

## **Nathan G. Dodder, Ph.D.**

Research Scientist

San Diego State University Research Foundation

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### **Professional Positions**

2023 – Present	Research Scientist III, San Diego State University Research Foundation, San Diego, CA
2016 – 2023	Research Scientist II, San Diego State University Research Foundation, San Diego, CA
2010 – 2016	Senior Scientist, Southern California Coastal Water Research Project, Costa Mesa, CA
2005 – 2010	Research Chemist, National Institute of Standards and Technology, Gaithersburg, MD
2003 – 2005	National Research Council Postdoctoral Fellowship, National Institute of Standards and Technology, Gaithersburg, MD.
1998 – 2003	Graduate Research Assistant, Indiana University, Bloomington, IN

### **Professional Appointments**

2023 – Present	Center for Tobacco and The Environment, Member, San Diego State University
2022 – Present	TRDRP Research Consortium on Thirdhand Smoke, Project PI
2018 – Present	Thirdhand Smoke Resource Center, Researcher, San Diego State University
2016 – Present	Adjunct Associate Professor, School of Public Health, San Diego State University
2016 – 2022	Measurement and Evaluation Research Group, San Diego State University
2015 – 2017	Board Member, Society of Environmental Toxicology and Chemistry, Southern California Chapter
2013	California Sea Grant Review Panel
2012 – 2016	Chair, Bight '13 Sediment Chemistry Committee, Southern California Bight Regional Monitoring Program
2010 – 2016	Adjunct Assistant Professor, School of Public Health, San Diego State University
2007 – 2010	Member, Clinical Proteomic Technology Assessment for Cancer, National Cancer Institute

### **Awards**

2023	Non-Tenure Track Faculty Outstanding Research, Scholarship, and Creative Activity (RSCA) Award. Division of Research and Innovation, San Diego State University.
2005	First Runner-up Environmental Science Paper of the Year (Environ. Sci. Technol. 2005, 39, 925–931), Environmental Science and Technology
1997	Summa Cum Laude, Minnesota State University Moorhead

### **Academic Training**

1998 – 2003	Ph.D., Indiana University Bloomington. Major: Analytical Chemistry, Minor: Environmental Science. Research Advisor: Professor Ronald A. Hites.
1993 – 1997	B.A., Chemistry, Minnesota State University Moorhead

### **Research Expertise**

- Analytical method development for isotope-dilution based quantification of contaminants, metabolites, and protein biomarkers by chromatography/mass spectrometry. Non-targeted and suspect screening mass spectrometry for the identification of unexpected environmental

contaminants. Installation, operation, and maintenance of LC/QQQ, LC/Q-TOF, MALDI-TOF, GC/MS, and GC×GC/TOF systems.

- Environmental survey design to assess the occurrence and fate of contaminants in abiotic matrices (stormwater, wastewater, sediment, hand wipes, surface wipes, dust, and passive samplers) and biotic matrices (serum/plasma, urine, saliva, blubber tissue, and fish).
- Scientific software development and statistical analysis using the R programming language, including tools for mass spectral interpretation, mass spectral libraries, models of contaminant fate, and automated quality control validation.

### Peer Reviewed Publications

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PubMed: <https://www.ncbi.nlm.nih.gov/myncbi/nathan.dodder.1/bibliography/public/>

Google Scholar: <https://scholar.google.com/citations?user=l8-7ghoAAAAJ&hl=en>

1. Richardot W.; Hamzai, L.; Ghukasyan, T.; Dodder, N.G.; Quintana, P.J.E.; Matt, G.E.; Sant, K.; Lopez-Galvez, N.; Hoh, E. Novel Chemical Contaminants Associated with Thirdhand Smoke in Settled House Dust. *Chemosphere*, **2024**, 352, 141138. <https://doi.org/10.1016/j.chemosphere.2024.141138>.
2. Duttagupta, S.; Nynas, K.; Richardot, W.; Salam, S.B.; Pennington, M.; Wong, J.; Van De Werfhorst, L.C.; Dodder, N.G.; Novotny, T.E.; Sant, K.; Holden, P.A.; Hoh, E. Influence of tobacco product wastes in a protected coastal reserve adjacent to urbanization. *Environmental Pollution*, **2024**, 199, 115929. <https://doi.org/10.1016/j.marpolbul.2023.115929>.
3. Merianos, A.L.; Matt, G.E.; Stone, T.M.; Jandarov, R.A.; Hoh, E.; Dodder, N.G.; Quintana P.J.E.; Lopez-Galvez, N.; Stone, L.; Mahabee-Gittens, E.M. Contamination of Surfaces in Children's Homes with the Potent Carcinogenic Tobacco-Specific Nitrosamine NNK and Nicotine. *Journal of Exposure Science and Environmental Epidemiology*, **2023**, 1-8. <https://doi.org/10.1038/s41370-023-00629-8>.
4. Quintana, P.J.E.; Lopez-Galvez, N.; Matt, G.E.; Merianos, A.L.; Dodder, N.G.; Hoh, E.; Stone, L.; Wullenweber, C.A.; Mahabee-Gittens, E.M. Cotton pillow samplers for assessment of thirdhand smoke in homes of smokers and nonsmokers with children. *Journal of Environmental Exposure Assessment*, **2023**, 2, <https://doi.org/10.20517/jeea.2023.28>.
5. Richardot, W.; Yabes, L.; Wei, H.H.; Dodder, N.G.; Watanabe, K.; Cibor, A.; Schick, S.; Novotny, T.; Gersberg, R.; Hoh, E. Leached compounds from smoked cigarettes and their potential for bioaccumulation in Rainbow Trout (*Oncorhynchus mykiss*). *Chemical Research in Toxicology*, **2023**, 36, 1703-1710. doi: 10.1021/acs.chemrestox.3c00167
6. Matt, G.E.; Merianos, A.L.; Stone, L.; Wullenweber, C.; Quintana, P.J.E.; Hoh, E.; Dodder, N.G.; Lopez-Galvez, N.; Mahabee-Gittens, E.M. Changes and Stability of Hand Nicotine Levels in Children of Smokers: Associations with Urinary Biomarkers, Reported Child Tobacco Smoke Exposure, and Home Smoking Bans. *Environment International*, **2023**, 181, 108239, <https://doi.org/10.1016/j.envint.2023.108239>.
7. Tang, X.; Gambier, C.; López-Gálvez, N.; Padilla, S.; Rapp, V.H.; Russell, M.L. ...; Dodder, N.G. ...; et al. Remediation of Thirdhand Tobacco Smoke with Ozone: Probing Deep Reservoirs in Carpets. *Environ. Sci. Technol.*, **2023**. doi:10.1021/acs.est.3c01628
8. Stack, M.E.; Hollman, K.; Mladenov, N.; Harper, B.; Pinongcos, F.; Sant, K.E. ...; Dodder, N.G. ...; et al. Micron-size tire tread particles leach organic compounds at higher rates than centimeter-size particles: Compound identification and profile comparison. *Environmental Pollution*, **2023**, 122116. doi:10.1016/j.envpol.2023.122116
9. Pulvers, K.; Tracy, L.; Novotny, T.E.; Satybaldiyeva, N.; Hunn, A.; Romero, D.R.; Dodder, N.G.; Magraner J.; Oren E. Switching people who smoke to unfiltered cigarettes: perceptions, addiction

