

CURRICULUM VITA

ELAINE SYMANSKI, PhD

Address: The University of Texas Health Science Center at Houston (UTHealth)
School of Public Health
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EDUCATION

1976-1978 Biology major
University of Rochester
Rochester, New York

1979-1981 BS, Environmental Studies, 8/1981
Western Washington University
Bellingham, Washington

1990-1996 MSPH, Environmental Sciences and Engineering, 12/1992
School of Public Health
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

PhD, Environmental Sciences and Engineering (Epidemiology minor), 12/1996
School of Public Health
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

PROFESSIONAL EXPERIENCE

1996-2003 Assistant Professor (tenure-track)

2003-present Associate Professor (with tenure)

2016-present Professor

Department of Epidemiology, Human Genetics and Environmental Sciences
(secondary appointment in the Department of Biostatistics, 2015-present)
UTHealth School of Public Health
Houston, Texas

2011-present Director, Southwest Center for Occupational and Environmental Health
UTHealth School of Public Health
Houston, Texas

2011-present Adjunct Associate Professor
UTHealth Graduate School of Biomedical Sciences
Houston, Texas

- 2005-2008 Adjunct Associate Professor
School of Rural Public Health
The Texas A&M University System Health Science Center
Bryan, Texas
- 2015-present Affiliate Member, Center for Translational Environmental Health Research
(CTEHR), NIEHS-funded National Center of Excellence in Environmental Health
Science, P30ES023512, C. Walker, PI, Texas A&M Health Science Center

FELLOWSHIPS AND AWARDS

- Excellence in Scholarship Incentive Award, University of Texas School of Public Health, 2001, 2002, 2006
- Excellence in Research Incentive Award, University of Texas School of Public Health, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014
- Bernard G. Greenberg Award for Excellence in Doctoral Research, School of Public Health, University of North Carolina at Chapel Hill, 1997
- Hoechst-Celanese Corporation Excellence Award, School of Public Health, University of North Carolina at Chapel Hill, 1995
- David A. Fraser Scholarship, Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, 1992
- Board of Governor's Fellowship in Science and Technology, University of North Carolina at Chapel Hill, 1990-1993
- Miriam Cole Scholarship, School of Public Health, University of North Carolina at Chapel Hill, 1990
- Thomas Henry Huxley Award, Outstanding Graduate Award, Huxley College of Environmental Studies, Western Washington University, 1981
- Shell Scholar, Huxley College of Environmental Studies, Western Washington University, 1979

RESEARCH

Primary Research Interests: Investigation of health effects associated with exposures in workplace and community settings in vulnerable populations using community-engaged approaches; Development and application of quantitatively based approaches for evaluating occupational and environmental exposures; Retrospective exposure assessment

Active contracts and grants (total costs shown)

Principal Investigator, *Sustainable Solutions to Metal Air Pollution in Disadvantaged Neighborhoods* (5R01ES023563), National Institute of Environmental Health Sciences (NIEHS), \$2,529,825, Effort: 20%, 08/11/2014–04/30/2019.

Principal Investigator, *Southwest Center for Occupational and Environmental Health* (2T42OH008421), National Institute for Occupational Safety and Health (NIOSH), Effort: 32%; \$7,771,549, 7/1/2015-6/30/2020.

Mentor, *UTSPG/GVSU Multimodal MCH Training Program* (5T04MC12785-07), Bird-Williams, C., PI, Health Resources and Services Administration (HRSA), \$883,170, 6/1/2014-5/31/2019.

Completed contracts and grants (total costs shown)

Principal Investigator, *Hypertension in Mexican-Americans: Assessing Disparities in Air Pollutant Risks* (RD-83458101), U.S. Environmental Protection Agency (U.S. EPA), Effort: 25%; \$1,250,000, 8/1/2010–7/31/2015.

Co-investigator, *Maternal Residential Proximity to Shale Gas Extraction and Pregnancy Outcomes* (5R03ES023954), National Institute of Environmental Health Sciences (NIEHS), \$152,000, Effort: 8%; 7/22/2014-6/30/2016.

