

KERI C. HORNBUCKLE

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Professional Appointments

2007-present Professor, Dept. Civil and Environmental Engineering, University of Iowa
2010-2016 Associate Dean for Academic Programs, College of Engineering, University of Iowa
2007-2010 Chair, Dept. Civil and Environmental Engineering, University of Iowa
2007 Visiting Professor, Stockholm University, Sweden
2001- 2007 Associate Professor, Dept. Civil and Environmental Engineering, University of Iowa
1998- 2001 Assistant Professor, Dept. Civil and Environmental Engineering, University of Iowa
1995-1998 Assistant Professor, Dept. Civil, Structural and Environmental Engineering, State University of New York at Buffalo

Education

Ph.D. (Civil Engineering - Environmental Engineering and Science) January 1996. University of Minnesota, Twin Cities,
Bachelor of Arts (Chemistry) May 1987. Grinnell College, Grinnell, Iowa.

Fellowships/Professorships

2015-present Donald E. Bently Professor of Engineering
2012-2013 Executive Leadership in Academic Technology and Engineering (ELATE) Fellowship
2007-2010 Robert and Virginia Wheeler Faculty Fellow of Engineering
1999, 2000 Old Gold Summer Fellowship, University of Iowa
1994-1995 Doctoral Dissertation Fellowship, University of Minnesota
1991-1992 Charles S. Mott / International Association of Great Lakes Research Fellowship
1986 Grinnell/ Leiden Research Fellowship. University of Leiden, The Netherlands

Awards and Honors

Honors Award for Campus Support, University Honors Program (2016)
The Faculty Excellence Award for Research, College of Engineering (2013)
Distinguished Achievement Award, (now called the May Brodbeck Award), University of Iowa (2009)
Iowa Women of Innovation (Nominated), Technology Association of Iowa. (2009)
University of Iowa Career Development Award (to work at Stockholm University, Sweden, 2007)
IAGLR Appreciation Award, International Association for Great Lakes Research (2006)
Collegiate Teaching Award, College of Engineering (Nominated, 2005)
Distinguished Service Award, Association of Environmental Engineering and Science Professors (2003)
Excellence in Review Award, American Chemical Society, *Environmental Science & Technology* (2003)
Certificate of Appreciation, the Great Lakes Program at SUNY University at Buffalo (1998)
Early Faculty Career (CAREER) Award, National Science Foundation (1997)
Engineering Education Scholar, National Science Foundation (1996)
Postdoctoral Award (declined), NSF/NATO (1995)
Best Student Paper Award, Environmental Division of the American Chemical Society (1993)

University Affiliations

IIHR- Hydrosience and Engineering
Interdisciplinary Graduate Program in Human Toxicology
Department of Occupational and Environmental Health, secondary faculty appointment
Center for Global and Regional Environmental Research

SERVICE

University Service

2017-present Chair, Academic Technologies Advisory Council (ATAC)
2015-present Faculty Advisory Council, International Programs
2013-2014 Chair, Seven-Year Review of the College of Liberal Arts and Sciences
2012-2016 University of Iowa Arts Advancement Committee
2011-2016 Executive Committee, Grand Challenges Scholars Program
2010-2016 Conference Committee: UI Health Sciences & Engineering Women Faculty Dev. Conf.
2011-2014 Presidential Scholars Selection Committee
2011-2012 College of Engineering Strategic Planning Executive Committee
2011 Program Review Committee, Applied Math and Computational Science
2010-2011 Provost Search Committee
2010-2011 Program Review Committee, Faculty Scholar and Global Scholar award
2010-2014 Honors Scholarship Selector, University of Iowa Honors Program.
2009-2014 U of IA Patent Advisory Committee, Office of the Vice President for Research
2009 Committee, proposal to President Mason for cluster hire in Water Sustainability
2009 Keynote Speaker, Belin-Blank Honors Recognition Event October 18, Iowa City
2009-2010 Chair, Search Committee for Associate VP for Diversity
2009-2010 Graduate Programs Assessment Task Force
2009-2010 Search Committee, Associate Provost for Faculty
2008-2009 Sustainability Curriculum Committee Member
2008 Review Committee, Regents Award for Faculty Excellence
2007-present Engineering Administrative Council (EAC) Member
2007-2008 Provost Search Committee
2005-2008 AGEP Iowa Advisory Board member (Alliance for Graduate Education & Professoriate)
2003- 2004 Faculty Senate Member
2004- 2007 Review Committee for the IREU (Iowa Research Experience for Undergraduates)
2003- 2006 Faculty Senate subcommittee on Student Financial Aid
2002- 2008 Center for the Health Effects of Environmental Contamination (CHEEC) Advisory Board

Scientific and Professional Societies

American Chemical Society (ACS) (1985 - Present).

Environmental Science & Technology. Associate Editor (2014- present)

Environmental Science & Technology Guest co-Editor, Special Focus Issue: PCB Sources, Exposures and Toxicities (2010)

American Society of Civil Engineers (ASCE) (2006-present)

Journal of Environmental Engineering Associate Editor (2006)

Association of Environmental Engineering and Science Professors (AEESP) (1995 - Present).

Conference Selection Committee (2010-2016)

Internet Resources Committee Member (2009 - 2011)

Board Member (2006 - 2009)

International Association for Great Lakes Research (IAGLR) (1993 - Present).

Vice President / President / Past President (2003 - 2006)

Journal of Great Lakes Research. Associate Editor (2001 - 2007)

Board Member (2002 - 2006)

Society for Environmental Toxicology and Chemistry (SETAC) (2000 - Present)

Women in Engineering Programs and Advocates (WEPAN) (2000 - Present)

International Service

Opponent for the Ph.D. defense, Department of Environmental Science and Analytical Chemistry (ACES), Stockholm University, Sweden. (2015)

Conference Committee, 4th International Conference on Occurrence, Fate, Effects, & Analysis of Emerging Contaminants in the Environment (EmCon2014). Iowa City, IA August 2014.

Conference Committee and Session Leader, 7th PCB Workshop 2012, Arcachon, France, (May 2012).

Opponent for the Ph.D. defense, Department of Occupational and Environmental Medicine, Sahlgrenska Academy at University of Gothenburg, Sweden. (2010).

Expert Reviewer for faculty search, Stockholm University, ITM- Applied Environmental Science (2010, 2014).

Conference Committee Member, 6th International PCB Workshop, Visby, Sweden, (2009 - 2010).

Co-Organizer, Special session honoring Steven J. Eisenreich at the International Association for Great Lakes Research annual meeting, Waterloo, Ontario. (May 2004).

Workshop Organizer, presenter, and scientific advisor: "Using Models to Develop Air Toxics Reduction Strategies: Lake Michigan as A Test Case." Sponsored by the Lake Michigan Forum, the Delta Institute, and the International Joint Commission, Milwaukee, WI, (October 2000).

Organizer, Joint Workshop of the Delta Institute and the International Air Quality Advisory Board of the International Joint Commission: "The Use of Atmospheric Modeling in Policy Development". Ann Arbor, MI, (July 1999).

International Joint Commission Science Advisory Board (1998 - 2002).

Liaison to the Air Quality Advisory Board, International Joint Commission (1998-2002).