- and behavioural effects in a cross-over randomised controlled trial. *Tob. Control.*, **2023**, 32, 520-523. <https://doi.org/tobaccocontrol-2021-056815>.
10. Matt, G.E.; Greiner, L.; Record, R.A.; Wipfli, H.; Long, J.; Dodder, N.G.; et al. Policy-relevant differences between secondhand and thirdhand smoke: strengthening protections from involuntary exposure to tobacco smoke pollutants. *Tobacco Control*, **2023**, 0, 1-9. doi:10.1136/tc-2023-057971
  11. Mahabee-Gittens, E.M.; Merianos, A.L.; Stone, L.; Wullenweber, C.A.; Quintana, P.J.E.; Hoh, E.; Dodder, N.G.; Lopez-Galvez, N.; Matt, G.E. Hand Nicotine as an Independent Marker of Thirdhand Smoke Pollution in Children's Environments. *Science of the Total Environment*, **2022**, <https://doi.org/10.1016/j.scitotenv.2022.157914>
  12. Stack, M.E.; Cossaboon, J.M.; Tubbs, C.W.; Vilchis, L.I.; Felton, R.G.; Johnson, J.L.; Danil, K.; Heckel, G.; Hoh, E.; Dodder, N.G. Assessing Marine Endocrine-Disrupting Chemicals in the Critically Endangered California Condor: Implications for Reintroduction to Coastal Environments. *Environ. Sci. Technol.*, **2022**, <https://doi.org/10.1021/acs.est.1c07302> (*Corresponding Author*)
  13. Matt, G.E.; Merianos, A.L.; Quintana, P.J.E.; Hoh, E.; Dodder, N.G.; Mahabee-Gittens, E.M. Prevalence and Income-Related Disparities in Thirdhand Smoke Exposure to Children. *JAMA Network Open*, **2022**, 5, e2147184. <https://doi.org/10.1001/jamanetworkopen.2021.47184>.
  14. Mladenov, N.; Dodder, N.G.; Steinberg, L.; Richardot, W.; Johnson, J.; Martincigh, B.S.; et al. Persistence and removal of trace organic compounds in centralized and decentralized wastewater treatment systems. *Chemosphere*, **2022**, 286, 131621.
  15. Ishida, K.P.; Luna, R.F.; Richardot, W.H.; Lopez-Galvez, N.; Plumlee, M.H.; Dodder, N.G.; et al. Nontargeted Analysis of Trace Organic Constituents in Reverse Osmosis and UV-AOP Product Waters of a Potable Reuse Facility. *ACS EST Water*, **2021**, doi:10.1021/acsestwater.1c00265.
  16. Snyder, K.; Mladenov, N.; Richardot, W.; Dodder, N.; Nour, A.; Campbell, C.; Hoh, E. Persistence and photochemical transformation of water soluble constituents from industrial crude oil and natural seep oil in seawater. *Marine Pollution Bulletin*, **2021**, 165, 112049.
  17. Kelley, S.T.; Liu, W.; Quintana, P.J.E.; Hoh, E.; Dodder, N.G.; Mahabee-Gittens, E.M.; et al. Altered microbiomes in thirdhand smoke-exposed children and their home environments. *Pediatr. Res.*, **2021**, <https://doi.org/10.1038/s41390-021-01400-1>.
  18. Hamzai, L.; Lopez-Galvez, N.; Hoh, E.; Dodder, N.G.; Matt, G.E.; Quintana, P.J. A systematic review of the use of silicone wristbands for environmental exposure assessment, with a focus on polycyclic aromatic hydrocarbons (PAHs), *J. Expo. Sci. Environ. Epidemiol.*, **2021**, <https://doi.org/10.1038/s41370-021-00359-9>.
  19. Chang, D.; Richardot, W.H.; Miller, E.L.; Dodder, N.G.; Sedlak, M.D.; Hoh, E.; et al. Framework for nontargeted investigation of contaminants released by wildfires into stormwater runoff: Case study in the northern San Francisco Bay area. *Integrated Environmental Assessment and Management*, **2021**, 17: 1179–1193.
  20. Matt, G. E.; Quintana, P. J. E.; Hoh, E.; Dodder, N. G.; Mahabee-Gittens, E. M.; Padilla, S.; et al. Thirdhand Tobacco Smoke is a Likely Source of Lead and Cadmium in Settled House Dust. *Journal of Trace Elements in Medicine and Biology*. **2021**, 63, 126656.
  21. Quintana, P. J. E.; Lopez-Galvez, N.; Dodder, N.G.; Hoh, E.; Matt, G. E.; Zakarian, J. M.; et al. Nicotine, Cotinine, and Tobacco-Specific Nitrosamines Measured in Children's Silicone Wristbands in Relation to Secondhand Smoke and E-cigarette Vapor Exposure. *Nicotine Tob. Res.* **2021**, 592-599.
  22. Matt, G. E.; Quintana, P. J. E.; Hoh, E.; Zakarian, J. M.; Dodder, N. G.; Record, R. A.; et al. Remediating Thirdhand Smoke Pollution in Multiunit Housing: Temporary Reductions and the Challenges of Persistent Reservoirs. *Nicotine Tob. Res.* **2021**, 364-372.
  23. Kassem, N. O. F.; Peterson, L. A.; Liles S., Kassem, N. O.; Zaki, F. K.; Lui, K-J.; Vevang, K. R.; Dodder, N. G.; et al. Urinary metabolites of furan in waterpipe tobacco smokers compared to non-smokers in home settings in the US. *Toxicology Letters*, **2020**, 333, 202–210.

