143.
48. **Keller J.M.**, Kannan K., Taniyasu S., Yamashita N., Day R.D., Arendt M.D., Segars A.L.,

- Kucklick J.R. 2005. Perfluorinated compounds in the plasma of loggerhead and Kemp's ridley sea turtles from the southeastern coast of the U.S. *Environmental Science and Technology* 39:9101-9108. DOI 10.1021/es050690c.
49. **Keller J.M.**, McClellan-Green P.D., Lee A.M., Arendt M.D., Maier P.P., Segars A.L., Whitaker J.D., Keil D.E., Peden-Adams M.M. 2005. Mitogen-induced lymphocyte proliferation in loggerhead sea turtles: comparison of methods and effects of gender, plasma testosterone concentration, and body condition on immunity. *Veterinary Immunology and Immunopathology* 103:269-281. DOI 10.1016/j.vetimm.2004.09.029.
 50. **Keller J.M.**, Kucklick J.R., Stamper M.A., Harms C.A., McClellan-Green P.D. 2004. Associations between organochlorine contaminant concentrations and clinical health parameters in loggerhead sea turtles from North Carolina, USA. *Environmental Health Perspectives* 112:1074-1079. DOI 10.1289/ehp.6923.
 51. **Keller J.M.**, Kucklick J.R., Harms C.A., McClellan-Green P.D. 2004. Organochlorine contaminants in sea turtles: correlations between whole blood and fat. *Environmental Toxicology and Chemistry* 23:726-738.
 52. **Keller J.M.**, Kucklick J.R., McClellan-Green P.D. 2004. Organochlorine contaminants in loggerhead sea turtle blood: extraction techniques and distribution among plasma and red blood cells. *Archives of Environmental Contamination and Toxicology* 46:254-264. DOI 10.1007/s00244-003-2262-z.
 53. **Keller J.M.**, Meyer J., Rau M., Mattie M., Augsperger T., Dong J., Levin E. 2000. Assessment of immunotoxicology in wild populations: review and recommendations. *Reviews in Toxicology* 3:167-212. ISSN 1382-6980.
 54. Harms C.A., **Keller J.M.**, Kennedy-Stoskopf S. 2000. Use of a two-step Percoll gradient for separation of loggerhead sea turtle (*Caretta caretta*) peripheral blood mononuclear cells. *Journal of Wildlife Diseases* 36:535-540.
 55. Schlezinger J.J., **Keller J.**, Verbrugge L.A., Stegeman J.J. 2000. 3,3',4,4'-Tetrachlorobiphenyl oxidation in fish, bird and reptile species: relationship to cytochrome P450 1A inactivation and reactive oxygen production. *Comparative Biochemistry and Physiology Part C* 125:273-286. ISSN 0742-8413.

Published Government Reports:

1. **Keller, J.M.**, Pugh, R.S., Becker, P.R. 2014. Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST): Rationale, Protocols, and Initial Collections of Banked Sea Turtle Tissues. *National Institute of Standards and Technology Internal Report 7996*. DOI 10.6028/NIST.IR.7996.
2. Kucklick, J.R., Reiner, J.L., Schantz M.M., **Keller J.M.**, Hoguet, J., Rimmer, C., Ragland, T., Pugh, R., Moors, A., Rhoderick, J., Ness, J., Peterson, D., Becker, P. 2013. Persistent Organic Pollutants and Vitamins in Northern Fur Seals (*Callorhinus ursinus*) Collected from St. Paul Island, Alaska as Part of the Alaska Marine Mammal Tissue Archival Project. *National Institute of Standards and Technology Internal Report 7958*. DOI 10.6028/NIST.IR.
3. Reiner, J.L., Hoguet, J., **Keller, J.M.**, O'Connell, S.G., Kucklick, J.R., Bryan, C.E., Davis, W.C.,

Moors, A., Pugh, R., Becker, P.R. 2012. Organohalogen Contaminants and Mercury in Beluga Whale Tissues Banked by the Alaska Marine Mammal Tissue Archival Project. *National Institute of Standards and Technology Internal Report* 7860. DOI 10.6028/NIST.IR.7860.

Other Publications (Letters to the Editor; Blogs; Features in Film):

1. Pattie Gonia. 2019. The Story Behind Everything to Lose. An REI sponsored film. <https://www.facebook.com/watch/?v=2364098047237896>
2. **Lynch, J.M.** 2019. How Hawaiian Plastic Marine Debris Affects Me. Personally. NIST Taking Measure – Just a Standard Blog. <http://nist-takingmeasure.blogs.gov>
3. **Lynch, J.M.** 2016. World Sea Turtle Day: Heroes on a Half-Shell. NIST Taking Measure – Just a Standard Blog. <http://nist-takingmeasure.blogs.govdelivery.com/world-sea-turtle-day-heroes-half-shell/>
4. Work T.W., Ackermann M., Casey J.W., Chaloupka M., Herbst L.H., **Lynch J.M.**, Stacy B.A. 2014. The story of invasive algae, arginine, and turtle tumors does not make sense. Letter to the Editor of PeerJ. Preprint DOI 10.7287/peerj.preprints.539v1.

Publications In Review:

56. Hyrenbach, K.D., McGinnis, Z., Page, K., Horgen, F.D., **Lynch, J.M.**, in review. You are what you eat: An ecological exploration of plastic ingestion by island-associated predatory fish in Oahu, Hawaii. *Submitted to Marine Pollution Bulletin*.
57. Shaw, K.R., **Lynch, J.M.**, Balazs, G.H., Jones, T.T., Pawloski, J., Rice, M.R., French, A.D., Liu, J., Cobb, G.P., Klein, D.M. in review. Trace element concentrations in blood and scute tissues from wild and captive Hawaiian green sea turtles (*Chelonia mydas*). *Submitted to Environmental Toxicology and Chemistry*.

Published Abstracts (Published in full):

1. **Lynch, J.M.** 2016. Role of environmental pollution in fibropapillomatosis of marine turtles. In: Hargrove, S., Work, T., Brunson, S., Foley, A.M., Balazs, G. *Proceedings of the 2015 International Summit on Fibropapillomatosis: Global Status, Trends, and Population Impacts*. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-PIFSC-54, 85 p. DOI 10.7289/V5/TM-PIFSC-54.
2. Kucklick, J., Pugh, R., Becker, P., **Keller, J.**, Day, R., Yordy, J., Moors, A., Christopher, S., Bryan, C., Schwacke, L., Goetz, C., Wells, R., Balmer, B., Hohn, A., Rowles, T. 2010. Specimen Banking for Marine Animal Health Assessment. *Interdisciplinary Studies on Environmental Chemistry – Environmental Specimen Bank*. pp. 15-23. ISBN 978-4-88704-153-0.
3. Peden-Adams, M.M., Keil, D.E., Romano, T., Mollenhauer, M.A.M., Fort, D.J., Guiney, P.D., Houde, M., Kannan, K., Muir, D.C., Rice, C.D., Stuckey, J., Segars, A.L., Scott, T., Talent, L., Bossart, G.D., Fair, P.A., **Keller, J.M.** 2009. Health Effects of Perfluorinated Compounds- What are the Wildlife Telling Us? *Reproductive Toxicology* 27:414-415.

4. **Keller J.M.**, McClellan-Green P.D. 2004. Effects of organochlorine compounds on cytochrome P450 aromatase activity in an immortal sea turtle cell line. *Marine Environmental Research* 58:347-351.
5. **Keller J.M.**, Kucklick J.R., Harms C.A., Kannan K., McClellan-Green P.D. 2003. Polychlorinated biphenyls, organochlorine pesticides, and perfluorooctanesulfonate in the blood of loggerhead sea turtles. *Organohalogen Compounds* (Proceedings of Dioxin 2003; Boston, MA) 62:33-36.

Presentations

Invited Seminars/Workshop Presentations:

1. **Lynch, J.M.** 2020. Implications of plastic ingestion by green turtles. Hawaiian Green Sea Turtle Diet Workshop, Honolulu, Hawaii, 10 Feb 2020.
2. **Lynch, J.M.** 2020. Chemical measurement services for plastic pollution research. Seminar presented for the National Institute of Standards and Technology, Gaithersburg, Maryland, 30 Jan 2020.
3. **Lynch, J.M.** 2020. Innovative technologies for polymer identification. National Academies of Sciences, Engineering and Medicine Emerging Technologies to Advance Research and Decisions on the Environmental Health Effects of Microplastics, Washington, DC, 27 Jan 2020.
4. **Lynch, J.M.** 2019. Plastic Marine Debris Research in Hawaii: Best Methods for Answering Fundamental Questions to Drive Solutions. Chevron Phillips Chemical Company, Kingwood, TX, 12 Nov 2019.
5. **Lynch, J.M.** 2019. The Need for Standards and Best-Practices in Sampling and Reporting Methods. The Science of Microplastics in the World Ocean Workshop, Woods Hole, MA, 15-18 Oct 2019.
6. **Lynch, J.M.** 2019. The role of NIST in chemical measurement services for plastic pollution research. Seminar presented for the National Institute of Standards and Technology, Gaithersburg, Maryland, 18 Sept 2019.
7. **Lynch, J.M.**, Jung, M.R., Brignac, K., Deshpande, A., O'Donnell, B., Weatherford, W., Royer, S-J., Maximenko, N., Whitney, J.L., Gove, J.M. 2019. Chemistry of Plastic Marine Debris. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 25 Jul 2019.
8. Aivazian, R., Srsen, P., Smith, W., McCoy, F., Guaya, C., **Lynch, J.M.** 2019. Accumulation and Separation of Shoreline Marine Debris through Buoyancy. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 25 Jul 2019.
9. Chamberlain, L.R., Jung, M., Hyrenbach, K.D., **Lynch, J.M.** 2019. Seabirds sample plastic pollution: Bonin Petrels (*Pterodroma hypoleuca*) as bioindicators of plastic in the North Pacific. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
10. Jung, M.R. Balasz, G.H., Jones, T.T., Work, T.M., Brunson, S., Gaos, A.R., **Lynch, J.M.** 2019. Too much of a bad thing: high quantities of plastic ingested by hawksbill sea turtles in the Central

Pacific. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 25 Jul 2019.