State and National Service

Environmental Laboratory Advisory Board (ELAB), a standing Federal Advisory Committee Act board that advises the U.S. Environmental Protection Agency (2016- present)

Advisory Board, Executive Leadership in Academic Technology and Engineering (ELATE), College of Medicine, Drexel University (2014-present)

Headwaters Council member, University of Minnesota Water Resources Center, St Paul, MN, Member. (2009 - 2013).

NSF (unsolicited proposals, air pollution), Panel Reviewer. (2003, 2005, 2007, 2012).

Presentation and Discussion with Graduate Student Women in Engineering, University of Wisconsin, Madison, (2011).

National Institute of Environmental Health Sciences (NIH Institute) panel review (2009, 2013).

Lake Michigan Atmospheric Deposition of Toxics Task Force, Lake Michigan Forum, Task Force Member. (2001- 2005).

Air Quality Advisory Committee, Iowa Environmental Council, Member. (2009).

Conference Organizing Committee, Biennial Conference of the Association of Environmental Engineering and Science Professors (AEESP), Iowa City, Iowa. (July 2009).

Science Committee for the National Science Foundation's CLEANER Project (the Collaborative Large-scale Engineering Analysis Network for Environmental Research), (2005 - 2006).

U.S.EPA's Science Advisory Board. Produced report EPA-SAB-05-002: "EPA's Air Toxics Research Strategy and Air Toxics Multi-Year Plan. A review by the Air Toxics Research Strategy and Multi-Year Plan Panel of the EPA Science Advisory Board.", Panelist. (2003 - 2004).

Co-Chair, 26th Annual Midwest Environmental Chemistry Workshop, Iowa City, IA. (October 2003).

Advisory board: UNI Summer Lakes study, University of Northern Iowa, Cedar Fall, IA, Member. (May 2000).

ASCE Environmental and Water Resources Design Conference. Williamsburg, Iowa. 37th annual "Aboard the USEPA Research Vessel Lake Guardian: Tracking Toxic organic chemicals in the Great Lakes", (1999).

Delta Institute's Workshop on Atmospheric Deposition of Toxics, Integrating Science and Policy, Chicago, IL, (1999).

National Science Foundation's Engineering Education Scholars Workshop. "Surviving and Thriving in the First Years." Carnegie Mellon University. Pittsburgh, PA, (1997 and 1998).

Session Chair, Adirondacks and Beyond, a Conference to Explore Science and Policy Linkages. "Predictive Models for Air Quality Assessment and Ecological Effects", Saratoga Springs, NY, N. (1997).

Air and Waste management Association's Conference on Atmospheric Deposition to the Great Waters, Niagara Fall, NY, Session Chair (October 1996).

TEACHING

Classroom Teaching

Environmental Engineering: Natural Systems (Iowa) / Water Quality (SUNY) (1995-2004,2017) Required sophomore/junior level civil engineering course and associated laboratory sections, enrollment 50-100.

Air Pollution Control Technology (1997, 2000-2006 SUNY and Iowa) Elective senior/MS level civil & environmental and chemical engineering course, enrollment 20-30.

Engineering Problem Solving I (2002-2005) Required first-year engineering course, enrollment ~400.

Environmental Processing of Organic Chemicals (2000, 2002) Ph.D. level environ. engineering course, enrollment 20-30.

Environmental Engineering Graduate Seminar (frequently)
Civil & Environmental Engineering Sophomore Seminar (2008-2010)
Civil & Environmental Engineering Professional Seminar (2007-2010)
Engineering Student Success (2015-2016)
Engineering Honors Seminar (2011- 2016)

Current Graduate Students:

Nick Herkert (Ph.D. student)
Jacob Jahnke (Ph.D. student)

Current Research Staff/Collaborators:

Andrew Awad (research technician)
Andres Martinez, Ph.D. (research engineer)
Maeve Bittle (undergraduate researcher)
Aaron Boesen (undergraduate researcher)
Rachel Marek, Ph.D. (research scientist)

Graduates and current position:

Andrew Awad (MS, 2015)
Wenxin Koh (Ph.D., 2015) Siegwerk, Des Moines, Iowa
Colin O'Sullivan (MS, 2014)
Zach Rodenburg (MS, 2014), consulting engineer, Illinois/Iowa
Rachel Marek (MS, 2009, Ph.D., 2013) Post-doc IIHR
Rachel Yucuis, (MS, 2012) consulting engineer, Mpls
Nick Petrich (MS, 2011 w/ Prof Scott Spak) consulting engineer
Tim Schulz (MS, 2011) consulting engineer, St. Louis
Andres Martinez (Ph.D., 2010) Research Engineer IIHR
Paul Eastling, (MS, 2010) consulting engineer, Mpls
Carolyn Persoon (MS 2005, Ph.D. 2010) U.S. EPA Region 5, Chicago
Karin Norström, Ph.D. (former post-doctoral fellow) IVL Swedish Environmental Research Institute
Mark Weldon (Ph.D., 2007) Quaker Oats, Cedar Rapids, Iowa
William Wombacher (MS, 2007) University of Colorado
Bryan Boulanger (Ph.D., 2004) Assoc Prof, Ohio Northern Univ.
Aaron M. Peck (Ph.D., 2004) Environmental Consultant, GA
Meredith Gooding (former post-doctoral fellow) U.S. EPA RTP, NC
Emily Linebaugh, (MS, 2004) Veenstra and Kimm, Inc., Coralville, IA
Sondra M. Miller (Ph.D., 2003) Assoc Prof. Boise State University
David Wethington (MS, 2002), Army Corp of Engineers, Chicago
Gretchen (Smith) Tsosie (MS, 1999) Navajo Area Indian Health Services, NM
S. Nicole Brown (MS, 2000) Smith Engineering Consultants, York IL
Jerel J Bodgdan (M.S., 1999), Malcolm-Pirnie, Inc., Orchard Park, NY
Mark L. Green (Ph.D., 2000) State University of New York at Buffalo
Zunyu Tao (M.S., 1998) State University of New York at Buffalo

PhD Committee Membership (other than as chair) Total: >25 students

Undergraduate Student Research Mentoring. Total: >30 students

Supervision of Postdoctoral Associates

Wenxin Koh "Metabolites of PCBs: method development"
Rachel Marek "Sources and fate of PCBs and OH-PCBs in Chicago and in Human Serum"
Dingfei Hu, "Detection and characterization of polychlorinated biphenyls in urban air."
Izabela Kania-Korwel, "Iowa Superfund Research Program Analytical Core."
Andres Martinez. "PCBs in industrial sediments"

Meredith Gooding Lassiter, "Effects of Synthetic Must Fragrances on Freshwater Mussels."
Karin Norström, "Analytical Chemistry of PCBs and their Metabolites in Complex Matrices."