Principal Investigator, *Southwest Center for Occupational and Environmental Health*, (3T42OH008421), National Institute for Occupational Safety and Health (NIOSH), \$4,499,330, 7/1/2011-6/30/2015.

Principal Investigator, *Early Life Exposures to Air Toxics and the Risk of Early Childhood Leukemia* (5R03CA162172), National Cancer Institute (NCI), \$147,440, 5/01/2012–4/30/2015.

Mentor, *The Houston Laboratory and Population Sciences Training Program in Gene-Environment Interaction* (1008200), Boerwinkle E, PI, Burroughs Wellcome, \$1,000,000, 2/1/2012-1/31/2015.

Co-investigator, *Air Toxics, Neighborhood Environment and Risk of Oral Clefts* (5R03DE021739) Lupo P., PI, National Institute of Dental and Craniofacial Research (NIDCR), \$167,344, 9/1/2012-8/31/2014.

Principal Investigator, *Tracking Air Pollutants and Newborn Health in Houston, Texas* (1R21ES017347), National Institute of Environmental Health Sciences (NIEHS), \$410,625, 12/15/09–05/30/2013.

Principal Investigator (sub-contract), *Development of Enhanced Statistical Methods for Assessing Health Effects Associated with an Unknown Number of Major Sources of Multiple Air Pollutants*, Eun Sug Park, PI, Texas A&M University, Health Effects Institute, \$56,364, 5/17/2010-02/16/2013.

Principal Investigator, *Hazardous Air Pollutants and Lymphohematopoietic Cancer Incidence in Houston 1995-2003* (5R03CA128106), National Cancer Institute (NCI), \$148,500, 9/30/07-8/31/10.

Principal Investigator, *Investigation of Key Determinants of VOC exposure*, The Mickey Leland National Urban Air Toxics Research Center (NUARTC), \$50,000, 12/1/06-11/30/07.

Co-investigator, *Center for Research on Environmental Disease (CRED)*, Delclos, G.L., Site P.I. (John DiGiovanni, PI, MD Anderson Cancer Center) (2 P30 ES007784-11A1), National Institute of Environmental Health Sciences (NIEHS), \$124,947, 4/1/2007-3/31/2012.

Co-investigator, *A Study to Evaluate the Health Effects of Air Pollution in Bexar County with a Focus on the Types of Emissions Associated with Coal-Fired Power Plants*, San Antonio City Public Service, J. Perkins, P.I., \$227,200, 6/1/2005-5/31/2007.

Principal Investigator, *Evaluation of Exposure Measurement Error* (5R03OH07834), National Institute for Occupational Safety and Health (NIOSH), \$148,500, 9/30/2003-8/31/2006.

Co-investigator, *Occupational Asthmagens in Cleaners: A Focus Group Study* (5R03OH008136), National Institute of Occupational and Safety Health (NIOSH), A. Arif, P.I., \$136,073, 9/1/2004-6/30/2006.

Co-investigator, *A Validated Asthma Questionnaire for Healthcare Workers* (5R01OH03945), Delclos, G.L., P.I., National Institute for Occupational Safety and Health (NIOSH), \$495,914, 10/1/2001-9/30/2004.

Principal Investigator (subcontract), *Perinatal PCB Exposure and Neuropsychological/Auditory Function*, A. Sweeney, P.I. (TAMU), National Institute of Environmental Health Sciences (NIEHS)/Environmental Protection Agency (EPA), \$37,246, 9/30/2002-5/31/2003 [part of the *FRIENDS Children's Environmental Health Center*, S. Schantz, P.I., University of Illinois at Urbana-Champaign, \$5,568,988]

Co-investigator, *Perinatal PCB Exposure and Neuropsychological/Auditory Function*, National Institute of Environmental Health Sciences (NIEHS)/Environmental Protection Agency (EPA), \$1,599,552, 9/1/2001-9/1/2002 (part of the *FRIENDS Children's Environmental Health Center*, S. Schantz, PI, University of Illinois at Urbana-Champaign, \$5,568,988).