11. Whitney, J.L., Gove, J.M., McManus, M.M., Lecky, J., Carvalho, F.C., **Lynch, J.M.**, Li, J., Neubauer, P., Smith, K.A., Phipps, J.E., Kobayashi, D.R., Balagso, K.B., Contreras, E.A., Manuel, M.E., Merrifield, M.A., Polovina, J.J., Asner, G.P., Maynard, J.A., Williams, G.J. in review. Prey-sized plastics are invading larval fish nurseries. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
12. Sandquist, R., **Lynch, J.M.**, Karr, J., Whitney, J., Gove, J., Hyrenbach, K.D., Korsmeyer, K. 2019. Chemical Compatibility of Plastic Polymers in Preservation and Digestion Treatments for Extracting Microplastic from Biological Tissue. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
13. Brignac K.C., Jung M.R., King C., Royer S.-J., Blickley L., Lamson M.R., Potemra J.T., **Lynch J.M.** in review. Marine Debris Polymers on Main Hawaiian Island Beaches, Sea Surface, and Seafloor. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 25 Jul 2019.
14. Hyrenbach, K.D., Hester, M.M., Horgen, F.D., **Lynch, J.M.** 2019. Towards ecosystem metrics of plastic ingestion by Hawaiian seabirds. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
15. Marchiani, J., Brignac, K., **Lynch, J.M.** 2019. Chemical Weathering and Additives in Plastic Marine Debris in the Hawaiian Islands. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
16. Weller, S., Marchiani, J., Teague, K., Moua, A., Brignac, K., Jung, M., King, C., **Lynch, J.M.** 2019. Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
17. Shaw, K., **Lynch, J.M.**, Kucklick, J.R. 2019. Identification and Quantification of Chemical Additives in Marine Debris. Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
18. Lynch, H.W., **Lynch, J.M.**, Kropidowski, S., Royer, S.-J. 2019. Fish aggregating device (FAD) satellite buoys wash ashore on Palmyra Atoll and Hawaii: A tool to source and prevent nets from entangling reefs? Hawai'i Marine Debris Research Workshop, Waimanalo, Hawaii, 26 Jul 2019.
19. **Lynch, J.M.** 2019. A review of NIST's and HPU's research on environmental pollutants in Hawaiian marine organisms. Land-based Pollutants and Reef Fish Workshop, Honolulu, Hawaii, 6 May 2019.
20. Jung, M.R., Balasz, G.H., Jones, T.T., Work, T.M., Gaos, A.R., **Lynch, J.M.** 2019. Quantity of plastic ingested by hawksbill sea turtles in the Central Pacific. Annual Hawaii Hawksbill Turtle Network Meeting, Honolulu, Hawaii, 28 Mar 2019.
21. **Lynch, J.M.** 2019. Overview of Organic Contaminant Exposure and Effects in Sea Turtles. Environmental Contaminants and Sea Turtles Workshop, Charleston, South Carolina, 3 Feb 2019.
22. **Lynch, J.M.** 2019. Contaminant measurement methods: QA/QC. Environmental Contaminants and Sea Turtles Workshop, Charleston, South Carolina, 3 Feb 2019.

23. **Lynch, J.M.** 2019. Summary of correlative and grouping methods for assessing contaminant exposure and effects in sea turtles. Environmental Contaminants and Sea Turtles Workshop, Charleston, South Carolina, 3 Feb 2019.
24. **Lynch, J.M.** 2019. Organic pollutant measurement methods in relation to ingested marine debris. Marine Debris and Sea Turtles Workshop, Charleston, South Carolina, 2 Feb 2019.
25. **Lynch, J.M.** 2018. Marine debris research: an expanding collaboration between HPU and NIST. Seminar presented for the College of Natural and Computational Sciences, Hawaii Pacific University, Kaneohe, Hawaii, 6 Sept 2018.
26. **Lynch, J.M.,** Bryan, C., Day, R., Moors, A., Vander Pol, S. 2017. Introduction of NIST's U.S. Pacific Islands Program (PIP) in Marine Environmental Specimen Banking and Chemical Measurements. Inter-agency Ecological Risk Assessment in Hawaii Research Workshop, Honolulu, Hawaii, 13 Sept 2017.
27. **Lynch, J.M.,** Clukey, K., Jung, M., Balazs, G., Hyrenbach, D., Jensen, B., Jones, T.T., Lepczyk, C., Li, Q., Work, T. 2017. Marine Debris Ingested by Pelagic Pacific Sea Turtles: A Focus on Chemical Properties. NOAA Hawaii Marine Debris Research Workshop, Honolulu, Hawaii, 30 Mar 2017.
28. Bryan, C., **Lynch, J.M.,** Day, R., Moors, A., Vander Pol, S. 2017. Introduction of NIST's U.S. Pacific Islands Program (PIP) in Marine Environmental Specimen Banking and Chemical Measurements. Seminar presented for the NOAA Inouye Regional Center Marine Science Seminar Series, Honolulu, Hawaii, 22 Feb 2017.
29. Pugh, R., **Lynch, J.M.** 2016. History and Scientific Use of NIST's Marine Environmental Specimen Bank Including an Expansion into the U.S. Pacific Islands. Seminar presented for the Bishop Museum, Honolulu, Hawaii, 1 Nov 2016.
30. **Lynch, J.M.** 2015. Exposure to and Effects of Persistent Organic Pollutants in Sea Turtles. Seminar presented for the College of Natural and Computational Sciences, Hawaii Pacific University, Kaneohe, Hawaii, 17 Sept 2015.
31. **Lynch, J.M.** 2014. Exposure to and Effects of Persistent Organic Pollutants in Sea Turtles. Seminar presented for the Department of Natural Resources and Environmental Management, University of Hawaii, Honolulu, Hawaii, 5 Dec 2014 (apply for affiliate faculty).
32. **Keller, J.M.** 2013. Exposure to and Effects of Persistent Organic Pollutants in Sea Turtles. Seminar presented for the Department of Natural Resources and Environmental Management, University of Hawaii, Honolulu, Hawaii, 25 Nov 2013.
33. **Keller, J.M.** 2013. Exposure to and effects of persistent organic pollutants in sea turtles. Seminar presented for the Department of Toxicology, North Carolina State University. Raleigh, North Carolina, 15 Jan 2013.
34. **Keller, J.M.** 2012. Exposure to and effects of persistent organic pollutants in sea turtles. Seminar presented for the Marine Sciences Program, Savannah State University. Savannah, Georgia, 10 Oct 2012.

35. **Keller, J.M.** 2011. Persistent Organic Pollutants in Sea Turtles: Research Findings in the Atlantic and Upcoming Plans in the Pacific. Seminar presented for the College of Natural and Computational Sciences, Hawaii Pacific University, Kaneohe, Hawaii, 30 Nov 2011. (apply for affiliate faculty).
36. **Keller, J.M.** 2011. PCB Concentrations and Congener patterns in Sea Turtles Sampled from the Southeast U.S. Coast. *Chemical Contaminants in the Coastal Food Web and Impacts on Ecosystem and Human Health along the Georgia Coast: Collaborative Research Meeting*. Charleston, South Carolina, 8 September 2011.
37. **Keller, J.M.** 2010. Tales of Contaminants in Sea Turtles: Recent Research Findings in the Atlantic and Upcoming Plans in the Pacific. Seminar presented for Ecology, Evolution, and Conservation Biology Evoluncheon series, University of Hawaii, Honolulu, Hawaii, 15 Oct 2010.
38. **Keller, J.M.** 2010. Tales of Contaminants in Sea Turtles: Recent Research Findings in the Atlantic and Upcoming Plans in the Pacific. Seminar presented for NOAA's Southwest Fisheries Science Center, La Jolla, California, 5 Oct 2010.
39. **Keller, J.M.** 2010. Biological effects associated with contaminants in sea turtles and proxy species: Organic non-pesticides. *Sea Turtle and Contaminants Workshop*, Washington, DC 4-6 May, 2010.
40. **Keller, J.M.** 2010. Existing Evidence of Sea Turtle Exposure to Contaminants: A Review of the Literature. *Sea Turtle and Contaminants Workshop*, Washington, DC 4-6 May, 2010.
41. **Keller, J.M.** 2008. Contaminant Monitoring and Health Assessments in Sea Turtles. Seminar presented for the Department of Bioscience and Biotechnology, Drexel University. Philadelphia, Pennsylvania, 10 Jun 2008.
42. **Keller, J.M., Day, R.D.** 2008. Contaminant Exposure and Health Assessment Studies in Sea Turtles: A Review and A Look into the Future. Seminar presented for National Oceanic and Atmospheric Administration's National Marine Fisheries Service, National Ocean Service, and Office of Protected Resources. Silver Spring, Maryland, 26 May 2008.
43. **Keller J.M.** 2003. Occurrence and effects of contaminants in sea turtles. *The North Atlantic Loggerhead Sea Turtle (Caretta caretta) Mortality Workshop*. St. Catherines Island, Georgia.
44. McClellan-Green P.D., **Keller J.M.** 2003. Are organochlorine contaminants affecting the immune and endocrine systems of loggerhead sea turtles? *North Carolina State University, College of Veterinary Medicine Seminar Series*. Raleigh, North Carolina, February 12, 2003.
45. **Keller J.M.** 2003. Are organochlorine contaminants affecting loggerhead sea turtle health? *Fort Johnson Marine Science Seminar Series*. Charleston, South Carolina, January 17, 2003.
46. **Keller J.M.** 2002. Are organochlorine contaminants affecting loggerhead sea turtle health? *Duke University Marine Laboratory Seminar Series*. Beaufort, North Carolina, December 11, 2002.
47. **Keller J.M.** 2002. Are organochlorine contaminants affecting loggerhead sea turtle health? *Duke University Integrated Toxicology Program Seminar Series*. Durham, North Carolina, November 15, 2002.