RESEARCH

Publications:

Reviewed Articles in Technical Journals

74. Grimm, F.A., Lehmler, H., Koh, W. X., DeWall, J., Teesch, L.M., Hornbuckle, K.C., Thorne, P.S., Robertson, L.W., Duffel, M.W. Identification of a sulfate metabolite of PCB 11 in human serum. *Environment International* 98, 120-128. DOI: 10.1016/j.envint.2016.10.023
73. Martinez, A., Hadnott, B.N., Awad, A., Herkert, N.J., Tomsho, K., Basra, K., Scammell, M.K., Heiger-Bernays, W., Hornbuckle, K.C. (2017) Release of Airborne Polychlorinated Biphenyls from New Bedford Harbor Results in Elevated Concentrations in the Surrounding Air. *Environmental Science & Technology Letters* 4 (4), 127-131. DOI: 10.1021/acs.estlett.7b00047
72. Koh, W., Hornbuckle, K. C., Wang, K., Thorne, P. (2016). Serum polychlorinated biphenyls and their hydroxylated metabolites are associated with demographic and behavioral factors in children and mothers. *Environment International*, 94, 538-545. DOI:10.1016/j.envint.2016.06.014
71. Herkert, N. J., A. Martinez and K. C. Hornbuckle (2016). "A model using local weather data to determine the effective sampling volume for PCB congeners collected on passive air samplers." *Environmental Science & Technology*, 50(13), 6690–6697. DOI: 10.1021/acs.est.6b00319
70. Awad, A., Martinez, A., Marek, R. F., Hornbuckle, K. C. (2016). Occurrence and Distribution of Two Hydroxylated Polychlorinated Biphenyl (OH-PCB) Congeners in Chicago Air. *Environmental Science & Technology Letters*, 3 (2), pp 47–51. DOI: 10.1021/acs.estlett.5b00337
69. Koh, W., Hornbuckle, K. C., Marek, R. F., Wang, K., Thorne, P. S. (2016). Hydroxylated polychlorinated biphenyls in human sera from adolescents and their mothers living in two U.S. Midwestern communities. *Chemosphere*, 147, 389–395. DOI: 10.1021/acs.estlett.5b00337
68. Martinez, A., Schnoebelen, D. J., Hornbuckle, K. C. (2016). Polychlorinated biphenyl congeners in sediment cores from the Upper Mississippi River. *Chemosphere*, 144, 1943–1949. doi:10.1016/j.chemosphere.2015.10.090
67. Martinez, A., Spak, S. N., Petrich, N. T., Hu, D., Carmichael, G. R., Hornbuckle, K. C. (2015). Atmospheric dispersion of PCB from a contaminated Lake Michigan harbor. *Atmospheric Environment*, 122, 791–798. doi:10.1016/j.chemosphere.2015.10.090
66. Shanahan, C. E., Spak, S. N., Martinez, A., Hornbuckle, K. C. (2015). Inventory of PCBs in Chicago and Opportunities for Reduction in Airborne Emissions and Human Exposure. *Environmental Science & Technology*, 49(23), 13878-13888. <http://dx.doi.org/10.1021/acs.est.5b00906>
65. Koh, W., Hornbuckle, K.C., and Thorne, P.S. (2015) Human Serum from Urban and Rural Adolescents and Their Mothers Shows Exposure to Polychlorinated Biphenyls Not Found in Commercial Mixtures. *Environmental Science & Technology* 49 (13), 8105-8112. DOI: 10.1021/acs.est.5b01854
64. Peverly, A. A., O'Sullivan, C., Venier, M., Liu, L.-Y., Martinez, A., Hornbuckle, K. C., Hites, R. A. (2015). Chicago's Sanitary and Ship Canal Sediment: Polycyclic Aromatic Hydrocarbons, Polychlorinated Biphenyls, Brominated Flame Retardants, and Organophosphate Esters. *Chemosphere* 134, 380-386.

doi:10.1016/j.chemosphere.2015.04.065

63. Ampleman, M. D., Martinez, A., DeWall, J., Rawn, D. F. K., Hornbuckle, K. C., Thorne, P. S. (2015). Inhalation and Dietary Exposure to PCBs in Urban and Rural Cohorts via Congener-Specific Measurements. *Environmental Science & Technology*, 49(2), 1156-1164. <http://dx.doi.org/10.1021/es5048039>
62. Grimm, F. A., Hu, D., Kania-Korwel, I., Lehmler, H.-J., Ludewig, G., Hornbuckle, K. C., Duffel, M. W., Bergman, Å., Robertson, L. W. (2015). Metabolism and metabolites of polychlorinated biphenyls. *Critical Reviews in Toxicology*, 45(3), 245–272. DOI:10.3109/10408444.2014.999365
61. Peverly, A. A., Ma, Y., Venier, M., Rodenburg, Z. L., Spak, S. M., Hornbuckle, K. C., Hites, R. A. (2015). Variations of Flame Retardant, Polycyclic Aromatic Hydrocarbon, and Pesticide Concentrations in Chicago's Atmosphere Measured using Active and Passive Sampling. *Environmental Science & Technology* 49 (9), 5371-5379.
60. Liang, Y., Martinez, A., Hornbuckle, K. C., Mattes, T. E. (2014). Potential for Polychlorinated Biphenyl Biodegradation in Sediments from Indiana Harbor Shipping Canal. *International Biodeterioration and Biodegradation*, 89, 50–57. dx.doi.org/10.1016/j.ibiod.2014.01.005
59. Marek, R. F., Thorne, P. S., DeWall, J., Hornbuckle, K. C. (2014). Variability in PCB and OH-PCB serum levels in children and their mothers in urban and rural U.S. communities. *Environmental Science & Technology* 48, 13459-13467.
58. Zhu, Y., Mapuskar, K. A., Marek, R. F., Wu, W., Lehmler, H.-J., Robertson, L. W., Hornbuckle, K. C., Spitz, D. R., Aykin-Burns, N. (2013). A New Player in Environmentally Induced Oxidative Stress: Polychlorinated Biphenyl Congener, 3,3' dichlorobiphenyl (PCB11). *Toxicological Sciences*, 136(1), 39–50. [10.1093/toxsci/kft186](http://dx.doi.org/10.1093/toxsci/kft186)
57. Yucius, R. A., Stanier, C. O., Hornbuckle, K. C. (2013). Cyclic Siloxanes in Air, Including Identification of High Levels in Chicago and Distinct Diurnal Variation. *Chemosphere*, 92(8), 905–910.
56. Marek, R. F., Martinez, A., Hornbuckle, K. C. (2013). Discovery of Hydroxylated Polychlorinated Biphenyls (OH-PCBs) in sediment from a Lake Michigan waterway and original commercial Aroclors. *Environmental Science & Technology*, 47, 8204–8210.
55. Marek, R. F., Thorne, P. S., Wang, K., DeWall, J., Hornbuckle, K. C. (2013). PCBs and OH-PCBs in Serum from Children and Mothers in Urban and Rural U.S. Communities. *Environmental Science & Technology*, 47(7), 3353–3361.
54. Martinez, A., O'Sullivan, C., Reible, D., Hornbuckle, K. C. (2013). Sediment pore water distribution coefficients of PCB congeners in enriched black carbon sediment. *Environmental Pollution*, 182, 357-363.
53. Petrich, N. T., Spak, S. N., Carmichael, G. R., Hu, D., Martinez, A., Hornbuckle, K. C. (2013). Simulating and explaining passive air sampling rates for semi-volatile compounds on polyurethane foam passive samplers. *Environmental Science & Technology*, 47, 8591–8598.
52. Martinez, A., Erdman, N. R., Rodenburg, Z. L., Eastling, P. M., Hornbuckle, K. C. (2012). Spatial distribution of chlordanes and PCB congeners in soil in Cedar Rapids, Iowa, USA. *Environmental Pollution*, 161, 222-228.
51. Hu, X., Adamcakova-Dodd, A., Lehmler, H.-J., Hu, D., Hornbuckle, K., Thorne, P. S. (2012). Subchronic Inhalation Exposure Study Of An Airborne Polychlorinated Biphenyl Mixture Resembling The Chicago Ambient Air Congener Profile. *Environmental Science & Technology*, 46(17), 9653-9662.