24. Matt, G. E.; Quintana, P. J. E.; Hoh, E.; Zakarian, J. M.; Dodder, N. G.; Record, R. A.; et al. Persistent tobacco smoke residue in multiunit housing: Legacy of permissive indoor smoking policies and challenges in the implementation of smoking bans. *Preventive Medicine Reports*, **2020**, *18*, 101088.
25. Tran, C. D.; Dodder, N. G.; Quintana, P. J. E.; Watanabe, K.; Kim, J. H.; Hovell, M. F.; Chambers, C. D.; Hoh, E. Organic Contaminants in Human Breast Milk Identified by Non-Targeted Analysis. *Chemosphere*, **2020**, *238*, 124677.
26. Xu, E. G.; Richardot, W. H.; Li, S.; Buruaem, L.; Wei, H.-H.; Dodder, N. G.; Schick, S. F.; Novotny, T.; Schlenk, D.; Gersberg, R. M.; et al. Assessing Toxicity and in Vitro Bioactivity of Smoked Cigarette Leachate Using Cell-Based Assays and Chemical Analysis. *Chem. Res. Toxicol.*, **2019**, *32*, 1670–1679.
27. Quintana, P. J. E.; Hoh, E.; Dodder, N. G.; Matt, G. E.; Zakarian, J. M.; Anderson, K. A.; Akins, B.; Chu, L.; Hovell, M. F. Nicotine Levels in Silicone Wristband Samplers Worn by Children Exposed to Secondhand Smoke and Electronic Cigarette Vapor Are Highly Correlated with Child’s Urinary Cotinine. *J. Expo. Sci. Environ. Epidemiol.*, **2019**, *29*, 733–741.
28. Cossaboon, J. M.; Hoh, E.; Chivers, S. J.; Weller, D. W.; Danil, K.; Maruya, K. A.; Dodder, N. G. Apex Marine Predators and Ocean Health: Proactive Screening of Halogenated Organic Contaminants Reveals Ecosystem Indicator Species. *Chemosphere*, **2019**, *221*, 656–664. (*Corresponding Author*)
29. Manzano, C. A.; Dodder, N. G.; Hoh, E.; Morales, R. Patterns of Personal Exposure to Urban Pollutants Using Personal Passive Samplers and GC × GC/ToF–MS. *Environ. Sci. Technol.*, **2019**, *53*, 614–624.
30. Trego, M. L.; Hoh, E.; Kellar, N. M.; Meszaros, S.; Robbins, M. N.; Dodder, N. G.; Whitehead, A.; Lewison, R. L. Comprehensive Screening Links Halogenated Organic Compounds with Testosterone Levels in Male Delphinus Delphis from the Southern California Bight. *Environ. Sci. Technol.*, **2018**, *52*, 3101–3109.
31. Clatterbuck, C. A.; Lewison, R. L.; Dodder, N. G.; Zeeman, C.; Schiff, K. Seabirds as Regional Biomonitors of Legacy Toxicants on an Urbanized Coastline. *Sci. Total Environ.* **2018**, *619–620*, 460–469.
32. Alonso, M. B.; Maruya, K. A.; Dodder, N. G.; Brito Jr., J. L.; Azevedo, A.; Santos-Neto, E.; Torres, J. P. M.; Malm, O.; Hoh, E. Non-targeted screening of halogenated organic compounds in bottlenose dolphins (*Tursiops Truncatus*) from Rio de Janeiro, Brazil. *Environ. Sci. Technol.*, **2017**, *51*, 1176–1185.
33. Mackintosh, S. A.; Dodder, N. G.; Shaul, N. J.; Aluwihare, L. I.; Maruya, K. A.; Chivers, S. J.; Danil, K.; Weller, D. W.; Hoh, E. Newly identified DDT-related compounds accumulating in southern California bottlenose dolphins. *Environ. Sci. Technol.* **2016**, *50*, 12129–12137.
34. Maruya, K. A.; Dodder, N. G.; Sengupta, A.; Smith, D. J.; Lyons, J. M.; Heil, A. T.; Drewes, J. E. Multi-media screening of contaminants of emerging concern (CECs) in coastal urban watersheds in Southern California (USA). *Environ. Toxicol. Chem.* **2016**, *35*, 1986–1994.
35. Maruya, K. A.; Dodder, N. G.; Mehinto, A. C.; Denslow, N. D.; Schlenk, D.; Snyder, S. A.; Weisberg, S. B. A tiered, integrated biological and chemical monitoring framework for contaminants of emerging concern in aquatic ecosystems. *Integr. Environ. Assess. Manag.* **2016**, *12*, 540–547.
36. Schiff, K.; Greenstein, D.; Dodder, N.; Gillett, D. J. Southern California Bight regional monitoring. *Regional Studies in Marine Science* **2016**, *4*, 34–46.
37. Millow, C. J.; Mackintosh, S. A.; Lewison, R. L.; Dodder, N. G.; Hoh, E. Identifying bioaccumulative halogenated organic compounds using a nontargeted analytical approach: seabirds as sentinels. *PLoS One* **2015**, *10* (5), e0127205.
38. Shaul, N. J.; Dodder, N. G.; Aluwihare, L. I.; Mackintosh, S. A.; Maruya, K. A.; Chivers, S. J.; Danil, K.; Weller, D. W.; Hoh, E. Nontargeted biomonitoring of halogenated organic compounds in two ecotypes of bottlenose dolphins (*Tursiops truncatus*) from the Southern California Bight. *Environ. Sci. Technol.* **2015**, *49* (3), 1328–1338.