Oral Platforms at Scientific Conferences:

1. Jung, M.R., Brignac, K.C., O'Malley, K., Weller, S., King, C., Royer, S.-J., Lamson, M.R., Currie, J., **Lynch, J.M.** 2020. Measuring amounts, sizes, and types of aquaculture gear in marine debris in Hawaii. *Aquaculture America*, Honolulu, Hawaii, 9-12 Feb 2020.
2. Karr, J., Sandquist, R., Whitney, J., Gove, J., Hyrenbach, K.D., Korsmeyer, K, **Lynch, J.M.** 2019. Chemical compatibility of microplastic polymers with commonly used and novel biological preservation and digestion methods. *Society of Environmental Toxicology and Chemistry North American Annual Meeting*, Toronto, Canada, 3-8 Nov 2019.
3. **Lynch, J.M.**, Jung, M.R., Balazs, G.H., Work, T.M., Brunson, S., Gaos, A., Jones, T.T. 2019. Sea Turtles as indicators of plastic marine debris quantities and types in the Central Pacific. *PICES (North Pacific Marine Science Organization) – 2019 Annual Meeting*, Victoria, Canada, 16-27 Oct 2019.
4. Cowger, W., Gray, A., Rochman, C., Primpke, S., Hapich, H. **Lynch, J.** 2019. Open Specy: An open source, online, spectra classification and sharing tool. *SciX 2019*, Palm Springs, CA 13-18 Oct 2019.
5. **Lynch, J.M.**, Deshpande, A., Weatherford, W., Wagner, R., Brignac, K.C., Page, K., Jung, M.R., Lascelles, N., Freeman, D., Drayton, D., King, C. 2019. An in-depth look at polymer identification of Hawaiian plastic marine debris: inter-laboratory comparison of different methods. *American Chemical Society National Meeting and Expo*, San Diego, CA 26-30 Aug 2019.
6. O'Donnell, B., Deshpande, A., **Lynch, J.**, Brignac, D., Jung, M., Lascelles, N., Freeman, D., Drayton, D. 2019. Identifying Polymers in Plastic Marine Debris using Raman Spectroscopy. *Impacts of Microplastics in the Urban Environment Conference at Rutgers University*, New Brunswick, NJ 28-29 Mar 2019.
7. O'Donnell, B., Deshpande, A., **Lynch, J.**, Brignac, D., Jung, M., Lascelles, N., Freeman, D., Drayton, D. 2019. Spectroscopic Techniques for Polymer Identification in Plastic Marine Debris. *PITTCON*, Philadelphia, PA 17-21 Mar 2019.
8. Jung, M.R., Balazs, G.H., Jones, T.T., Work, T.M., Gaos, A.R., Lynch, J.M. 2019. Quantity of plastic ingested by hawksbill sea turtles in the central Pacific. *39th Annual Symposium on Sea Turtle Biology and Conservation*. Charleston, SC. 4-9 Feb 2019.
9. Banerjee, S.M., Bengt, J., Allen, C., Lynch, J.M., Sterling, E., Naro-Maciel, E., McFadden, K., Lamont, M., Balazs, G., Jones, T.T., Rice, M., Seminoff, J., Komoroske, L.M. 2019. Diversity of gene expression in sea turtle blood. *39th Annual Symposium on Sea Turtle Biology and Conservation*. Charleston, SC. 4-9 Feb 2019.
10. Shaw, K., Balazs, G., Jones, T.T., Lynch, H.W., Klein, D., **Lynch, J.M.** 2018. Concentrations and risks of metal contamination from lead shot in a Hawaiian green sea turtle (*Chelonia mydas*) foraging aggregation and their habitat. *39th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Sacramento, CA, 4-8 Nov 2018.
11. Allen, C.A., Martin, S.L., **Lynch, J.M.**, Summers, T.M., Hapdei, J., Rice, M.R., Balazs, G.,

- Jensen, M.P., Seminoff, J.A., Jones, T.T. 2018. Feminization of green sea turtle foraging aggregations in the Pacific: establishing foraging ground sex ratios for climate change research. 25th Annual Hawai'i Conservation Conference, Honolulu, Hawaii, 24-26 Jul 2018.
12. Moors, A., Schuur, S., **Lynch, J.**, Ellisor, D., Ness, J., Trevillian, J., Pugh, R. in review. The NIST Marine Environmental Specimen Bank: Tissue Access Policies and Implementation. *International Society of Biological and Environmental Repositories Annual Meeting*, Dallas, Texas, 20-24 May 2018.
 13. Jung, M.R., Orski, S.V., Rodriguez C, V., Beers, K.L., Balazs, G.H., Work, T.M., Jones, T.T., Brignac, K.C., Hyrenbach, K.D., Jensen, B.A., **Lynch, J.M.** 2018. What's for Dinner?: Polymer Identification of Plastic Debris Ingested by Pelagic-phase Sea Turtles in the Central Pacific. 38th Annual Symposium on Sea Turtle Biology and Conservation, Kobe, Japan, 18-23 Feb 2018.
 14. **Lynch, J.M.** Jung, M.R., Orski, S.V., Rodriguez C, V., Beers, K.L., Balazs, G.H., Work, T.M., Brignac, K.C., Royer, S-J., Jensen, B.A., 2018. Validation of ATR FT-IR to identify polymers of ingested plastic marine debris. 6th International Marine Debris Conference, San Diego, California, 12-16 Mar 2018.
 15. Allen, C.A., Martin, S.L., **Lynch, J.M.**, Summers, T.M., Hapdei, J., Rice, M., Seminoff, J.A., Jones, T.T. 2017. How many males are enough? Feminization of green sea turtle foraging aggregations in the Pacific. 6th International Society of Wildlife Endocrinology Conference. Orlando, Florida. 14-16 Aug 2017.
 16. **Lynch, J.M.**, Bagley, D.A, Day, R.D., Ehrhart, L.M., Foley, A.M., Harms, C.A., Trevillian, J., Schroeder, B.A., Stacy, N.I. 2016. Plasma chemistry & persistent organic pollutants in loggerhead sea turtles with & without fibropapillomatosis from Florida Bay & Indian River Lagoon. *Society of Environmental Toxicology and Chemistry (SETAC) World Congress*. Orlando, Florida, 6-10 Nov 2016 (invited).
 17. Clukey, K.E., Lepczyk, C.A., Balazs, G., Work, T., Li, C., **Lynch, J.M.** 2016. Assessment of Plastic Ingestion and Persistent Organic Pollutant Concentrations in Sea Turtles from the Pelagic Realm of the Pacific Ocean. *Society of Environmental Toxicology and Chemistry (SETAC) World Congress*. Orlando, Florida, 6-10 Nov 2016.
 18. **Lynch, J.M.**, Balazs, G.H., Allen, C., Arengo, F., Benson, S., Brooker, J., Eguchi, T., Harris, H., Jensen, B.A., LeRoux, R., Pugh, R.S., Rice, M.R., Seminoff, J., Sterling, E., Summers, T.M., Work, T.M., Becker, P.R. 2015. Cryo-Repository and Persistent Organic Pollutant Monitoring of Sea Turtle Tissues from the U.S. Pacific Islands Region. *PacificChem 2015 The International Chemical Congress of Pacific Basin Societies*, Honolulu, Hawaii, 15-20 Dec 2015.
 19. Pugh, R.S., Becker, P.R., Bryan, C.E., Day, R.D., **Lynch, J.M.**, Moors, A.J., Vander Pol, S.S. 2015. Best Practices and Their Challenges When Banking Samples from Remote Regions of the Pacific. *International Conference on Environmental Specimen Banks*, Nancy, France, 30 Jun-1 Jul 2015.
 20. **Lynch, J.M.** 2015. Role of environmental pollution in fibropapillomatosis of marine turtles. 2015 *International Summit on Fibropapillomatosis: Global Status, Trends, and Population Impacts*, Honolulu, Hawaii 11-14 Jun 2015 (invited).
 21. Stacy, N.I., Denslow, N., **Lynch, J.M.** 2015. Understanding the use and limitations of

clinopathologic endpoints in toxicologic studies of aquatic animals. *Fifth Florida Marine Mammal Health Conference*, Gainesville, Florida 2-4 Jun 2015.