50. Martinez, A., Hornbuckle, K. C. (2011). Record of PCB congeners, sorbents and potential toxicity in core samples in Indiana Harbor and Ship Canal. *Chemosphere*, 85(3), 542.
49. Hu, D., Martinez, A., Hornbuckle, K. C. (2011). Sedimentary records of non-Aroclor and Aroclor PCB mixtures in the Great Lakes. *Journal of Great Lakes Research*, 37(2), 359.
48. Ela, W. P., Sedlak, D. L., Barlaz, M. A., Henry, H. F., Muir, D. C. G., Swackhamer, D. L., Weber, E. J., Arnold, R. G., Ferguson, P. Lee, Field, J. A., Furlong, E. T., Giesy, J. P., Halden, R. U., Henry, T., Hites, R. A., Hornbuckle, K. C., Howard, P. H., Luthy, R. G., Meyer, A. K., Saez, A. Eduardo, vom Saal, F. S., Vulpe, C. D., Wiesner, M. R. (2011). Toward Identifying the Next Generation of Superfund and Hazardous Waste Site Contaminants. *Environmental Health Perspectives*, 119(1), 6.
47. Hu, D., Lehmler, H.-J., Martinez, A., Wang, K., Hornbuckle, K. C. (2010). Atmospheric PCB congeners across Chicago. *Atmospheric Environment*, 44(12), 1550.
46. Zhao, H. X., Adamcakova-Dodd, A., Hu, D., Hornbuckle, K. C., Just, C. L., Robertson, L. W., Thorne, P. S., Lehmler, H. -J. (2010). Development of a synthetic PCB mixture resembling the average polychlorinated biphenyl profile in Chicago air. *Environment International*, 36(8), 819.
45. Norstrom, K., Czub, G., McLachlan, M. S., Hu, D., Thorne, P. S., Hornbuckle, K. C. (2010). External exposure and bioaccumulation of PCBs in humans living in a contaminated urban environment. *Environment International*, 36(8), 855.
44. Martinez, A., Wang, K., Hornbuckle, K. C. (2010). Fate of PCB Congeners in an Industrial Harbor of Lake Michigan. *Environmental Science & Technology*, 44(8), 2803.
43. Hu, D., Hornbuckle, K. C. (2010). Inadvertent Polychlorinated Biphenyls in Commercial Paint Pigments. *Environmental Science & Technology*, 44(8), 2822.
42. Hornbuckle, K. C., Robertson, L. R. (2010). Polychlorinated Biphenyls (PCBs): Sources, Exposures, Toxicities: Environ Sci Technol. *Environmental Science & Technology*, 44, 2749-2751.
41. Martinez, A., Norstrom, K., Wang, K., Hornbuckle, K. C. (2010). Polychlorinated biphenyls in the surficial sediment of Indiana Harbor and Ship Canal, Lake Michigan. *Environment International*, 36(8), 849.
40. Miller, S. M., Hornbuckle, K. C. (2010). Spatial and temporal variations of persistent organic pollutants impacted by episodic sediment resuspension in southern Lake Michigan. *Journal of Great Lakes Research*, 36(2), 256.
39. Persoon, C., Peters, T. M., Kumar, N., Hornbuckle, K. C. (2010). Spatial Distribution of Airborne Polychlorinated Biphenyls in Cleveland, Ohio and Chicago, Illinois. *Environmental Science & Technology*, 44(8), 2797.
38. Correa, P. A., Lin, L., Just, C. L., Hu, D., Hornbuckle, K. C., Schnoor, J. L., Van Aken, B. (2010). The effects of individual PCB congeners on the soil bacterial community structure and the abundance of biphenyl dioxygenase genes. *Environment International*, 36(8), 901.
37. Hu, X., Adamcakova-Dodd, A., Lehmler, H.-J., Hu, D., Kania-Korwel, I., Hornbuckle, K. C., Thorne, P. S. (2010). Time Course of Congener Uptake and Elimination in Rats after Short-Term Inhalation Exposure to an Airborne Polychlorinated Biphenyl (PCB) Mixture. *Environmental Science & Technology*, 44(17), 6893.
36. Persoon, C., Hornbuckle, K. C. (2009). Calculation of passive sampling rates from both native PCBs and depuration compounds in indoor and outdoor environments. *Chemosphere*, 74(7), 917.

35. Wombacher, W. D., Hornbuckle, K. C. (2009). Synthetic Musk Fragrances in a Conventional Drinking Water Treatment Plant with Lime Softening. *Journal of Environmental Engineering-ASCE*, 135(11), 1192.
34. Hu, D., Martinez, A., Hornbuckle, K. C. (2008). Discovery of Non-Aroclor PCB (3,3'-Dichlorobiphenyl) in Chicago Air. *Environmental Science & Technology*, 42(21), 7873.
33. Kania-Korwel, I., Hornbuckle, K. C., Robertson, L. W., Lehmler, H.-J. (2008). Dose-dependent enantiomeric enrichment of 2,2',3,3',6,6'-hexachlorobiphenyl in female mice. *Environmental Toxicology and Chemistry*, 27(2), 299.
32. Kania-Korwel, I., Xie, W., Hornbuckle, K. C., Robertson, L. W., Lehmler, H.-J. (2008). Enantiomeric enrichment of 2,2',3,3',6,6'-hexachlorobiphenyl (PCB 136) in mice after induction of CYP enzymes. *Archives of Environmental Contamination and Toxicology*, 55(3), 510.
31. Kania-Korwel, I., Hornbuckle, K. C., Robertson, L. W., Lehmler, H. -J. (2008). Influence of dietary fat on the enantio selective disposition of 2,2',3,3',6,6'-hexachlorobiphenyl (PCB 136) in female mice. *Food and Chemical Toxicology*, 46(2), 637.
30. Kania-Korwel, I., Zhao, H., Norstrom, K., Li, X., Hornbuckle, K. C., Lehmler, H.-J. (2008). Simultaneous extraction and clean-up of polychlorinated biphenyls and their metabolites from small tissue samples using pressurized liquid extraction. *Journal of Chromatography A*, 1214(40910), 37.
29. Kania-Korwel, I., Shaikh, N. S., Hornbuckle, K. C., Robertson, L. W., Lehmler, H.-J. (2007). Enantioselective disposition of PCB 136 (2,2',3,3',6,6'-hexachlorobiphenyl) in C57BL/6 mice after oral and intraperitoneal administration. *Chirality*, 19(1), 56.
28. Weldon, M., Hornbuckle, K. C. (2006). Concentrated animal feeding operations, row crops, and their relationship to nitrate in Eastern Iowa rivers. *Environmental Science & Technology*, 40(10), 3168.
27. Kania-Korwel, I., Garrison, A., Avants, J., Hornbuckle, K. C., Robertson, L., Sulkowski, W., Lehmler, H. (2006). Distribution of chiral PCBs in selected tissues in the laboratory rat. *Environmental Science & Technology*, 40(12), 3704.
26. Peck, A. M., Hornbuckle, K. C. (2006). Environmental sources, occurrence, and effects of synthetic musk fragrances. *Journal of Environmental Monitoring*, 8(9), 874.
25. Peck, A. M., Linebaugh, E. K., Hornbuckle, K. C. (2006). Synthetic musk fragrances in Lake Erie and Lake Ontario sediment cores. *Environmental Science & Technology*, 40(18), 5629.
24. Peck, A. M., Hornbuckle, K. C. (2006). Synthetic musk fragrances in urban and rural air of Iowa and the Great Lakes. *Atmospheric Environment*, 40(32), 6101.
23. Gooding, M. P., Newton, T. J., Bartsch, M. R., Hornbuckle, K. C. (2006). Toxicity of synthetic musks to early life stages of the freshwater mussel *Lampsilis cardium*. *Archives of Environmental Contamination and Toxicology*, 51(4), 549.
22. Kania-Korwel, I., Hornbuckle, K. C., Peck, A., Ludewig, G., Robertson, L., Sulkowski, W., Espandiari, P., Gairola, C., Lehmler, H. (2005). Congener-specific tissue distribution of aroclor 1254 and a highly chlorinated environmental PCB mixture in rats. *Environmental Science & Technology*, 39(10), 3513.
21. Boulanger, B., Vargo, J., Schnoor, J. L., Hornbuckle, K. C. (2005). Evaluation of perfluorooctane surfactants in a wastewater treatment system and in a commercial surface protection product. *Environmental Science & Technology*, 39(15), 5524.