39. Maruya, K. A.; Dodder, N. G.; Tang, C.-L.; Lao, W.; Tsukada, D. Which coastal and marine environmental contaminants are truly emerging? *Environ. Sci. Pollut. Res.* **2015**, *22* (3), 1644–1652.
40. Maruya, K. A.; Dodder, N. G.; Weisberg, S. B.; Gregorio, D.; Bishop, J. S.; Klosterhaus, S.; Alvarez, D. A.; Furlong, E. T.; Bricker, S.; Kimbrough, K. L.; et al. The Mussel Watch California pilot study on contaminants of emerging concern (CECs): Synthesis and next steps. *Mar. Pollut. Bull.* **2014**, *81* (2), 355–363.
41. Maruya, K. A.; Dodder, N. G.; Schaffner, R. A.; Weisberg, S. B.; Gregorio, D.; Klosterhaus, S.; Alvarez, D. A.; Furlong, E. T.; Kimbrough, K. L.; Lauenstein, G. G.; et al. Refocusing Mussel Watch on contaminants of emerging concern (CECs): The California pilot study (2009-10). *Mar. Pollut. Bull.* **2014**, *81* (2), 334–339.
42. Dodder, N. G.; Maruya, K. A.; Ferguson, P. L.; Grace, R.; Klosterhaus, S.; La Guardia, M. J.; Lauenstein, G. G.; Ramirez, J. Occurrence of contaminants of emerging concern in mussels (*Mytilus spp.*) along the California coast and the influence of land use, storm water discharge, and treated wastewater effluent. *Mar. Pollut. Bull.* **2014**, *81* (2), 340–346. (*Corresponding Author*)
43. Alvarez, D. A.; Maruya, K. A.; Dodder, N. G.; Lao, W.; Furlong, E. T.; Smalling, K. L. Occurrence of contaminants of emerging concern along the California coast (2009-10) using passive sampling devices. *Mar. Pollut. Bull.* **2014**, *81* (2), 347–354.
44. Phinney, K. W.; Ballihaut, G.; Bedner, M.; Benford, B. S.; Camara, J. E.; Christopher, S. J.; Davis, W. C.; Dodder, N. G.; Eppe, G.; Lang, B. E.; et al. Development of a Standard Reference Material for metabolomics research. *Anal. Chem.* **2013**, *85* (24), 11732–11738.
45. Abbatiello, S. E.; Mani, D. R.; Schilling, B.; MacLean, B.; Zimmerman, L. J.; Feng, X.; Cusack, M. P.; Sedransk, N.; Hall, S. C.; Addona, T.; ...Dodder, N. G.; ...; et al. Design, implementation and multisite evaluation of a system suitability protocol for the quantitative assessment of instrument performance in liquid chromatography-multiple reaction monitoring-MS (LC-MRM-MS). *Mol. Cell. Proteomics* **2013**, *12* (9), 2623–2639.
46. Dodder, N. G.; Maruya, K. A.; Lauenstein, G. G.; Ramirez, J.; Ritter, K. J.; Schiff, K. C. Distribution and sources of polybrominated diphenyl ethers in the Southern California Bight. *Environ. Toxicol. Chem.* **2012**, *31* (10), 2239–2245. (*Corresponding Author*)
47. Hoh, E.; Dodder, N. G.; Lehotay, S. J.; Pangallo, K. C.; Reddy, C. M.; Maruya, K. A. Nontargeted comprehensive two-dimensional gas chromatography/time-of-flight mass spectrometry method and software for inventorying persistent and bioaccumulative contaminants in marine environments. *Environ. Sci. Technol.* **2012**, *46* (15), 8001–8008.
48. Lowenthal, M. S.; Gasca-Aragon, H.; Schiel, J. E.; Dodder, N. G.; Bunk, D. M. A quantitative LC-MS/MS method for comparative analysis of capture-antibody affinity toward protein antigens. *J. Chromatogr. B* **2011**, *879* (26), 2726–2732.
49. Liao, W.-L.; Heo, G.-Y.; Dodder, N. G.; Reem, R. E.; Mast, N.; Huang, S.; DiPatre, P. L.; Turko, I. V.; Pikuleva, I. A. Quantification of cholesterol-metabolizing P450s CYP27A1 and CYP46A1 in neural tissues reveals a lack of enzyme-product correlations in human retina but not human brain. *J. Proteome Res.* **2011**, *10* (1), 241–248.
50. Liao, W.-L.; Heo, G.-Y.; Dodder, N. G.; Pikuleva, I. A.; Turko, I. V. Optimizing the conditions of a multiple reaction monitoring assay for membrane proteins: quantification of cytochrome P450 11A1 and adrenodoxin reductase in bovine adrenal cortex and retina. *Anal. Chem.* **2010**, *82* (13), 5760–5767.
51. Addona, T. A.; Abbatiello, S. E.; Schilling, B.; Skates, S. J.; Mani, D. R.; Bunk, D. M.; Spiegelman, C. H.; Zimmerman, L. J.; Ham, A.-J. L.; Keshishian, H. ...; Dodder, N. G. ...; et al. Multi-site assessment of the precision and reproducibility of multiple reaction monitoring-based measurements of proteins in plasma. *Nat. Biotechnol.* **2009**, *27* (7), 633–U85.

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53. Stapleton, H. M.; Dodder, N. G. Photodegradation of decabromodiphenyl ether in house dust by natural sunlight. *Environ. Toxicol. Chem.* **2008**, *27* (2), 306–312.
54. Dodder, N. G.; Tai, S. S.-C.; Sniegoski, L. T.; Zhang, N. F.; Welch, M. J. Certification of creatinine in a human serum reference material by GC-MS and LC-MS. *Clin. Chem.* **2007**, *53* (9), 1694–1699. (Corresponding Author)
55. Dodder, N. G.; Peck, A. M.; Kucklick, J. R.; Sander, L. C. Analysis of hexabromocyclododecane diastereomers and enantiomers by liquid chromatography/tandem mass spectrometry: Chromatographic selectivity and ionization matrix effects. *J. Chromatogr. A* **2006**, *1135* (1), 36–42. (Corresponding Author)
56. Stapleton, H. M.; Dodder, N. G.; Kucklick, J. R.; Reddy, C. M.; Schantz, M. M.; Becker, P. R.; Gulland, F.; Porter, B. J.; Wise, S. A. Determination of HBCD, PBDEs and MeO-BDEs in California sea lions (*Zalophus californianus*) stranded between 1993 and 2003. *Mar. Pollut. Bull.* **2006**, *52* (5), 522–531.
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58. Dodder, N. G.; Strandberg, B.; Augspurger, T.; Hites, R. A. Lipophilic organic compounds in lake sediment and American coot (*Fulica americana*) tissues, both affected and unaffected by avian vacuolar myelinopathy. *Sci. Total Environ.* **2003**, *311* (1-3), 81–89.
59. Mazdai, A.; Dodder, N. G.; Abernathy, M. P.; Hites, R. A.; Bigsby, R. M. Polybrominated diphenyl ethers in maternal and fetal blood samples. *Environ. Health Perspect.* **2003**, *111* (9), 1249–1252.
60. Dodder, N. G.; Strandberg, B.; Hites, R. A. Concentrations and spatial variations of polybrominated diphenyl ethers and several organochlorine compounds in fishes from the northeastern United States. *Environ. Sci. Technol.* **2002**, *36* (2), 146–151.
61. Strandberg, B.; Dodder, N. G.; Basu, I.; Hites, R. A. Concentrations and spatial variations of polybrominated diphenyl ethers and other organohalogen compounds in Great Lakes air. *Environ. Sci. Technol.* **2001**, *35* (6), 1078–1083.