22. Gribble, M.O., Reiner, J.L., Becker, P.R., Hoguet, J., Keller, J.M., Kucklick, J.R., Moors, A.J., Ness, J., Peterson, D., Pugh, R., Ragland, T., Rimmer, C., Rhoderick, J., Schantz, M.M. 2014. Parametric accelerated failure-time models to summarize temporal trends of contaminants in sentinel species populations. *Oceans and Human Health Gordon Research Conference*, Biddeford, Maine 31 May-1 Jun 2014.
23. **Keller, J.M.**, Balazs, G.H., Rice, M.R., Work, T.M., Sterling, E., Arengo, F., McFadden, K., Nilsen, F., Jensen, B., Pugh, R.S., Becker, P.R. 2014. Update on the Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST) Project: Sample archive and contaminant analysis. *The 34th Annual Symposium on Sea Turtle Biology and Conservation*. New Orleans, Louisiana, 13-17 Apr 2014.
24. Jensen, B., Bachman, M., Foltz, K., **Keller, J.**, Baird, R., Ylitalo, G., West, K. 2013. Can biomarkers help elucidate the impacts of persistent pollutants in Hawaiian cetaceans? *2nd Biennial Workshop on Science and Conservation of Hawaiian Odontocetes at the 20th Biennial Conference on the Biology of Marine Mammals*, Dunedin, New Zealand 7 December 2013.
25. Kucklick, J., Reiner, J.L., Becker, P.R., Hoguet, J., **Keller, J.M.**, Moors, A.J., Ness, J., Peterson, D., Pugh, R., Ragland, R., Rimmer, C., Rhoderick, J., Schantz, M.M. 2013. Temporal trends of persistent organic pollutants and vitamins in northern fur seals from St. Paul Island, Alaska. *34th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Nashville, TN, 17-21 Nov 2013.
26. Pugh, R.S., **Keller, J.M.**, Balazs, G.H., Moors, A.J., Becker, P.R., Bryan, C.E., Day, R.D., Jensen, B.A., Rice, M.R., Work, T.M. 2013. The Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST) Project. *International Conference for Environmental Specimen Banks*, Sydney, Australia 5-9 May 2013.
27. **Keller, J.M.**, Balazs, G.H., Jensen, B.A., Nilsen, F., Rice, M.R., Work, T.M. 2013. A preliminary screening of persistent organic pollutants in Hawaiian green turtle plasma in relation to fibropapillomatosis. *The 33rd Annual Symposium on Sea Turtle Biology and Conservation*. Baltimore, Maryland, 2-8 Feb 2013. NOAA Technical Memorandum (2013) NMFS-SEFSC-645, p. 13.
28. Bachman, M.J., **Keller, J.M.**, West, K., Jensen, B. 2012. Persistent organic pollutant concentrations in cetaceans stranded in the Hawaiian Islands, 1997 - 2011. *33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Long Beach, CA, 11-15 Nov 2012. Best Student Presentation Award.
29. **Keller, J.M.**, Balazs, G.H., Becker, P.R., Bryan, C.E., Day, R.D., Jensen, B.A., Nilsen, F., Pugh, R.S., Rice, M.R., Work, T.M. 2012. Introduction of the Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST) Project. *The 32nd Annual Symposium on Sea Turtle Biology and Conservation*. Huatulco, Mexico, 13-16 Mar 2012.
30. Stacy, N.I., **Keller, J.M.**, Norton, T.N., Peden-Adams, M.M., Harms, C., Avens, L., Braun-McNeill, J., Segars, A., Foley, A.M., Stedman, N., Day, R.D., Dodd, M., Teas, W., Murphy, S., Cluse, W., Bresette, M., Frick, M.G. 2012. Hematology, plasma biochemistry and immune function parameters in debilitated loggerhead sea turtles (*Caretta caretta*) stranded along the

Southeastern US coast in 2004-2005. Southeastern Regional Sea Turtle Meeting. Jekyll Island, Georgia, 1-4 Feb 2012.

31. Reiner, J.L., O'Connell, S.G., **Keller, J.M.**, Kucklick, J.R., Moors, A.J., Pugh, R.S., Becker, P.R. 2012. Retrospective analysis of perfluorinated alkyl acids in marine mammals from Alaska. *Society of Environmental Toxicology and Chemistry (SETAC) World Congress.* Berlin, Germany, 20-24 May 2012.
32. Vander Pol, S.S., Becker, P.R., Pugh, R.S., Moors, A.J., Ellisor, M.B., Day, R.D., Roseneau, D.G., Kucklick, J.R., Hoguet, J., Reiner, J.L., **Keller, J.M.**, O'Connell, S.G. 2011. The Role of Environmental Specimen Banks in Biomonitoring Environmental Contaminants. *IUPAC World Chemistry Congress,* San Juan, Puerto Rico, 30 Jul-7 Aug 2011.
33. Ragland, J.M., Arendt, M.D., **Keller, J.M.** 2011. Organohalogen contaminant concentrations vary in adult male loggerheads based on migration patterns. *The 31st Annual Symposium on Sea Turtle Biology and Conservation.* San Diego, California, 12-15 Apr 2011. NOAA Technical Memorandum (2012) NMFS-SEFSC-631, p. 202.
34. Kucklick, J.R., Becker, P., **Keller, J.**, Hoguet, J., Reiner, J., Pugh, R., Moors, A., Rust, L., Mahoney, B. 2011. Temporal and Spatial Trends of Current-Use and Legacy Persistent Organic Pollutants in Beluga Whales from Alaska. *Alaska Marine Science Symposium,* Anchorage, Alaska 17-21 Jan 2011.
35. Reiner, J., O'Connell, S.G., Kucklick, J., Becker, P.R., Shantz, M., **Keller, J.** 2010. Transport of perfluorinated compounds to the Arctic: Spatial and temporal trends in beluga whales (*Delphinapterus leucas*) from Alaska. *PacifiChem,* Honolulu, Hawaii 15-20 Dec 2010.
36. Kucklick, J.R., Becker, P., **Keller, J.**, Hoguet, J., Reiner, J., Pugh, R., Moors, A., Rust, L. 2010. Temporal and Spatial Trends of Current-Use and Legacy Persistent Organic Pollutants in Beluga Whales from Alaska. *International Conference for Environmental Specimen Banks,* Berlin, Germany 15-16 Nov 2010.
37. O'Connell, S.G., Arendt, M., Segars, A., Kimmel, T., Braun-McNeill, J., Avens, L., Schroeder, B., Ngai, L., Kucklick, J.R., **Keller, J.M.** 2010. Examining Perfluorinated Contaminants in Loggerhead Sea Turtles (*Caretta caretta*) from the East Coast of the United States. *31st Annual Meeting of the Society of Environmental Toxicology and Chemistry,* Portland, OR, 7-11 Nov 2010.
38. Hoguet, J., Kucklick, J., **Keller, J.M.**, Pugh, R., Moors, A., Becker, P. accepted. 2010. Trends of Legacy and Current-use Persistent Organic Pollutants in Beluga Whales from Alaskan Waters. *31st Annual Meeting of the Society of Environmental Toxicology and Chemistry,* Portland, OR, 7-11 Nov 2010.
39. Reiss, K.L., Kucklick, J.R., **Keller, J.M.**, Strand, A.E., Gelsleichter, J. 2010. Occurrence of Hydroxylated Organic Contaminants and Other Organohalogen Compounds in Shark Blood Plasma from the Southeast Coast of the US. *31st Annual Meeting of the Society of Environmental Toxicology and Chemistry,* Portland, OR, 7-11 Nov 2010.
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53. **Keller, J.M.** 2008. Perfluorinated contaminant research at NIST: Value assigning Standard Reference Materials (SRMs) and measuring spatial and temporal trends from the Marine Environmental Specimen Bank. *PFAA Days II Recent Advances in Perfluoroalkyl Acid (PFAA) Research Meeting at U.S. EPA*. Research Triangle Park, North Carolina, 3-4 Jun 2008 (invited).
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58. **Keller, J.M.**, Thorvalson, K., Sheridan, T., Harms, C.A., Segars, A.L., Beasley, J., Day, R., Peden-Adams, M.M., Kucklick, J.R., Norton, T. 2007. Organic contaminant concentrations change in debilitated loggerhead turtle plasma during recovery in rehabilitation. *27th Annual Symposium on Sea Turtle Biology and Conservation*. Myrtle Beach, South Carolina 22-28 Feb 2007. NOAA Technical Memorandum (2008) NMFS-SEFSC-569, p. 20.
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73. Moss, S.L., Wilson, T.P., **Keller, J.M.**, Richards, S.M. 2005. Conservation implications of polybrominated diphenyl ethers in two species of turtle from the Tennessee River. *Joint Meeting of Ichthyologists and Herpetologists*. Tampa, Florida. 6-11 Jul 2005.
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80. Norton T.M., Dodd M., Segars A., **Keller J.M.**, Peden-Adams M., Day R.D., Harms C., Jacobson E., Foley A., Murphy S., Cluse W., Teas W., Bresette M., Schroeder B., Mackinnon A., Stedman

N. 2004. Debilitated loggerhead turtles (*Caretta caretta*) syndrome along the southeastern US coast: incidence, pathogenesis, and monitoring. *American Association of Zoo Veterinarians and Wildlife Disease Association Annual Joint Conference*. San Diego, California.