20. Peck, A., Hornbuckle, K. C. (2005). Gas-phase concentrations of current-use pesticides in Iowa. *Environmental Science & Technology*, 39(9), 2952.
19. Boulanger, B., Peck, A., Schnoor, J. L., Hornbuckle, K. C. (2005). Mass budget of perfluorooctane surfactant in Lake Ontario. *Environmental Science & Technology*, 39(1), 74.
18. Wethington, D., Hornbuckle, K. C. (2005). Milwaukee, WI, as a source of atmospheric PCBs to Lake Michigan. *Environmental Science & Technology*, 39(1), 57.
17. Boulanger, B., Vargo, J., Schnoor, J. L., Hornbuckle, K. C. (2004). Detection of perfluorooctane surfactants in Great Lakes water. *Environmental Science & Technology*, 38(15), 4064.
16. Hornbuckle, K. C., Smith, G., Miller, S., Eadie, B., Lansing, M. (2004). Magnitude and origin of polychlorinated biphenyl (PCB) and dichlorodiphenyltrichloroethane (DDT) compounds resuspended in southern Lake Michigan. *Journal of Geophysical Research-Oceans*, 109(C5).
15. Peck, A., Hornbuckle, K. C. (2004). Synthetic musk fragrances in Lake Michigan. *Environmental Science & Technology*, 38(2), 367.
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7. Hornbuckle, K. C., Eisenreich, S. (1996). Dynamics of gaseous semivolatile organic compounds in a terrestrial ecosystem - Effects of diurnal and seasonal climate variations. *Atmospheric Environment*, 30(23), 3935.
6. Pearson, R., Hornbuckle, K. C., Eisenreich, S., Swackhamer, D. (1996). PCBs in Lake Michigan water revisited. *Environmental Science & Technology*, 30(5), 1429.
5. Hornbuckle, K. C., Sweet, C., Pearson, R., Swackhamer, D., Eisenreich, S. (1995). Assessing Annual Water-Air Fluxes of Polychlorinated-Biphenyls in Lake-Michigan. *Environmental Science & Technology*, 29(4), 869.

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1. Achman, D., Hornbuckle, K. C., Eisenreich, S. (1993). Volatilization of Polychlorinated-biphenyls from Green Bay, Lake-Michigan. *Environmental Science & Technology*, 27(1), 75.

Peer-Reviewed Conference Papers

4. Hornbuckle, K. C., Green, M. L. The Effects of Air Temperature, Wind Direction, and the Chicago Urban Plume on Gas-Phase Organic Compounds over Lake Michigan, in *University of Antwerp Press. Proceedings from the International Symposium on Atmospheric Deposition and Impact on Ecosystems, with particular reference to the Mid-East*, December 2002.
3. Hornbuckle, K. C. Predicting and measuring atmospheric deposition of POPs to Lake Ontario, in *Great Lakes Monograph No. 12 published by the State University of New York at Buffalo*, September 10, 1998.
2. Hornbuckle, K. C. Air Toxics and Ecological Effects, in *Adirondacks and Beyond: Understanding Air Quality and Ecosystem Relationships, a conference to explore science and policy linkages*, November 12, 1997.
1. Hornbuckle, K. C., van der Meulen, M.C.H., Ambrose, S. A., Davidson, C. I. The National Science Foundation's Engineering Education Scholars Workshop: Strategies for the new professor, in *College of Engineering and Graduate School, Southern Illinois University—Carbondale*, August 13, 1997.

Technical Articles Published in Cited Media

10. Kolpin, D. Hornbuckle, K. C. (2010). *What's in your floodwaters? A Watershed Year: Anatomy of the Iowa Floods of 2008*. University of Iowa Press.
9. Hornbuckle, K. C., Carlson, D. L., Swackhamer, D. L., Baker, J. E., Eisenreich, S. J. (2006). *PCBs in the Great Lakes*. (pp. 33-35). The Handbook in Environmental Chemistry Series Springer-Verlag, Heidelberg.
8. Hornbuckle, K. C., Green, M. L. (2002). *The Effects of Air Temperature, Wind Direction, and the Chicago Urban Plume on Gas-Phase Organic Compounds over Lake Michigan*. University of Antwerp Press. Proceedings from the International Symposium on Atmospheric Deposition and Impact on Ecosystems, with particular reference to the Mid-East.
7. Hornbuckle, K. C., Hoff, S. J., Thorne, P. S., Bundy, D. S., O'Shaughnessy, P. T. (2002). *Emissions and Community Exposures from CAFOs* (pp. 45-85). Iowa Concentrated Animal Feeding Operations Air Quality Study, Final Report by the University of Iowa and Iowa State University Study Group, J.A. Merchant and R.F. Ross.
6. Hornbuckle, K. C. (1998). *Predicting and measuring atmospheric deposition of POPs to Lake Ontario*. Great Lakes Monograph No. 12 published by the State University of New York at Buffalo.