#### Externally Funded Research Grants

1. **2023-2025.** The health of marine ecosystems in the Southern California Bight and associations with offshore DDT+ dumping. *Role: Co-Principal Investigator. Funding: NOAA through Scripps Institute of Oceanography, \$300,000. Location: SDSU.*
2. **2023-2025.** Hazard assessment of deep ocean DDT disposal: Defining biomagnified DDT+ chemical profiles and investigating the health impacts on sentinel wildlife species and humans. *Role: Co-Principal Investigator. Funding: State Water Resources Control Board, California Sea Grant, and USC Sea Grant's California Deep Ocean DDT+ Research Program, \$1,999,494. Location: SDSU.*
3. **2023-2025.** Foundational Research for Deep Ocean Dumping of DDT+ Wastes: How much is out there, where is it, and what is it doing today? *Role: Co-Principal Investigator. Funding: State Water Resources Control Board, California Sea Grant, and USC Sea Grant's California Deep Ocean DDT+ Research Program, \$519,990 (SDSU Portion). Location: SDSU.*
4. **2023-2026** Microplastic pollution from cigarette filters: Assessment of fate, transport, and toxicity *Role: Co-Investigator. Funding: TRDRP, \$1,326,396. Location: SDSU.*
5. **2023-2024.** Identification of 1,2,3-Trichloropropane Precursors in Wastewater. *Role: Principal Investigator. Funding: LA County Sanitation District, \$15,000. Location: SDSU.*

6. **2022-2025.** THS in Homes: Fate, Characterization, and Remediation. *Role: Principal Investigator. Funding: TRDRP, \$767,550. Location: SDSU.*
7. **2022-2025.** Thirdhand smoke consortium chemical analysis core. *Role: Co-Investigator. Funding: TRDRP, \$654,409. Location: SDSU.*
8. **2022-2025.** Silicone wristbands to measure secondhand exposure to tobacco, e-cigarettes and cannabis. *Role: Co-Investigator. Funding: TRDRP, \$1,349,342. Location SDSU.*
9. **2021-2022.** The 2021 ESPINA study follow-up Exam: Fungicides, Insecticides, Inflammation and Child Development. *Role: Co-Investigator. Funding: NIH/NIEHS, \$64,715 (SDSU Portion). Location: SDSU.*
10. **2021-2023.** Surface Water Emissions from Cannabis Cultivation Sites: Quantity, Quality, Toxicity, and Relationships to Farmers' Practices. *Role: Co-Investigator. Funding: California Department of Cannabis Control, \$800,000 (SDSU Portion). Location: SDSU.*
11. **2020-2024.** Noninvasive Hormone Monitoring in Managed White Rhinoceroses. *Role: Principal Investigator. Funding: San Diego Zoo Wildlife Alliance, \$25,000. Location: SDSU.*
12. **2019-2021.** Secondhand smoke, past smoking, diet, novel biomarkers, and breast cancer metastasis. *Role: Co-Investigator. TRDRP, \$602,000. Location: SDSU.*
13. **2019-2021.** Pilot Investigation of Tobacco, E-Cigarette, and Cannabis Contaminants in an Urban Natural Reserve. *Role: Co-Investigator and Site Co-Principal Investigator. Funding: TRDRP, \$872,018. Location: SDSU.*
14. **2019-2021.** A Pilot Study of Tobacco & Cannabis Contaminants in Protected Areas. *Role: Co-Investigator. Funding: TRDRP, \$195,650 (SDSU Portion). Location: SDSU.*
15. **2018-2021.** Thirdhand Smoke Dissemination, Outreach, and Resource Center. *Role: Co-Investigator. Funding: TRDRP, \$1,798,008. Location: SDSU.*
16. **2018-2021.** Reducing Exposure to Thirdhand Smoke in Multiunit Housing. *Role: Co-Investigator. Funding: TRDRP, \$1,119,720. Location: SDSU.*
17. **2018-2021.** Remediation of Tobacco Toxicants Polluting Low-Income Multiunit Housing. *Role: Co-Investigator. Funding: TRDRP, \$601,884. Location: SDSU.*
18. **2018-2021.** Exposure to Tobacco, E-Cigarette, and Marijuana in Multiunit Housing. *Role: Co-Investigator. Funding: TRDRP, \$1,126,942. Location: SDSU.*
19. **2018-2021.** Assessing Marine Endocrine Disrupting Chemicals in the Critically Endangered California Condor: Implications of Reintroduction to Coastal Environments. *Role: Co-Principal Investigator. Funding: NOAA CA SeaGrant, \$257,485. Location: SDSU.*
20. **2018-2022.** Contribution of Thirdhand Smoke to Overall Tobacco Smoke Exposure in a Pediatric Population. *Role: Co-Investigator. Funding: NIH/NIEHS, \$1,643,738 (SDSU Portion). Location: SDSU.*
21. **2017-2021.** Enhanced Evaluation of the Removal of Contaminants of Emerging Concern in Decentralized Water Reuse Systems by Non-Targeted Analysis. *Role: Co-Principal Investigator. Funding: NSF, \$304,569. Location: SDSU.*
22. **2017-2021.** Analysis of Stormwater Runoff from Burned Natural Areas and Urban Structures using Non-Targeted Mass Spectrometry. *Role: Principal Investigator. Funding: San Francisco Estuary Institute, \$50,000. Location: SDSU.*
23. **2017-2021.** Analysis of Sediment in San Francisco Bay Margin. *Role: Principal Investigator. Funding: San Francisco Estuary Institute, \$50,000. Location: SDSU.*
24. **2014-2017.** Enhanced Cataloging of Bioaccumulative Chemicals in Stranded Marine Mammals to Assess Health Impacts. *Role: Principal Investigator. Funding: NOAA Prescott, \$133,119. Location: SCCWRP.*

### **Awarded Internal Research Proposals, National Institute of Standards and Technology (NIST)**

- 2008 Standards Development. Dodder, N. G.; Phinney, K. W.; Stein, S. E. Metabolite Profiling of SRM 1950, Metabolites in Human Plasma.
- 2007 Exploratory Research. Dodder, N. G.; Bunk, D. M.; Phinney, K. W. De Novo Peptide Sequencing for Protein Identification by Mass Spectrometry
- 2006 Exploratory Research. Camara, J. E.; Bunk, D. M.; Dodder, N. G.; Reddy, P. In Vitro Synthesis of Stable-Isotope Labeled Proteins for Use as Internal Standards for Mass Spectrometric Quantification of Clinical Protein Biomarkers

### **Scientific Software**

- 2010 – Present Lead Developer: OrgMassSpecR software package for organic/biological mass spectrometry data analysis. R statistical programming language.  
<http://OrgMassSpec.github.io/>
- 2014 Developer: Web Based RIVPACS Benthic Index Calculator Tool. R statistical programming language. <http://data.sccwrp.org/sqo/index.php>

### **Development of NIST Standard Reference Materials (SRMs)**

- 2008 – 2010 Coordination of measurements for SRM 1950 Metabolites in Human Plasma
- 2006 – 2007 GC/MS measurements in support of SRM 967 Creatinine in Human Serum

### **Participation in Inter-Laboratory Comparisons**

- 2013 – 2014 Coordinated studies of contaminant quantification in marine sediments and tissues in support of the Bight '13 Regional Monitoring Program.
- 2009 – 2010 Quantification of protein biomarkers by nano-LC/MRM/MS. Organized by the Clinical Proteomic Technology Assessment for Cancer (National Cancer Institute).
- 2007 – 2009 Development of reference materials for an inter-laboratory comparison of peptide identification by mass spectrometry. Organized by the Clinical Proteomic Technology Assessment for Cancer (National Cancer Institute).
- 2002 Quantification of polybrominated diphenyl ethers in biological and sediment reference materials. Organized by the Netherlands Institute for Fisheries Research (*Chemosphere*, 2002, 46, 625-633.).