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84. **Keller J.M.**, Peden-Adams M., Stamper M.A., Kucklick J.R., McClellan-Green P. 2002. Are organochlorine contaminants affecting loggerhead sea turtle health? *Carolina's SETAC Annual Meeting*. Raleigh, North Carolina. (Best Student Presentation).
85. **Keller J.M.**, Peden-Adams M., Stamper M.A., Kucklick J.R., McClellan-Green P. 2002. Are contaminants affecting loggerhead health? *The 22nd Annual Symposium on Sea Turtle Biology and Conservation*. Miami, Florida. NOAA Technical Memorandum NMFS-SEFSC-503, p. 68. (Best Student Paper Award).
86. **Keller J.M.**, Harms C., Kennedy-Stoskopf S., McClellan-Green P. 2000. Isolation and proliferation of peripheral blood mononuclear cells from the loggerhead sea turtle (*Caretta caretta*): techniques and applications. *The 20th Annual Symposium on Sea Turtle Biology and Conservation*. Orlando, Florida. NOAA Technical Memorandum NMFS-SEFSC-477, p. 103-105.

Posters at Scientific Conferences:

1. **Lynch, J.M.**, Weatherford, W., Wagner, R., Jung, M.R., Brignac, K.C., King, C. 2019. A deep dive into polymer identification methods for Hawaiian beach plastic marine debris. *40th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Toronto, Canada 8-11 Nov 2019.
2. Shaw, K., Hyrenbach, D., Fraser, L., Liu, J., Cobb, G., **Lynch, J.**, Klein, D. 2019. Elemental concentrations in feathers of Bonin Petrel (*Pterodroma hypoleuca*) on Midway Atoll. *40th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Toronto, Canada 8-11 Nov 2019.
3. Corniuk, R.N., **Lynch, J.M.**, Arendt, M.D., Braun-McNeill, J., Owens, D.W., Kucklick, J.R., McClellan-Green, P.D. 2019. Using plasma vitellogenin in loggerhead sea turtles to assess reproductive maturation and as a biomarker of estrogenic contaminant exposure. *40th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Toronto, Canada 8-11 Nov 2019.

4. Weller, S., Moua, A., Teague, K., Marchiani, J., Brignac, K., Jung, M., King, C., **Lynch, J.M.** 2019. Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance. 40th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Toronto, Canada 8-11 Nov 2019.
5. Wood, C., Balazs, G.H., Rice, M., Work, T.M., Jones, T.T., Sterling, E., Summers, T.M., Brooker, J., Kurpita, L., King, C., **Lynch, J.M.** 2019. Perfluorinated environmental contaminant concentrations in sea turtle blood and eggs from Hawaii to Saipan. PICES 2019 Annual Meeting (North Pacific Marine Science Organization), Victoria, Canada 16-27 Oct 2019.
6. Kautz, K., Vander Jagt, J., **Lynch, J.M.**, Jensen, B.A. 2019. An In Vitro Analysis of PPARα and CYP4A as Potential Biomarkers for Perfluoroalkyl Acid Exposure in Cetacean Kidney Cells. 15th International Congress of Toxicology (ICTXV), Honolulu, HI 15-18 Jul 2019.
7. Shaw, K., Balazs, G.H., Jones, T.T., Lynch, H.W., Klein, D.M., Liu, J., Cobb, G.P., **Lynch, J.M.** 2019. Concentrations and risks of metal contamination from lead shot in a Hawaiian green sea turtle (*Chelonia mydas*) foraging aggregation and their habitat. 39th Annual Symposium on Sea Turtle Biology and Conservation. Charleston, SC. 4-9 Feb 2019.
8. **Lynch, J.M.**, Jung, M., Jensen, B., Moors, A., Pugh, R.S. 2019. Inventory and potential uses of the NIST Biological and Environmental Monitoring and Archival of Sea Turtle Tissues (BEMAST) project. 39th Annual Symposium on Sea Turtle Biology and Conservation. Charleston, SC. 4-9 Feb 2019.
9. Townsend, K., Ness, J., Hogue, J., Stacy, N.I., **Lynch, J.M.** 2019. Testing the quality and stability of plasma protein and whole blood RNA in a archived loggerhead sea turtle blood, *Caretta caretta*. 39th Annual Symposium on Sea Turtle Biology and Conservation. Charleston, SC. 4-9 Feb 2019.
10. Freeman, D., Deshpande, A., **Lynch, J.M.**, Lascelles, N., Drayton, D., Brignac, K.C., Jung, M.R., Hoskins-Brown, D. accepted. Comparing two methods to characterize the chemical components of marine microplastics. ASLO 2019 Aquatic Sciences Meeting, San Juan, Puerto Rico 24 Feb–1 Mar 2019.
11. **Lynch, J.M.**, Deshpande, A., Weatherford, W., Wagner, R., Brignac, K.C., Page, K., Jung, M.R., Drayton, D., Lascelles, N., Freeman, D., King, C. 2018. An inter-laboratory comparison for polymer identification of Hawaiian plastic marine debris: What exactly comprises the debris? 39th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Sacramento, CA, 4-8 Nov 2018.
12. Jung, M.R., Balazs, G.H., Jones, T.T., Work, T.M., Gaos, A.R., **Lynch, J.M.** 2018. Plastic ingestion in pelagic-phase and neritic-phase hawksbill sea turtles (*Eretmochelys imbricata*) in the Central Pacific Ocean. 39th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Sacramento, CA, 4-8 Nov 2018.
13. Brignac, K.C., Jung, M.R., King, C., Royer, S.-J., Blickley, L., Page, K., Lamson, M., O'Brien, K., Potemra, J., **Lynch, J.M.** 2018. Identification and Spatial Distribution of Plastic Marine Debris Polymers in the Hawaiian Islands: Beach, Sea Surface, and Seafloor. 39th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Sacramento, CA, 4-8 Nov 2018.

14. Brignac, K.C., Jung, M.R., King, C., Currie, J., Stack, S.H., Lamson, M.R., Blickley, L., O'Brien, K., Royer, S-J., Potemra, J.T., **Lynch, J.M.** 2018. Polymer Identification of Plastic Marine Debris on Beaches and the Sea Surface in the Hawaiian Archipelago by FT-IR to Determine Sources. *Asia and Oceania Geosciences Society*, Honolulu, Hawaii, 3-8 Jun 2018.
15. Shaw, K., **Lynch, J.M.**, French, A.D., Balazs, G., Jones, T.T., Pawloski, J., Rice, M., Klein, D. 2018. Metal concentrations in blood and scute tissues from wild and captive Hawaiian green sea turtles (*Chelonia mydas*). *38th Annual Symposium on Sea Turtle Biology and Conservation*, Kobe, Japan, 18-23 Feb 2018.
16. Brignac, K.C., Jung, M.R., King, C., Currie, J., Lamson, M.R., Blickley, L., O'Brien, K., Royer, S-J., Potemra, J.T., **Lynch, J.M.** 2018. Polymer Identification of Plastic Marine Debris on Beaches and the Sea Surface in the Hawaiian Archipelago by FT-IR to Determine Sources. *6th International Marine Debris Conference*, San Diego, California, 12-16 Mar 2018.
17. Jung, M.R., Balazs, G.H., Work, T.M., Orski, S.V., Rodriguez C, V., Beers, K.L., Brignac, K.C., Hyrenbach, K.D., Jensen, B.A., **Lynch, J.M.** 2018. Polymer Identification of Plastic Debris Ingested by Pelagic-phase Sea Turtles in the Central Pacific. *6th International Marine Debris Conference*, San Diego, California, 12-16 Mar 2018.
18. Shaw, K., **Lynch, J.M.**, French, A.D., Balazs, G., Jones, T.T., Pawloski, J., Rice, M., Klein, D. 2017. Metal concentrations in biological specimens from wild and captive Hawaiian green sea turtles (*Chelonia mydas*). *38th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Minneapolis, MN, 12-16 Nov 2017.
19. Shaw, K., **Lynch, J.**, Balazs, G., Jones, T., Pawloski, J., Rice, M., Klein, D. 2017. Trace elements in wild and captive Hawaiian green sea turtles (*Chelonia mydas*). South-Central Regional Chapter Meeting of Society of Environmental Toxicology and Chemistry (SETAC), Houston, Texas. 28-30 April 2017. (Second Place Award for Best Student Poster Presentation).
20. Allen, C.A., Martin, S.L., **Lynch, J.M.**, Summers, T.M., Hapdei, J., Rice, M., Seminoff, J.A., Jones, T.T. 2017. How many males are enough? Feminization of green sea turtle foraging aggregations in the Pacific. *37th Annual Symposium on Sea Turtle Biology and Conservation*. Las Vegas, Nevada. 15-20 Apr 2017.
21. Miller, B., Stacy, N.I., Stedman, N., **Lynch, J.M.**, Norton, T.M. 2017. Discrepancy Of Plasma Iron Concentrations With Tissue Iron Stores In Chronically Debilitated Loggerhead Sea Turtles (*Caretta caretta*) With Inflammatory Disease. International Association for Aquatic Animal Medicine Conference. Cancun, Mexico. 20-24 May 2017. (Award for Best Student Poster Presentation).
22. Clukey, K.E., Lepczyk, C., Balazs, G., Work, T., **Lynch, J.M.** 2015. Assessment of Plastic Ingestion and Associated Organic Pollutants in Sea Turtles across the Pacific Ocean. *College of Tropical Agriculture and Human Resources (CTAHR) and COE Student Research Symposium*, Honolulu, Hawaii 10-11 Apr 2015. (Best Natural Resource and Environmental Management Masters Student Poster Presentation Award).
23. Clukey, K.E., Lepczyk, C., Balazs, G., Work, T., **Lynch, J.M.** 2015. Assessment of Plastic Ingestion and Associated Organic Pollutants in Sea Turtles across the Pacific Ocean. *40th Annual Albert L. Tester Memorial Symposium*, Honolulu, Hawaii 8-10 Apr 2015.