5. Eisenreich, S. J., Hornbuckle, K.C., Achman, D.A. (1997). *Air-Water Exchange of Semi-Volatile Organic Chemicals (SOCs) in the Great Lakes*. Atmospheric Deposition of Contaminants to the Great Lakes and Coastal Water Baker JE, ed., Society for Environmental Toxicology and Chemistry. 109-136.
4. Hornbuckle, K. C. (1997). *Air Toxics and Ecological Effects*. Adirondacks and Beyond: Understanding Air Quality and Ecosystem Relationships, a conference to explore science and policy linkages.
3. Hornbuckle, K. C., van der Meulen, M.C.H., Ambrose, S. A., Davidson, C. I. (1997). *The National Science Foundation's Engineering Education Scholars Workshop: Strategies for the new professor*. In Proceedings, International Conference on Engineering Education: Progress through Partnerships, Chicago, IL. August 14-15, 1997.
2. Vlahos, P., Mackay, D., Eisenreich, S. J., Hornbuckle K.C. (1995). *Exchange of chemicals between the atmosphere and lakes* (pp. 167-184). In Physics and Chemistry of Lakes. Lerman A, Imboden DM, Gat JR, eds. Heidelberg, Springer-Verlag.
1. Eisenreich, S.J., Achman D. Hornbuckle, K, Baker, J.E. (1991). *Volatilization of PCBs from the Great Lakes* (pp. 400-412). Air-Water Mass Transfer. Wilhelm SC, ed. Gulliver JS.

Presentations

>150 Scientific Presentations at Conferences

Selected Invited Talks

Hornbuckle, K. C., "Fate of Polychlorinated Biphenyls in an industrial harbor of Lake Michigan," Ohio State University, Columbus, OH. (September 2015).

Hornbuckle, K. C., "Inadvertent Production of Polychlorinated Biphenyls and its Impact on Environmental and Human Exposure to these Persistent, Bioaccumulating, and Toxic Pollutants," Dept. Ecological and Environmental Engineering, West Lafayette, IN. (November 2015).

Hornbuckle, K.C. "The Future of Engineering Education" Panelist. Syracuse University (December 2014).

Hornbuckle, K. C., Keynote to the UM Dept of CEE, "Experiences from the Iowa Superfund Basic Research Program," University of Michigan Department of Civil and Environmental Engineering, Ann Arbor, MI. (January 2014).

Hornbuckle, K. C., Martinez, A., Wang, K., Spokane River Regional Toxics Task Force (SRRTTF) toxics workshop #1, "Indiana Harbor and Ship Canal: not just a tributary source of PCBs into Lake Michigan," Spokane, WA. (June 2012).

Hornbuckle, K. C., Martinez, A., Hu, D., Schulz, T., Thorne, P. S., 7th International PCB Workshop, "Sources of PCB congeners in urban, industrial, rural, and indoor environments," NIH/NIEHS, Arcachon, France. (May 2012).

Hornbuckle, K. C., "Origin, Source, Exposure and Toxicology of Non-Aroclor PCB11," University of Wisconsin – Madison. Environmental Chemistry & Technology Graduate Program, Madison, WI. (February 2011).

Hornbuckle, K. C., Agency for Toxic Substances and Disease Registry (ATSDR), "Industrial chemicals in urban environments: Airborne PCBs and their sources," Atlanta, GA. (February 2010).

Hornbuckle, K. C., "Industrial Chemicals in Urban Environments: Airborne PCBs in Chicago," Iowa State University, Graduate Program in Meteorology, Ames, IA. (February 2010).

Hornbuckle, K. C., State Legislators at the Environment, Health and the Future – 2009 Policy Summit, "Airborne PCBs in Chicago," Chicago. (January 2009).

Hornbuckle, K. C., Wombacher, W., "The fate of synthetic musk fragrances in a conventional water plant with lime softening." Department of Applied Environmental Science, Stockholm University. (March 2007).

Hornbuckle, K. C., "PCBs in the Great Lakes, The role of the atmosphere," Department of Applied Environmental Science and the Department of Environmental Chemistry, Stockholm University. (February 2007).

Hornbuckle, K. C., PCB Workshop, "Distribution of PCB congeners in urban/industrial Chicago: experimental design," Zakopane, Poland. (September 2006).

Hornbuckle, K. C., "Consumer and Industrial Chemicals in Natural Systems," Inaugural Installment of the Nunan Lectures in Syracuse University's L.C. Smith College of Engineering and Computer Science, Syracuse, NY. (March 2006).

Hornbuckle, K. C., "Passive Air Sampling for Airborne PCBs," Masaryk University, Research Center for Environmental Chemistry and Toxicology (RECETOX), Brno, Czech Republic. (December 2005).

Hornbuckle, K. C., Boulanger, B. O., International Joint Commission Science Advisory Board, "Fluorinated Surfactants in the Great Lakes: Today, Yesterday, and Tomorrow," Toronto, Ontario. (June 2005).

Hornbuckle, K. C., "Synthetic Fragrances and other Personal Care Products in Natural Systems," School of Public and Environmental Affairs, Indiana University, Bloomington, IN. (December 2, 2004).

Hornbuckle, K. C., Gordon Research Conference on Environmental Sciences 2000: Water, "Episodic large-scale sediment dynamics in large lakes: Organic contaminant cycling and the role of the atmosphere," Holderness School, New Hampshire. (June 2000).

Hornbuckle, K. C., Green, M. L., DePinto, J. V., Eisenreich, S. J., International Symposium on Atmospheric Deposition and Impact on Ecosystems, with particular reference to the Mid-East. Sponsored by the International Union of Pure and Applied Chemistry (IUPAC), "The effects of air temperature, wind direction and the Chicago urban plume on spatial and temporal variability of gas-phase organic compounds," Tel Aviv, Israel. (June 2000).

Hornbuckle, K. C., "The Effect of Climate on Transport of Persistent Organic Pollutants," Grinnell College Chemistry Department, Grinnell, Iowa. (November 1999).

Hornbuckle, K. C., "Modeling the Regional Transport of Toxic Organic Compounds," Department of Environmental Sciences, Rutgers University, New Brunswick, NJ. (January 1998).

Hornbuckle, K. C., "Exchange of Persistent Organic Compounds between Air and Terrestrial Surfaces.," Department of Civil and Environmental Engineering, Michigan Technical University, Houghton, MI. (May 1997).

Hornbuckle, K. C., "Are Green Plants Sources or Sinks of Airborne Contaminants: A Discussion of the Dynamics of Vapor Exchange in Terrestrial Systems," Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY. (April 1997).

Hornbuckle, K. C., Great Lakes Ecosystem Modeling Seminar and Discussion Group on the Great Lakes, "The Role of Vegetation in the Long Range Transport of Persistent Organic Chemicals," Great Lakes Program at the University at Buffalo and the Great Lakes Center at Buffalo State College, New York. (April 1997).

Hornbuckle, K. C., Analytical Chemistry Seminar Series, "Long-range and regional transport of potential toxic compounds," Department of Chemistry, University at Buffalo, Buffalo, NY. (January 1997).

Hornbuckle, K. C., "Air/Water Exchange of Semi-Volatile Organic Compounds in the Great Lakes," University of Toronto, Department of Chemistry, Toronto, Ontario. (March 1995).

Research Grants (Current)

Hornbuckle, K. C. (Principal), Lehmler, H. (Co-Principal), Sen Gupta, A., "Analytical Core," Sponsored by NIEHS/NIH, through the Iowa Superfund Research Program, (Larry Robertson, Program PI), \$1,270,000. (April 2015 - March 2020).