### **Membership on SDSU School of Public Health Master's Thesis Committees (2<sup>nd</sup> Member)**

1. Thomas Morales (**2023**). Persistence, Removal, and Transformation of Trace Organic Compounds in Sunlight-Exposed Secondary-Treated Wastewater.
2. Jade Johnson (**2022**). Non-Targeted Analysis of Trace Organic Chemical Removal from Municipal Wastewater Treated by Aerobic and Anaerobic Membrane Bioreactors.
3. MaryAnn Basma Zakaria (**2021**). Identification of Chemicals of Emerging Concern in the Upper South San Francisco Bay Using Non-Targeted Analysis.
4. Margaret Stack (**2020**). Assessment of Marine Endocrine-Disrupting Compounds in the Critically Endangered California Condor and their Marine Mammal Prey.
5. Jennifer Cossaboon (**2017**). Enhanced Cataloguing of Halogenated Organic Compounds in Marine Mammals of the Southern California Bight using a Non-Targeted Analytical Method.



6. Lorren Azure (2017). Polycyclic Aromatic Hydrocarbons and Oxygenated Polycyclic Aromatic Hydrocarbons (PAHs and Oxy-PAHs) in House Dust Samples in Relation to Smoking Behavior in the Home.
7. Maria Christina Kander (2017). Bioaccumulation of Metals (As, Cd, Cr, Cu, Ni, Pb, Se, and Zn) from Smoked Cigarette Litter in Fish (rainbow trout) and Shellfish (Mediterranean mussels).

#### Conference/Workshop Organization

- |      |  |
|------|--|
| 2016 | Session Co-Chair, Advanced Analytical Methods for Contaminant Discovery, SETAC North America Conference, Orlando, Florida                              |
| 2015 | Session Co-Chair, Advanced Analytical Methods for Contaminant Discovery, SETAC North America Conference, Salt Lake City, Utah                          |
| 2014 | Session Co-Chair, Advanced Analytical Methods for Contaminant Discovery, SETAC North America Conference, Vancouver, Canada                             |
| 2012 | Session Co-Chair, Helping Contaminants Emerge: Non-targeted and Effect-directed Environmental Analysis, SETAC North America Conference, Long Beach, CA |
| 2005 | Co-Organizer, Workshop on Brominated Flame Retardants in the Environment, National Institute of Standards and Technology, Gaithersburg, MD             |

#### Technical Reports

1. Dodder, N. G.; Stack, M. E.; Cossaboon, J. M.; Hoh, E. Chapter 4: DDT in Southern California Marine Mammals. In, Updating and Reviewing Research on Continuing Ecological Effects of Deepwater Ocean Dumping of DDT Wastes into the Southern California Bight. Prepared for Chartrand Environmental. May 2022.
2. Clatterbuck, C. A.; Lewison, R. A.; Dodder, N.; Zeeman, C.; Schiff, K. Southern California Bight 2013 Regional Monitoring Program: Volume V. Contaminant Bioaccumulation in Seabird Eggs of the Southern California Bight. SCCWRP Technical Report 944. September 2016.
3. Dodder N.; Schiff, K.; Latker, A.; Tang, C.-L. Southern California Bight 2013 Regional Monitoring Program: Volume IV. Sediment Chemistry. SCCWRP Technical Report 922. April 2016.
4. Dodder, N.; Schiff, K. Areas of Special Biological Significance: Northern California Bioaccumulation Monitoring. Technical Report 857. SCCWRP Technical Report 857. January 2015.
5. Dodder, N. G.; Mehinto, A. C.; Maruya, K. A. Monitoring of Constituents of Emerging Concern (CECs) in California's Aquatic Ecosystems – Pilot Study Design and QA/QC Guidance. Southern California Coastal Water Research Project. SCCWRP Technical Report 854. March 2015.
6. Dodder, N.; Lao, W.; Tsukada, D.; Diehl, D.; Schiff, K. Areas of Special Biological Significance: Bioaccumulation Monitoring. SCCWRP Technical Report 816. February 2014.
7. Schiff, K.; Gossett, R.; Ritter, K.; Tiefenthaler, L.; Dodder, N.; Lao, W.; Maruya, K. Southern California Bight 2008 Regional Monitoring Program: III. Sediment Chemistry. SCCWRP Technical Report 661. July 2011.
8. Eppe, G.; Dodder, N. G. Identification of endogenous and exogenous metabolites in SRM 1950 using the NIST mass spectral library and retention indices. NIST Report of Analysis, 2010.
9. Eppe, G.; Dodder, N. G. Identification of endogenous and exogenous metabolites in SRM 1950 using authentic compounds. NIST Report of Analysis, 2010.
10. Eppe, G.; Lowenthal, M. S.; Dodder, N. G. Identification of amino acids (AA) in SRM 1950 using authentic compounds. NIST Report of Analysis, 2009.