24. Moors, A.J., Pugh, R.S., Reiner, J.L., Hoguet, J., **Keller, J.M.**, Kucklick, J.R., Ness, J., Peterson, D., Ragland, T., Rimmer, C. Roderick, J. Becker, P.R. 2014. Recent use of northern fur seal (*Callorhinus ursinus*) specimens collected by the Alaska Marine Mammal Tissue Archival Project (AMMTAP) to investigate contaminant trends. *Alaska Marine Science Symposium*, Anchorage, Alaska 20-24 Jan 2014.
25. Bachman, M.J., **Keller, J.M.**, West, K., Jensen, B. 2013. Examining persistent organic pollutant concentrations and activation of a biomarker (CYP1A1) in stranded cetaceans from the Pacific Islands region. *20th Biennial Conference on the Biology of Marine Mammals*, Dunedin, New Zealand 9-13 December 2013.
26. Reiner, J.L., **Keller, J.M.**, Schantz, M.M. 2013. Emerging contaminants in NIST Standard Reference Materials. *International Society of Exposure Science*, Basel, Switzerland 19-23 August 2013.
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108. **Keller J.M.**, Stamper M.A., Kucklick J.R., McClellan-Green P. 2001. Assessment of immune function and presence of contaminants in the loggerhead sea turtle. *Carolina's SETAC Annual Meeting*. Clemson, South Carolina.
109. **Keller J.M.**, Stamper M.A., Kucklick J., McClellan-Green P. 2001. Assessment of immune function and presence of contaminants in the loggerhead sea turtle. *The 21st Annual Symposium on Sea Turtle Biology and Conservation*. Philadelphia, Pennsylvania. NOAA Technical Memorandum NMFS-SEFSC-528, p. 211.
110. DeWitt J., Meyer E., Gabrys C., **Jackson J.**, Benson K., Henshel, D. 1997. Changes in domestic chicks exposed to TCDD or PCB-126 at embryonic day 0-4. *Society of Environmental Toxicology and Chemistry 18th Annual Meeting*. San Francisco, California. PTP007.

Scholarships, Fellowships, Awards, and Funding (in U.S. Dollars)

- | | |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020 | American Chemistry Council award to Hawaii Pacific University (HPU) CMDR for microplastic method development in sediment core samples |
| 2020 | American Chemistry Council award to HPU CMDR for polymer kit production |
| 2020 | Norwegian Retailers' Environment Fund award to HPU CMDR for sourcing ghost fishing gear |
| 2019 | NOAA OR&R funds to develop methods for measuring PAHs in Deepwater Horizon Oiled sea turtle blood samples |
| 2019 | Donations to HPU CMDR from Pattie Gonia's GoFundMe crowdsourcing and from Sky Network |
| 2019 | Co-Investigator, State of Hawaii Department of Health Educational Research Proposal to HPU for PFAS study in goatfish from Oahu |
| 2018 | Co-Investigator, State of Hawaii Department of Health Educational Research Proposal to Texas Tech University for heavy metal study in Hawaiian green sea turtles |
| 2017 | High ranking reviewer for <i>Environmental Toxicology and Chemistry</i> |
| 2017-2018 | NIST-supported Summer Undergraduate Research Fellows from UH |
| 2010-2015 | Congressional Appropriations for the 12-member NIST U.S. Pacific Islands Program team; \$1.5 million was provided to Hawaii universities to support 9 of my collaborative student research projects |
| 2013 | NIST grant to College of Charleston to support John Brooker part-time |
| 2004-2011 | NIST funds to support four full-time student stipends |
| 2009 | SC Sea Grant Funding to support Jared Ragland stipend |
| 2008 | NOAA NMFS Sea Turtle Health Assessment Funding to NIST |
| 2003-2007 | National Science Foundation funding to support five students in the Research Experience for Undergraduates Program |
| 2003-2004 | National Research Council, Post-Doctoral Fellowship at NIST |
| 2002 | Named an E.hormone Fellow |
| | Named a Morris Animal Foundation Fellow |
| | Duke University Marine Laboratory Fellowship |
| | Gordon Research Conference Travel Grant |
| | Sea Turtle Symposium Archie Carr Best Biology Student Presentation Award |

Best Student Presentation at Carolina SETAC
 Duke University Graduate School Conference Travel Fellowships
 Nicholas School of the Environment Professional Development Funds
 22nd Annual Sea Turtle Symposium Student Travel Grant
 2001 Duke University Marine Laboratory Fellowship
 21st Annual Sea Turtle Symposium Travel Grant
 Nicholas School of the Environment Professional Development Funds
 2000 Morris Animal Foundation Grant*
 Duke University Marine Biomedical Center Feasibility Grant*
 20th Annual Sea Turtle Symposium Travel Grant
 Nicholas School of the Environment Professional Development Funds
 1999 Duke University Marine Biomedical Center Feasibility Grant*
 1997 NSF Research Experience for Undergraduates
 1996 Summer Student Fellowship Woods Hole Oceanographic Institution
 * Assisted in obtaining funds with the P.I., Dr. Patricia McClellan-Green

Teaching Experience

Courses:

- Summer 2010. Field Studies in Coral Reef Biology (BIOL250/453), College of Charleston, Charleston, South Carolina, taught in British Virgin Islands
- Summer 2010. Marine Science and Nautical Field Studies, High School course offered in the British Virgin Islands through Marine Science and Nautical Training Academy (MANTA)
- Summer 2009. Marine Science and Nautical Field Studies, High School course offered in the British Virgin Islands through Marine Science and Nautical Training Academy (MANTA)
- Fall 2006. Aquatic Toxicology (BIOL642/EVSS720), College of Charleston, Charleston, South Carolina.
- Fall 2005. Aquatic Toxicology (BIOL642/EVSS720), College of Charleston, Charleston, South Carolina.
- Fall 2004. Aquatic Toxicology (BIOL642/EVSS720), College of Charleston, Charleston, South Carolina.

Guest Lecturer:

- Quantifying plastic pollution in Hawaii. 2020. Al Werner's Plastics in the Environment, Mt. Holyoke College 9 Apr 2020.
- HPU/NIST Marine debris research 2019. Plastic Fantastic? (HON 2200), Hawaii Pacific University, Waimanalo, Hawaii.
- Exposure to and Effects of Persistent Organic Pollutants in Sea Turtles. 2015. *Toxicology and Stress Response in Marine Organisms* (MARS 6010), Hawaii Pacific University, Waimanalo, Hawaii.
- Intersection of Conservation Biology & Toxicology. 2015. *Toxicology and Stress Response in Marine Organisms* (MARS 6010), Hawaii Pacific University, Waimanalo, Hawaii.
- Exposure to and effects of persistent organic pollutants in sea turtles. 2013. *Environmental Health*, Duke University, Durham, North Carolina.
- Endocrine Disruption. 2009. *Aquatic Toxicology* (BIOL642/EVSS720), College of Charleston, Charleston, South Carolina.
- Organohalogens in Sea Turtles. 2006. *Grice Marine Biology Seminar Course*, College of

- Charleston, Charleston, South Carolina.
- Why Care About Biomagnification? 2005. *Biology*, James Island Charter High School, Charleston, South Carolina.
 - Occurrence and Effects of Contaminants on Sea Turtles. 2004. *Biology of Sea Turtles* (Mar Sci 376), Coastal Carolina University, Conway, South Carolina.
 - Wildlife Toxicology. 2003. *Aquatic Toxicology* (BIOL642/EVSS720), College of Charleston, Charleston, South Carolina.
 - Health Assessment, Immunology, and Toxicology. 2001. *Biology and Conservation of Sea Turtles* (BIO125), Duke University Marine Laboratory, Beaufort, North Carolina.
 - Accumulation and Effects of Contaminants in Sea Turtles. 2001. *Coastal Ecotoxicology and Pollution* (ENV255), Duke University Marine Laboratory, Beaufort, North Carolina.
 - Loggerhead Immune System: Healthy or Suppressed? 2000. *Marine Tetrapod Adaptation* (BIOL503), College of Charleston, Charleston, South Carolina.
 - Hormones and Possible Endocrine Disruption by Contaminants in Sea Turtles. 2000. *Biochemistry of Marine Organisms* (BIO155), Duke University Marine Laboratory, Beaufort, North Carolina.
 - Endocrine Disruptors and Their Potential Effects on Sea Turtles. 1998. *Biochemistry of Marine Organisms* (BIO155), Duke University Marine Laboratory, Beaufort, North Carolina.