Hornbuckle, K. C. (Principal), Martinez Araneda, A. J. (Co-Principal), Spak, S. N. (Co-Principal), Wang, K. (Supporting), "Atmospheric Sources of PCB Congeners," Sponsored by NIEHS/NIH, through the Iowa Superfund Research Program (Larry Robertson, Program PI), \$1,100,000. (April 2015 - March 2020).

Thorne, P. (Principal), Jones, M (Co-PI), Hornbuckle, K. C. (Co-PI), "Characterization of Exposures of Urban and Rural Cohorts to Airborne PCBs," Sponsored by NIEHS/ NIH: US Department of Health & Human Services, (Larry Robertson, Program PI), \$1,400,000. (April 1, 2015 - March 31, 2020).

Hornbuckle, K. C. (Principal), Martinez, A. (Co-Principal), "Supplement to Project 4: PCBs in Ambient Air: Responding to community concerns in New Bedford, MA," Sponsored by NIEHS/NIH, through the Iowa Superfund Research Program, (Larry Robertson, Program PI), \$148,500. (June 2015 - April 2017).

Gibbs, J.L. (Principal), Hornbuckle, K.C. (co-PI). "Pilot Study: Passive sampling for outdoor airborne herbicides 2,4-D, acetochlor, atrazine, and glyphosate at Iowa farm households" Sponsored by the Environmental Health Sciences Research Center, University of Iowa. \$40,000. (2016-2017).

Completed Grants:

Title: "Atmospheric Sources of PCB Congeners." A research project of the Iowa superfund basic research program, "Semi-volatile PCBs: Sources, Exposures, Toxicities." Larry Robertson, program PI
Project Director: Hornbuckle, K.C. (Project Leader), G. Carmichael, and P. Thorne
Sponsor: NIEHS/ NIH: US Department of Health & Human Services; 04/01/10 to 03/31/15 (\$1,390,000 including IDC)

Title: "Analytical Core: Extraction, Detection, and Interpretation of PCB Congeners in Complex Matrices." A core facility of the Iowa superfund basic research program, "Semi-volatile PCBs: Sources, Exposures, Toxicities." Larry Robertson, program PI
Project Director: Hornbuckle, K.C. (Project Leader 75%); Lehmler, H.-J.
Sponsor: NIEHS/ NIH: US Department of Health & Human Services; 04/01/10 to 03/31/15 (\$1,625,000 including IDC)

Title: "Characterization of Exposures of Urban and Rural Cohorts to Airborne PCBs." A research project of the Iowa superfund basic research program, "Semi-volatile PCBs: Sources, Exposures, Toxicities." Larry Robertson, program PI
Project Director: Thorne, P. (Project Leader); Hornbuckle, K.C.
Sponsor: NIEHS/ NIH: US Department of Health & Human Services; 04/01/10 to 03/31/15 (\$1,450,000 including IDC)

Title: "Chicago as a Source of Air Toxics to Lake Michigan."
Project Director: Keri Hornbuckle, Co-Director: Ron Hites, Indiana University
Sponsor: Great Lakes National Program Office/ U.S. Environmental Protection Agency (GLNPO/ USEPA); \$1,200,000 including IDC. 9/1/2010 to 8/30/2015.

Title: "MRI: Acquisition of Instrumentation (LC-MS/MS) for the Trace Analysis of Anthropogenic Organic Compounds and Their Metabolites in Various Complex Matrices"
Project Director: Guangshu Zhai, CoDirectors: Keri C. Hornbuckle; Jerry L Schnoor; Hans-Joachim Lehmler; Larry W Robertson.
Sponsor: National Science Foundation (NSF) Major Instrumentation Program; 9/1/2012 – 8/31/2014 (\$339,373 including IDC)

Title: "Siloxanes in Chicago Air."

Project Director: Hornbuckle, K.C. and Stanier, C.

Sponsor: The Center for the Health Effects of Environmental Contamination (CHEEC)

Budget: \$30,000. 06/2010-05/2011

Title: "SGER: Transport of Sediments and Pollutants into the Terrestrial Regions of a Small Urban-Industrial City: The June 2008 Flood of Cedar Rapids, Iowa"

Project Director: Keri Hornbuckle (PI) and Thanos Papanicolaou (co-PI)

Sponsor: National Science Foundation

Budget: \$99,000 8/1/08-01/31/10

Title: "A molecular microbiological search for active biphenyl dioxygenases in polychlorinated biphenyl-contaminated sediments"

Project Director: Tim Mattes (PI) and Keri Hornbuckle (co-PI)

Sponsor: Center for Health Effects of Environmental Contamination (CHEEC)

Budget: \$30,000 2008-2009.

Title: "Atmospheric Sources of PCB Congeners." A research project of the Iowa superfund basic research program, (Larry Robertson, Program PI), "Semi-volatile PCBs: Sources, Exposures, Toxicities."

Project Director: Hornbuckle, K.C. (Project Leader) and Persky, V. (co-Project Leader)

Sponsor: NIESH/ NIH: US Department of Health & Human Services

Budget: (\$229,000 in direct costs for year 1, non-competitive renewal for 4 years. Total including indirect costs is 1,355,922) 04/01/06 to 03/31/10

Title: "Analytical Core: Extraction, Detection, and Interpretation of PCB Congeners in Complex Matrices." A core facility of the Iowa superfund basic research program, "Semi-volatile PCBs: Sources, Exposures, Toxicities." Larry Robertson, program PI

Project Director: Hornbuckle, K.C. (Project Leader); Lehmler, H.-J. (co-Project Leader); Just, C.J. (co-Project Leader)

Sponsor: NIESH/ NIH: US Department of Health & Human Services

Budget: (Total is \$2,086,159) 04/01/06 to 03/31/10

Title: "Characterization of Exposures of Urban and Rural Cohorts to Airborne PCBs." A research project of the Iowa superfund basic research program, "Semi-volatile PCBs: Sources, Exposures, Toxicities." Larry Robertson, program PI

Project Director: Thorne, P. (Project Leader); Hornbuckle, K.C. (co-Project Leader)

Sponsor: NIESH/ NIH: US Department of Health & Human Services

Budget: (\$290,730 in direct costs for year 1, Total is ~\$1,700,000) 04/01/06 to 03/31/10

Title: Prevalence and Control of Synthetic Musk Fragrances in Iowa Drinking Water.