11. Dodder, N. G. Identification of collision-induced-dissociation fragment ions of cobalamin (Vitamin B12 SRM 3951). NIST Report of Analysis, **2009**.
12. Dodder, N. G. Characterization of Peptides for NCI CPTAC Study 7. NIST Report of Analysis, **2009**.
13. Dodder, N. G.; Liao, W.-L.; Camara, J. E.; Bunk, D. M.; Turko, I. V. Informatics to determine the percent incorporation of nitrogen-15 in isotopically labeled proteins. NIST Report of Analysis, **2009**.
14. Dodder, N. G.; Lowenthal, M. S.; Bunk, D. M. Determination of the Optimum Target Peptides and MS/MS Transitions for the Quantification of Cardiac Troponin. NIST Report of Analysis, **2008**.
15. Dodder, N. G.; Bunk, D. M. Characterization of Peptide Reference Materials for the CPTAC Initial Multiple Reaction Monitoring Inter-Laboratory Comparison (Study 4). NIST Report of Analysis, **2008**.
16. Dodder, N. G. Error Rate of Peptide De Novo Sequencing. NIST Report of Analysis, **2007**.
17. Dodder, N. G. Computer Program for the Automated Determination of Protein Sequence Coverage. NIST Report of Analysis, **2007**.
18. Dodder, N. G. Computer Programs for the Determination of Amino Acid Combinations of Similar Mass. NIST Report of Analysis, **2007**.
19. Dodder, N. G.; Bunk, D. M. Initial Determination of the Peptide Sequencing Capabilities of the MALDI TOF/TOF Mass Spectrometer. NIST Report of Analysis, **2007**.
20. Dodder, N. G. AWK Computer Program for the Calculation of Peptide Ion Fragments. NIST Report of Analysis, **2007**.
21. Dodder, N. G. AWK Computer Programs for the Analysis of Hydrogen/Deuterium Exchange Experiments. NIST Report of Analysis, **2007**.
22. Dodder, N. G.; Sniegowski, L. T.; Welch, M. J. SRM 967 Creatinine in Human Serum NKDEP Commutability Study: GC/MS Measurements. NIST Report of Analysis, **2006**.
23. Dodder, N. G.; Sniegowski, L. T.; Welch, M. J. Quantification of Creatinine in Standard Reference Material 967 by GC/MS. NIST Report of Analysis, **2006**.
24. Dodder, N. G. Separation of Hexabromocyclododecane Isomers by C18 and C30 Liquid Chromatography. NIST Report of Analysis, **2005**.
25. Dodder, N. G. Percent Composition of Three Hexabromocyclododecane (HBCD) Isomers in Atmospheric Samples from Five Locations in the United States. NIST Report of Analysis, **2005**.
26. Dodder, N. G.; Stapleton, H. M. Development of a Quantitation Method for Three Hexabromocyclododecane (HBCD) Isomers by C30 Liquid Chromatography and Tandem Mass Spectrometry. NIST Report of Analysis, **2005**.
27. Stapleton, H. M.; Dodder, N. G. Measurement of PBDEs, Methoxylated PBDEs and HBCD in Archived California Sea Lion (*Zalophus californianus*) Blubber. NIST Report of Analysis, **2005**.
28. Dodder, N. G. Analysis of Boswellic Acids by Liquid Chromatography Mass Spectrometry. NIST Report of Analysis, **2005**.

### Media Interviews

1. Le condor de Californie très menacé par des polluants persistants. (The California condor is highly threatened by persistent pollutants.) Sciences Et Avenir, Eva Proust, May 31, **2022**.  
[https://www.sciencesetavenir.fr/animaux/biodiversite/contamine-aux-polluants-persistants-le-condor-de-californie-est-tres-menace\\_163661](https://www.sciencesetavenir.fr/animaux/biodiversite/contamine-aux-polluants-persistants-le-condor-de-californie-est-tres-menace_163661)
2. Coastal condors face risks from legacy chemicals. The Wildlife Society, David Frey, May 20, **2022**.  
<https://wildlife.org/coastal-condors-face-risks-from-legacy-chemicals/>

3. Banned Contaminants Still Threaten Endangered California Condors. SDSU NewsCenter, SDSU News Team, May 18, **2022**. [https://newscenter.sdsu.edu/sdsu\\_newscenter/news\\_story.aspx?sid=78779](https://newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?sid=78779)
4. Scientists find new and mysterious DDT chemicals accumulating in California condors. Los Angeles Times, Rosanna Xia, May 17, **2022**. <https://www.latimes.com/environment/story/2022-05-17/study-finds-high-concentrations-of-ddt-in-california-condors>

### Presentations

1. Assessing environmental contaminants in the critically endangered California condor: Cross-project GC×GC/TOF-MS datasets. 19<sup>th</sup> International GC×GC Symposium, Virtual. May 29-June 2, **2022**. (Oral)
2. The Historical Trend of DDX in California Marine Mammals. California Coastal Chloro-Contamination Conference (C5), University of California Santa Barbara, May 17-18, **2022**. (Invited Oral)
3. Focus Group: External Software and Freeware Options. 13<sup>th</sup> Multidimensional Chromatography Virtual Workshop, Virtual. February 2, **2022**. (Invited Oral)
4. Non-targeted identification of contaminants in Southern California sentinel marine mammals. LECO GC×GC Symposium & Workshop, Virtual. September 18, **2020**. (Oral)
5. Nicotine levels in silicone wristband samplers worn by children exposed to secondhand smoke and electronic cigarette vapor are correlated with urinary cotinine. Society for Research on Nicotine and Tobacco (SRNT), San Francisco, February 20-23, **2019**. (Poster)
6. Non-targeted identification of contaminants in Southern California sentinel marine mammals. Society for Environmental Toxicology and Chemistry, Southern California Chapter Annual Meeting, Dana Point, CA. April 27, **2017**. (Invited Oral)
7. Non-targeted identification of contaminants in Southern California sentinel marine mammals. SETAC North America 37<sup>th</sup> Annual Meeting, Orlando, FL. November 10, **2016**. (Oral)
8. Methods and software for identification of contaminants in sentinel marine mammals. Nontarget2016, Ascona, Switzerland. June 2, **2016**. (Oral)
9. Non-Targeted Biomonitoring of Contaminants in Southern California Bottlenose Dolphins (*Tursiops truncatus*). Southern California Marine Mammal Workshop, Newport Beach, CA. February 19, **2016**. (Invited Oral)
10. Biomonitoring of organic contaminants in marine mammals by GC×GC/TOF-MS. SETAC North America 36<sup>th</sup> Annual Meeting, Salt Lake City, UT. November 4, **2015**. (Poster)
11. An integrated biological and chemical monitoring framework for contaminants of emerging concern in aquatic ecosystems. Industrial Environmental Association 31<sup>st</sup> Environmental Training Symposium and Conference, San Diego, CA. October 30, **2015**. (Invited Oral)
12. Comprehensive Detection of Contaminants by Non-Targeted Mass Spectrometry. SCCWRP Annual Symposium, Costa Mesa, CA. February 26, **2015**. (Oral)
13. The Southern California Coastal Water Research Project (SCCWRP). Scripps Center for Oceans and Human Health, La Jolla, CA. December 10, **2014**. (Invited Oral)
14. Monitoring of Constituents of Emerging Concern (CECs) in Aquatic Ecosystems – Pilot Study Requirements. California Surface Water Ambient Monitoring Program (SWAMP) Meeting, Riverside, CA. November 6, **2014**. (Invited Oral)
15. Southern California CEC Surveys, Monitoring Prioritization, and Advanced Measurement Technology. Southern California Environmental LC/MS/MS Discussion Group, Orange County Water District, Fountain Valley, CA. May 22, **2014**. (Oral)