Duke University Teaching Assistant (1997-2002):

- *Beach and Island Geological Processes* (EOS202) by Orrin Pilkey
- *Biology and Conservation of Sea Turtles* (BIO125) by Larry Crowder
- *Biochemistry of Marine Organisms* (BIO155) by Patricia McClellan-Green
- *Molecular and Cellular Processes of Marine Organisms* (BIO244) by P. McClellan-Green
- *Physiology of Marine Organisms* (BIO150) by Richard Forward
- *Professional and Field Skills Modules* by Lynn Maguire

Research Mentoring:

Student	Mentor role	Years	Project/Thesis title	Education Level
Darrielle Williams	NOAA EPP/MSI Scholar Advisor	2020	Plastic Ingestion and Sea Turtles: Quantifying Harm Done by Plastic Ingestion through Toxicological Assessment	Undergraduate
Rachylle Hart	NOAA Hollings Scholar Advisor	2020	Polymer identification techniques of microfibers extracted from larval fish	Undergraduate
Kelly Krause	NOAA Hollings Scholar Advisor	2020	Persistent organic pollutant concentrations in Pacific leatherback sea turtles (<i>Dermochelys coriacea</i>) and their prey	Undergraduate
Drew McWhirter	Advisor of thesis committee	2020-present	Reducing the ecological damage of plastic ghost fishing gear on Hawaiian coral reefs	Masters
Granya Boyd	Lab mentorship of a FWS student	2019-present	Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance	Undergraduate
Kerrienne O'Malley	Undergraduate advisor	2019-present	Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance	Undergraduate

Natasha Sawickij	Advisor of thesis committee	2019-present	Perfluoroalkyl substance (PFAS) concentrations in fillets of nearshore Hawaiian reef fish caught in subsistence fisheries	Masters
Jenna Karr	Member of thesis committee	2018-present	Chemical compatibility of microplastic polymers with commonly used and novel biological preservation and digestion methods	Masters
Sheena Weller	Advisor of Practicum	2018-present	Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance	Masters
Ray Aivazian	Undergraduate advisor	2019-present	Accumulation and Separation of Shoreline Marine Debris through Buoyancy	Undergraduate
Raquel Corniuk	Advisor of Practicum	2018-present	Using plasma vitellogenin in loggerhead sea turtles to assess reproductive maturation and as a biomarker of estrogenic contaminant exposure	Masters
Cathryn Wood	Advisor of Practicum	2019	Perfluorinated environmental contaminant concentrations in sea turtle blood and eggs from Hawaii to Saipan	Masters

Kellie Teague	Supervisor	2018-2019	Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance	Masters
Angelica Moua	Supervisor	2018-2019	Identifying polymers of plastic marine debris to monitor the effectiveness of Maui's expanded polystyrene foam food service containers ordinance	Masters
Rachel Sandquist	NOAA Hollings Scholar Advisor	2019	Chemical compatibility of microplastic polymers with commonly used and novel biological preservation and digestion methods	Undergraduate
Joelle Marchiani	SURF advisor	2019	Chemical Weathering and Additives in Plastic Marine Debris in the Hawaiian Islands	Undergraduate
Kelly Townsend	REU advisor	2018	Testing the quality and stability of RNA and protein in a 13-year frozen archive of loggerhead sea turtle blood	Undergraduate
Lauren Fraser	Member of thesis committee	2017-2019	Using Seabirds to Sample Plastic Pollution: Bonin Petrels (<i>Pterodroma hypoleuca</i>) as Bioindicators of Pelagic Plastic in the Northwestern Hawaiian Islands	Masters
Kaylee Kautz	Member of thesis committee	2017-2019	Protein biomarkers of perfluorinated compound exposure in dolphin and human embryonic kidney cells	Masters

Kayla Brignac	SURF advisor/undergraduate thesis co-advisor	2017-2018	Polymer composition of Hawaiian Island beach and surface water marine debris	Undergraduate
Karla Balagso	Lab mentorship of a NOAA summer student	2017	Microplastics in coastal slicks off West Hawai'i	Undergraduate
Elizabeth Fischer	Supervisor	2017	Characterizing Hawaiian beach plastic marine debris	Undergraduate
Genardine Arizala	Supervisor	2017	Characterizing Hawaiian beach plastic marine debris	Undergraduate
Jennette Vanderjagt	member of thesis committee	2015-2018	Potential biomarkers of perfluorinated compound exposure in dolphin and human embryonic kidney cells	Masters
Melissa Jung	co-advisor of thesis project	2015-2017	Polymer identification of ingested plastic marine debris in three species of pelagic Pacific sea turtles	Masters
Adam Kurtz	Supervisor	2015	Perfluorinated Compounds and Potential Biomarkers of Exposure and Effect in Cetaceans from the Tropical North Pacific	post-Masters
Harry Quedenfeld	Supervisor	2014	Homogenizing sea turtle scute samples for NIST Marine Environmental Specimen Bank	Undergraduate
James Dean	Supervisor	2014	Homogenizing sea turtle scute samples for NIST Marine Environmental Specimen Bank	Undergraduate
Stephanie Shaw	Project Lead	2014-2017	Determining Mercury Concentrations and Evaluating Two Biomarkers of Exposure in Two Popular Recreational	Masters

			Fishes in Hawaiian Waters	
Julia Smith	Project Lead	2013-2018	The Influence of Life History Traits and Diet on Bioaccumulation and Biomagnification of Mercury in Blood of Captive Bottlenose Dolphins (<i>Tursiops truncatus</i>)"	Masters
Katharine Clukey	co-advisor of thesis project	2013-2016	Quantifying Plastic Ingestion and Associated Organic Pollutants in Sea Turtles from the Pacific Ocean	Masters
Jessica Jacob	Project Lead	2012-2015	Initial characterization of novel beaked whale morbillivirus in Hawaiian cetaceans	post-Masters
John Brooker	supervisor	2012-2014	Perfluorinated Compounds in tissue samples of Pacific sea turtles	Undergraduate
Melannie Bachman	co-advisor of thesis project	2011-2013	Persistent organic pollutant concentrations and investigation of CYP1A1 as a biomarker in 16 species of cetaceans stranded in the Pacific Islands	Masters
Frannie Nilsen	Project Lead	2011-2012	Use of indicator chemicals to characterize the plastic fragments ingested by Laysan albatross	post-Masters
Jodi Grim	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	continuing studies

Olivia Ahern	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Amos Bartlett	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Mira Gandhi	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Courtney Gerstenmaier	MANTA Science Instructor	2010	Genetic Diversity Affects Community Processes within a Non-Native Population of the Seaweed <i>Gracilaria vermiculophylla</i>	Undergraduate
Jason Peet	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Devin Petrone	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Caitlin Savage	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	Undergraduate
Ally Decker	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School

Tess Dooley	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Chris Findlay	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Will Gould	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Francesca Hagood	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Erin Lancaster	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Chelsea McCurry	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Jessica Murfree	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Griffin Siegel	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School

Mary Grace Wyndham	MANTA Science Instructor	2010	Marine science in the BVIs on the MANTA field studies course	High School
Parker South	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Aubrey (Plum) Glendinning	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Tiffany Kingston	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Walter Hundley	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Jessica Barber	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Bennett Stedwell	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Benjamin Smith	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School

Harlan Renken	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Oliver Gillete	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Alexis Hall	MANTA Science Instructor	2009	Marine science in the BVIs on the MANTA field studies course	High School
Katie (Reiss) Bazan	member of thesis committee	2008-2011	Assessment of OH-PBDEs and OH-PCBs in the blood plasma and their potential effects on the thyroid gland of bonnethead (<i>Sphyrna tiburo</i>) and finetooth (<i>Carcharhinus isodon</i>) sharks in estuaries around South Carolina	Masters
Jared Ragland	major advisor of thesis project	2008-2010	Persistent organic pollutants in blood plasma of adult male loggerhead sea turtles (<i>Caretta caretta</i>) (Outstanding Graduate Student Award)	Masters
Emily Basile	member of dissertation committee; host of guest student	2007-2010	Polybrominated diphenyl ether contamination in the Northern Diamondback Terrapin (<i>Malaclemys terrapin</i>), a model estuarine vertebrate of Barnegat Bay, New Jersey	Ph.D.
Steven O'Connell	major advisor of thesis project	2007-2009	Spatial and temporal distribution of perfluorinated substances in juvenile loggerhead sea turtles, <i>Caretta caretta</i> , along the east coast of the United States	Masters

Courtney Arthur	member of thesis committee; Prof of Aq. Tox.	2007-2009	Mercury contamination along the eastern coast of the US: Assessment of the diamondback terrapin, <i>Malaclemys terrapin</i> , as a sentinel species	Masters
Lily Ngai	REU co-advisor	2007	Comparison of perfluorinated contaminant concentrations in plasma of five sea turtle species	Undergraduate
Virgina Winder	Professor Aquatic Toxicology Course	2006	Fluoxetine in the Marine Environment: Effects on Sheepshead Minnow (<i>Cyprinodon variegatus</i>) Locomotor and Reproductive Behavior	Masters
Anthony Nitti	lab mentorship of REU	2006	Detection of hydroxylated contaminants in sea turtle plasma	Undergraduate
Heather (Harper) Laux	Professor Aquatic Toxicology Course	2006	The Effects of the Insecticide Bifenthrin on Grass Shrimp, <i>Palaemonetes pugio</i> and Sheepshead Minnow, <i>Cyprinodon variegatus</i>	Masters
Kelly Stewart	Host of guest student	2006-2007	Monitoring persistent organic pollutants in leatherback turtles (<i>Dermochelys coriacea</i>) confirms maternal transfer	Ph.D.
Deb (Zdankiewicz) Ellisor	Prof of Aq. Tox.; labmate	2006-2007	Distribution and Stratification of Persistent Organic Pollutants in the Blubber of Bottlenose Dolphin (<i>Tursiops truncatus</i>)	Masters
Joyce Stuckey	member of thesis committee; Prof of Aq. Tox.	2005-2007	Evaluation of polybrominated diphenyl ethers (PBDEs) in the brown pelican (<i>Pelecanus occidentalis</i>) and their effects on the immune response in a surrogate	Masters

			avian species	
Meaghean Finnegan	member of thesis committee; Prof of Aq. Tox.	2005-2007	Effects of the antifoulant biocide Irgarol 1051 on the eastern mudsnail, Ilyanassa obsoleta, and estuarine periphyton.	Masters
Jenny Litz	Host of guest student	2005-2006	Social structure, genetic structure, and organohalogen pollutants in bottlenose dolphins in Biscayne Bay, FL	Ph.D.
Emily Cooper	Professor Aquatic Toxicology Course	2005	Preliminary Risk Assessment of Pharmaceuticals in Estuaries and the Detection and Environmental Processing of Pharmaceuticals in a Southeastern Estuary, Kiawah Island, SC	Masters
Joseph Cowan	Professor Aquatic Toxicology Course	2005		Masters
Mark Messersmith	Professor Aquatic Toxicology Course	2005		Masters
Stefan Moss	Host of guest student	2004	Levels of persistent organic pollutants in plasma from two species of turtle from the Tennessee River Gorge	Masters