Project Director: Keri Hornbuckle

Sponsor: Center for Health Effects of Environmental Contamination

Budget: \$ 30,000 1/2006 – 12/2006

Title: Fragrances in Iowa Drinking Water – IREU

Project Director: Keri Hornbuckle with William Wombacher (MS student)

Sponsor: VP office for Research

Budget: \$3000 1/2006-6/2006

Title: Acquisition of Automated and High Sensitivity Instrumentation for the Analysis of Organic Compounds in Complex Matrices

Project Director: Keri Hornbuckle

Sponsor: National Science Foundation Major Research Instrumentation Program

Budget: \$ 347,700 (30% of which is a match from the U of IA VP for Research) 7/2005 – 7/2007

Title: Supplement to "Acquisition of Automated and High Sensitivity Instrumentation for the Analysis of Organic Compounds in Complex Matrices"

Project Director: Keri Hornbuckle

Sponsor: National Science Foundation Major Research Instrumentation Program

Budget: \$ 4600 7/2005 – 7/2007

Title: Exposure Assessment Facility Core, a core facility of the Environmental Health Sciences Research Center, Peter Thorne, Director

Project Director: Hornbuckle, K.C

Sponsor: National Institute for Environmental Health Sciences

Budget: \$98,000 in direct costs per year. Total for 2 years was ~\$288,000 (4/2002-4/2004)

Title: Development of a Passive Air Sampler for Measuring PCBs in Air

Project Director: Keri Hornbuckle, Co-PI: Hans-Joachim Lehmler

Sponsor: The Center for Health Effects of Environmental Contamination

Budget: \$23,700

Title: Development of a Strategy to Assess Health and Environmental Effects of Synthetic Musk Fragrances in the Mississippi River.

Project Director: Gooding, M (postdoc), Co-PI: Hornbuckle, KC, Ludewig, G.

Funding Source: VP for Research and External Affairs, Collaborative Interdisciplinary Projects.

Budget: \$25,000

Title: Enantioselective Enrichment of Chiral Polychlorinated Biphenyl (PCBs) Congeners in Complex Mixtures In Vivo

Project Director: Lehmler, H.J.; Co-Investigator: Hornbuckle, K.C.

Funding Source: EHSRC (Environmental Health Sciences Research Center)

Budget: \$20,000

Title: Air Dispersion Modeling of Confined Animal Feeding Operations

Project Director: OShaughnessy, P.; Co-Investigator: Hornbuckle, K.C.

Funding Source: EHSRC

Budget: \$18,800

Title: Synthetic Musk Fragrances in Great Lakes Sediments

Project Director: Hornbuckle, K.C. ;Co-Investigators: Boulanger, B. (Ph.D. student) And Schnoor, JS

Funding Source/Agency: CGRER

Funding Amount/Period \$20,000 / May 2003 – April 2004.

Title: Assessment of Air Quality and Air Pollutant Impacts in Isle Royale National Park and Voyageurs National Park

Project director: Hornbuckle, K.C.; Co-Investigator (funded separately through the University of MN): Swackhamer, DL

Funding Source/Agency: National Park Service

Funding Amount (KCH only)/ Period: \$14,250 / September 2001-December 2002.

Title: Conceptual Network Design Studies for Iowa Hydrologic and Environmental Validation Site.

Project Director: Krajewski, W.; Co-Investigators: Eichinger, W., Hornbuckle, K.

Funding Source/Agency: Center for Global and Regional Environmental Research (CGRER)

Funding Amount/Period \$20,000/ January –December 2002.

Title: Pollutants of Emerging Concern in Iowa Air.

Project Director: Hornbuckle, K.C.; Co-Investigator: Peck, A.M. (Ph.D. student)

Funding Source/Agency: Center for Health Effects of Environmental Contamination (CHEEC).

Funding Amount/Period \$20,000/ January –December 2002.

Title: Environmental Exposure Assessment of Perfluorooctane sulfonate in various environmental matrices
Project Director: Brian Boulanger (PhD student) and Jerald Schnoor; Co-Investigators: Keri Hornbuckle
Funding Source/Agency: Environmental Health Sciences Research Center (EHSRC-NEIHS)
Funding Amount/period: \$16,000/ January-December 2002.

Title: Ambient Air Quality in the Vicinity of Concentrated Animal Feeding Operations.
Project Director: Peter S. Thorne; Co-Investigators: Lester, Peck, Hornbuckle, Donham, O'Shaughnessy, Osterberg.
Funding Source/Agency: Environmental Health Sciences Research Center (EHSRC-NEIHS)
Funding Amount/period: \$20,000/ January-December 2002.

Title: Study of Organic Contaminants in Air and Water in Conjunction with Episodic Events - Great Lakes Experiment
Project Director: Hornbuckle, K.C.
Funding Source/Agency: U.S. Environmental Protection Agency, Great Lakes National Program Office
Funding Amount/Period: \$364,000 / Jan. 1, 1998 to Feb 4, 2001. Competitive Renewal funded to the University of Iowa in Fall, 1999.

Title: Dynamics of Gas-Phase Persistent Organic Chemicals: An Investigation of the Effect of Climate using a Controlled Chamber
Project Director: Hornbuckle, K.C.
Funding Source/Agency: National Science Foundation Faculty Early Career Development (CAREER) Program. Funding Amount/Period: Sept. 1, 1997 through Aug. 30, 2001: \$210,000

Selected reports of the Hornbuckle research in the popular press:

- WQAD Moline. Feb 24, 2014 "Yellow dye can hurt you – and it's everywhere"
<http://wqad.com/2014/02/24/report-yellow-dye-can-hurt-you-and-its-everywhere/>
- Iowa Now (May 2013): "PCBs are Everywhere" http://now.uiowa.edu/2013/04/pcbs-are-everywhere?utm_source=email%2Blink&utm_medium=PCBs%20are%20everyw&utm_campaign=IANow%20Email%20asap%20%28%29&CFID=263979&CFTOKEN=27793828
- Scientific American.com (April 2013): "Chemicals from Personal Care Products Pervasive in Chicago Air"
<http://www.scientificamerican.com/article.cfm?id=chemicals-from-personal-care-products-pervasive-in-chicago-air>
- Environmental Health News (April 2013): "Chemicals on federal radar pervasive in Chicago Air"
<http://www.environmentalhealthnews.org/ehs/news/2013/siloxanes-in-the-air>
- Environmental Health Perspectives (March 2013): "Nonlegacy PCBs: Pigment Manufacturing By-Products Get a Second Look" <http://ehp.niehs.nih.gov/2013/03/121-a86/>
- Environmental Health News (December 2012): "Dredging could unleash PCBs in Indiana community"
<http://www.environmentalhealthnews.org/ehs/news/2012/indiana-canal-pcbs>
- University of Iowa Press Release (November 2011) "UI engineers conduct residential soils study, one of few such U.S. studies ever done" <http://news-releases.uiowa.edu/2011/november/112911hornbuckle.html>
- NIEHS Environmental Factor "SRP researchers quantify PCB pollution in East Chicago harbor"
<http://www.niehs.nih.gov/news/newsletter/2011/october/science-chicago/index.cfm>
- IIHR- University of Iowa Special Report (Spring 2011) "Understanding PCBs"
<http://www.iihr.uiowa.edu/research/understanding-pcbs/>
- Northwest Indiana Post-Tribune (Jan 15, 2010) "Concern over canal mud as dredge plan nears. Study finds extreme levels of PCBs, but Army Corps says alarm unwarranted"
- Des Moines Register (Dec 5, 2009) "U of I team fears PCBs may remain cause for concern"
- Science News (Nov 23, 2009) "PCBs: When green paint isn't 'green'"
http://www.sciencenews.org/view/generic/id/49932/title/PCBs_When_green_paint_isn%20%80%99t_%E2%80%98green%E2%80%99
- Chicago Tribune (Jan 22, 2009) "Mysterious PCB found near schools."