16. Broader Impacts of SCOHH Non-Targeted Analysis and Natural Halogenated Product Research. Oceans and Human Health Grantee Conference, Scripps Institute of Oceanography, La Jolla, CA. March 27, **2014**. (Invited Oral)
17. Trend detection and enhanced cataloguing of bioaccumulative chemicals in southern California dolphins. Annual California Stranding Network Meeting, NOAA Southwest Fisheries Science Center, La Jolla, CA. February 7, **2014**. (Invited Oral)
18. Monitoring Strategies for Contaminants in Marine Ecosystems. Babcock Laboratories, Riverside, CA, February 5, **2014**. (Invited Oral)
19. Contaminants of Emerging Concern in Southern California. Society for Environmental Toxicology and Chemistry, Southern California Chapter Annual Meeting, San Pedro, CA, April 18, **2013**. (Invited Oral)
20. National Mussel Watch Monitoring of the California Coast in 2010. Korean-American Scientists and Engineers Association Regional Conference, Carlsbad, CA. February 16, **2013**. (Invited Oral)
21. Levels of Persistent Organic Pollutants in Blubber of Free-Ranging Bottlenose Dolphins (*Tursiops truncatus*) Off Southern California. Southern California Marine Mammal Workshop, Newport Beach, CA. February 1, **2013**. (Poster)
22. Pilot Monitoring of CECs in California via the Mussel Watch Program. SCCWRP Annual Symposium, Costa Mesa, CA. January 24, **2013**. (Oral)
23. Occurrence of CECs in Bivalve Tissues from the California Mussel Watch Pilot Study. Society for Environmental Toxicology and Chemistry National Meeting, Long Beach, CA. November 14, **2012**. (Oral)
24. Pilot Monitoring of CECs in California via the Mussel Watch Program. Society for Environmental Toxicology and Chemistry, Southern California Chapter Annual Meeting, Costa Mesa, CA, April 20, **2012**. (Oral)
25. A non-targeted GC×GC/TOF-MS method for inventorying persistent and bioaccumulative contaminants in marine environments. American Chemical Society Annual Meeting, San Diego, CA. March 28, **2012**. (Poster)
26. Pilot Monitoring of CECs in California via the Mussel Watch Program. SCCWRP Annual Symposium, Costa Mesa, CA. January 26, **2012**. (Oral)
27. Non-targeted Mass Spectrometry for Contaminant Identification. Orange County Sanitation District, Fountain Valley, CA. December 6, **2011**. (Invited Oral)
28. Untargeted Mass Spectrometry for Contaminants of Emerging Concern. San Francisco Estuary Institute, Oakland, CA. March 25, **2011**. (Invited Oral)
29. Identification of anthropogenic and naturally occurring organic compounds in California sea lion and Massachusetts dolphin blubber. Southern California Marine Mammal Workshop, Newport Beach, CA. January 21-22, **2011**. (Poster)
30. Untargeted Mass Spectrometry for Contaminants of Emerging Concern. SCCWRP Annual Symposium, Costa Mesa, CA. January 25, **2011**. (Oral)
31. Tracking Contaminants in the Southern California Coastal Waters. University of California Riverside, Department of Environmental Sciences, Riverside, CA. December 1, **2010**. (Invited Oral)
32. Identification of anthropogenic and naturally occurring organic compounds in California sea lion and Massachusetts dolphin blubber. Society for Environmental Toxicology and Chemistry National Meeting, Portland, OR. November 7-10, **2010**. (Poster)
33. Identification and Quantification of Metabolites in a Human Plasma Standard Reference Material by Multiple Mass Spectrometry Methods. American Society for Mass Spectrometry Conference, Philadelphia, PA, **2009**. (Oral)
34. Quantification of Creatinine in a Human Serum Standard Reference Material (SRM 967) by GC-MS and LC-MS. American Society for Mass Spectrometry Conference, Indianapolis, IN, **2007**. (Poster)

35. Protein biomarker analysis: measurement of the analytical variability due to tryptic digestion and MALDI-TOF-MS analysis. United States Human Proteome Organization Conference, Boston, MA, **2006**. (Poster)
36. The reproducibility of tryptic digests measured by MALDI-TOF-MS. American Chemical Society National Meeting, Washington, DC, **2005**. (Oral)
37. Improvements in the Analysis of Hexabromocyclododecane (HBCD) by LC/MS/MS. Workshop on Brominated Flame Retardants in the Environment, National Institute of Standards and Technology, Gaithersburg, MD, **2005**. (Poster)
38. Quantitation of Transferrin in Human Serum by MALDI-TOF-MS. American Society for Mass Spectrometry Conference, San Antonio, TX, **2005**. (Poster)
39. Analysis of Three Hexabromocyclododecane (HBCD) Isomers by C30 Liquid Chromatography and Tandem Mass Spectrometry. Sigma Xi Postdoctoral Presentation, National Institute of Standards and Technology, Gaithersburg, MD, **2005**. (Poster)
40. Studies on the Quantitation of Proteins Using Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF-MS). American Society for Mass Spectrometry Conference, Nashville, TN, **2004**. (Poster)
41. Brominated Flame Retardants: Current Sources, Fate and Transformation in the Environment. National Institute of Standards and Technology, Building and Fire Research Laboratory, Gaithersburg, MD, **2004**. (Oral presentation with Heather M. Stapleton.)
42. Quantitation of Intact Proteins by Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF-MS). Sigma Xi Postdoctoral Presentation, National Institute of Standards and Technology, Gaithersburg, MD, **2004**. (Poster)
43. Polybrominated Diphenyl Ethers in Air, Fish, and Human Maternal and Umbilical Cord Blood Samples. National Institute of Standards and Technology, Analytical Chemistry Division, Gaithersburg, MD, **2003**. (Oral)
44. Polybrominated Diphenyl Ethers in Air, Fish, and Human Maternal and Umbilical Cord Blood Samples. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, **2003**. (Oral)
45. Polybrominated Diphenyl Ether (PBDE) in Human Maternal and Umbilical Cord Blood Samples. Indiana Analytical Conference, McCormick's Creek State Park, IN, **2002**. (Oral)
46. Polybrominated Diphenyl Ethers (PBDE) in Air, Fish, and Human Maternal and Umbilical Cord Blood Samples. Midwest Environmental Chemistry Workshop, Chicago, IL, **2002**. (Oral, award winner.)
47. Concentrations and Spatial Variations of Polybrominated Diphenyl Ethers in Air, Fish, and Human Blood from the Northeastern United States. Annual Polybrominated Diphenyl Ether Workshop, Burlington, ON, **2001**. (Oral)
48. Polybrominated Diphenyl Ethers (PBDEs) in Fish from a Lake in the Vicinity of a Potential Point Source. Society for Environmental Toxicology and Chemistry Meeting, Nashville, TN, **2000**. (Oral)
49. Polybrominated Diphenyl Ethers (PBDEs) in Fish from a Lake in the Vicinity of a Potential Point Source. International Association for Great Lakes Research Meeting, Cornwall, ON, **2000**. (Oral)