Katrina Aleksa	REU co-advisor	2004	Analysis of Organochlorine Contaminants in Juvenile Loggerhead Sea Turtle Plasma	Undergraduate
Sadie Drescher	Professor Aquatic Toxicology Course	2004	Ability of soils and sediments to remove nitrogen (denitrification) from stormwater runoff in a paired watershed assessment on Kiawah Island, SC	Masters
Christiana Pollack	Professor Aquatic Toxicology Course	2004	Environmental Analysis at Boston University	post-M.A.
Lorimar Serrano	Professor Aquatic Toxicology Course	2004	Water Quality Restoration for Coastal Subdivision Stormwater Ponds	Masters
Stacie Dover	Professor Aquatic Toxicology Course	2004		Masters
Cara Fiore	Professor Aquatic Toxicology Course	2004	Characterization of Macrofaunal Assemblages Associated with Sponges and Tunicates off the Southeastern United States	Masters
Jennifer (Yordy) Balmer	labmate	2004-2009	Persistent Organic Pollutant (POP) mixtures in wild bottlenose dolphins: the influences of life history, dietary exposure, physiology and their potential for endocrine disruption	Ph.D.

Brianna Carlson	major advisor of thesis project; Prof of Aq. Tox.	2004-2007	Assessment of organohalogen contaminants in benthic juvenile loggerhead sea turtles, <i>Caretta caretta</i> , from coastal North Carolina, including method development, blood compartment partitioning, and temporal trend analysis with emphasis on polybrominated diphenyl ethers	Masters
Robert Swarthout	member of thesis committee	2004-2006	Organohalogen contaminant analysis in sea turtle blood: method development and application to Kemp's ridley and green sea turtles from the Gulf of Mexico	Masters
Gaelle Blanvillain	member of thesis committee; Prof of Aq. Tox.	2004-2005	Using diamondback terrapins (<i>Malaclemys terrapin</i>) as sentinel species for mercury monitoring in estuaries along the southeast coast of the US	Masters
Jeff Schwenter	Professor Aquatic Toxicology Course; lab mentorship	2004-2005	Monitoring Mercury in the Diamondback Terrapin (<i>Malaclemys terrapin</i>): Kinetics and Accumulation of an Emerging Global Contaminant	Masters
Juan Jose Alava	Host of guest student	2003-2004	Assessment of persistent organic pollutants in loggerhead sea turtle eggs, <i>Caretta caretta</i> (<i>Chelonii</i> : <i>Chelonididae</i>) from Florida, USA	Masters

Ryan Templeton	REU co-advisor	2003	Organochlorine contaminant concentrations in fat and blubber of leatherback turtles	Undergraduate
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Service

2020-present	Member, Global Ghost Gear Initiative Solutions Committee
2019-present	Chair, PICES Working Group 42 Indicators of Marine Plastic Pollution
2019	Student Judge for the International Sea Turtle Symposium
2018	Member, PICES Study Group on Marine Microplastics
2018	Co-chair of “Chemistry of Marine Debris” session at 6IMDC
2016	Student Judge for the Society of Environmental Toxicology and Chemistry (SETAC) World Congress
2012-2015	Editorial Board Member, <i>Environmental Toxicology and Chemistry</i>
2012-2015	Member, Research Advisory Committee for NIST’s Chemical Science Division
2012-2013	Website Chair, Palmyra Atoll Research Consortium
2009	Student Judge for College of Charleston’s Grice Colloquium
2009	Co-chair of “Marine Organism Health” session at the 30 th Annual Meeting of the Society of Environmental Toxicology and Chemistry
2008	Co-chair of session at 28 th Annual Symposium on Sea Turtle Biology and Conservation
2008	Program, Planning, and Student Judging Committees for SEAMAMMS
2008	Co-chair of “Perfluorinated Compounds: Environmental Sources, Fate, Distribution and Trends” session at the 29 th Annual Meeting of the Society of Environmental Toxicology and Chemistry
2007-2010	Representative, Fort Johnson Marine Science Seminar Committee
2007	Co-chair of session and on Student Judging Committee at 27 th Annual Symposium on Sea Turtle Biology and Conservation
2005-2014	Secretary for faculty meetings, College of Charleston, Graduate Program in Marine Biology
2005	Co-chair of “Pathology, Health, and Rehabilitation” session at 25 th Annual Symposium on Sea Turtle Biology and Conservation
2004-2005	Nominations Committee, College of Charleston, Graduate Program in Marine Biology
2004	Student Judging Committee at 24 th Annual Symposium on Sea Turtle Biology and Conservation
2001-2002	Co-organizer, Duke University Marine Laboratory Seminar Series

Professional Memberships

2019-present	American Chemical Society
1999-2009, 2016-present	Society of Environmental Toxicology and Chemistry (SETAC)
2000-present	International Sea Turtle Society
2001-2009	Carolina’s SETAC Regional Chapter
2008	National Marine Educators Association
2008	South Carolina Marine Educators Association

Marine Environmental Field Skills

- Experience with sea turtle, bottlenose dolphin, and diamondback terrapin live capturing, fish capturing, & seabird egg collections
- Proficient at sea turtle necropsies and gastrointestinal tract assessments for plastics
- Proficient at drawing blood from hard-shelled sea turtles
- Proficient at flipper and PIT tagging sea turtles
- Proficient at sampling keratin scute material from sea turtle carapaces
- Proficient at skin biopsy sampling of sea turtles
- Proficient at blood and tissue processing and storing for various laboratory analyses
- Experience with benthic coral assessments and fish abundance survey techniques
- PADI Rescue Diver certified and AAUS-equivalent Diver in Training

Analytical Technology Capabilities

- Proficient use of analytical instrumentation, including liquid chromatography tandem mass spectrometry (LC/MS/MS) with electrospray ionization and atmospheric pressure photospray ionization sources, liquid chromatography mass spectrometry (LC/MS), gas chromatography mass spectrometry (GC/MS) with electron impact and negative chemical ionization sources, gas chromatography time-of-flight mass spectrometry (GC/TOF-MS), gas chromatography electron capture detection (GC-ECD), Fourier transform infrared spectroscopy (FT-IR), Raman spectroscopy, differential scanning calorimetry (DSC), pressurized fluid extraction, microwave extraction, solid phase extraction, and size exclusion chromatography
- Proven ability to conduct polymer identification of plastic items from microplastics to megaplastics, including multi-layer composites
- Proven ability to develop methods for the detection and quantification of environmental contaminants
- Demonstrated capacity to perform quantitative analysis of organic contaminants in various sample types (matrices), including blood, serum, plasma, milk, fat, blubber, liver, eggs, sediment, urban dust, house dust, sludge, mussel and fish tissues, and fish oil
- Provided high quality measurements of concentrations of various contaminant classes, including polychlorinated biphenyls (PCBs), organochlorine pesticides, brominated flame retardants (BFRs), such as polybrominated diphenyl ethers (PBDEs) and hexabromocyclododecanes (HBCDs), perfluorinated compounds (PFCs), polycyclic aromatic hydrocarbons (PAHs), triclosan, and methyl-triclosan
- Experience in preparing, value-assigning, and using NIST Standard Reference Materials (SRMs), including solution SRMs and SRMs of a variety of environmental matrices (listed above) for environmental contaminants
- Wrote and implemented NIST protocols for field sampling collection and storage of tissues from live and dead stranded marine animals (blood, blubber, milk, fat, liver, skin, keratin-containing tissues, muscle, bile, lesions) for environmental specimen banking, organic and inorganic contaminant analysis, and health assessments

Proficient Skills in Biology, Cell and Molecular Biology, Biomedical Research

- Marine organism live capturing techniques
- Blood and tissue sampling live sea turtles and other marine organisms
- Tissue sampling during necropsies for various laboratory analyses (genetics, immunology, pathology, toxicology, biochemistry, cell line development)
- Animal handling and husbandry for laboratory studies (marine invertebrates, fish, turtles,

chickens, and strong collaborations with toxicologists that use mouse/rat models)

- Cell culture and *in vitro* toxicity testing
- Immunology (cytology, lysozyme activity, lymphocyte proliferation, natural kill cell activity, plaque-forming cell response)
- Western blotting and enzyme activity assays
- Protein and chemical isolation and identification
- Strong collaborations with marine animal health researchers, toxicologists, and biomedical scientists