Principal Investigator, *The Utility of Biomarkers as Dose and Exposure Measures* (KO1 OH00166), National Institute for Occupational Safety and Health (NIOSH), \$161,676, 9/30/1997-9/29/2001.

Principal Investigator, *Investigation of the Time-varying Behavior of Nickel Exposure from 1977 to 1994*, NiPera, Inc., \$40,000, 5/1/1997-7/30/1998.

Co-investigator, *Reproductive Health, Serum Dioxin and P450 Genes in Vietnam Veterans*, Environmental Protection Agency (EPA), Sweeney, A.M., P.I., \$872,595, 12/1/1997-11/30/2001.

Co-investigator, *Prenatal Exposure to Pesticides*, National Cancer Institute (NCI), Cooper, S.P., P.I., \$24,936, 9/16/1997-9/16/1998.

Co-investigator, *Assessment of Exposures to Migrant Farmworker Children*, Cooper, S.P., PI, National Cancer Institute (NCI), \$24,934, 9/19/1997-9/19/1998.

Co-investigator, *NIOSH ERC Training Grant*, Delclos, G.L., P.I., National Institute for Occupational Safety and Health (NIOSH), \$1,044,490, 7/1/2000-6/30/2005.

Co-investigator, *NIOSH ERC Training Grant*, Delclos, G.L., P.I., National Institute for Occupational Safety and Health (NIOSH), \$430,596, 7/1/1995-6/30/2000.

Publications in Refereed Journals (*Indicates student's work in which E. Symanski was primary mentor and is named senior author)

1. Yager JW, Paradisin WM, **Symanski E**, Rappaport SM. Sister chromatid exchanges induced in peripheral lymphocytes of workers exposed to low concentrations of styrene. *Progress in Clin Biol Res* 340C:347-56 (1990). PMID: 2381933
2. Kromhout H, **Symanski E**, Rappaport SM. A comprehensive evaluation of within- and between-worker components of occupational exposure to chemical agents. *Ann Occup Hyg* 37:253-270 (1993). PMID: 8346874
3. Rappaport SM, Kromhout H, **Symanski E**. Variation of exposure between workers in homogeneous exposure groups. *Am Ind Hyg Assoc J* 54:654-662 (1993). PMID: 8256689

4. **Symanski E**, Rappaport SM. An investigation of the dependence of exposure variability on the interval between measurements. *Ann Occup Hyg* 38:361-372 (1994). PMID: 7978960
5. Rappaport SM, **Symanski E**, Yager JW, Kupper LL. The relationship between environmental monitoring and biological markers in exposure assessment. *Environ Health Perspect* 103(Suppl 3):49-54 (1995). PMID: PMC1519016
6. **Symanski E**, Hertz-Picciotto I. Blood lead levels in relation to menopause, smoking, and pregnancy history. *Am J Epidemiol* 141:1047-1058 (1995). PMID: 7771441
7. **Symanski E**, Kupper LL, Kromhout H, Rappaport SM. An investigation of systematic changes in occupational exposure. *Am Ind Hyg Assoc J* 57:724-735 (1996). PMID: 8765201
8. Rappaport SM, Yeowell-O'Connell K, Bodell W, Yager JW, **Symanski E**. An investigation of multiple biomarkers among workers exposed to styrene and styrene-7,8-oxide. *Cancer Res* 56:5410-5416 (1996). PMID: 8968094
9. Tornero-Velez R, **Symanski E**, Kromhout H, Yu RC, Rappaport SM. Compliance versus risk in assessing occupational exposures. *Risk Analysis* 17:279-292 (1997). PMID: 9232013
10. Shimokura GH, Savitz DA, **Symanski E**. Assessment of tap water use for estimating exposure to trihalomethanes. *Environ Health Perspect* 106:55-59 (1998). PMID: PMC1533009
11. **Symanski E**, Kupper LL, Rappaport SM. Comprehensive evaluation of long term trends in occupational exposure: Part 1. Description of the database. *Occup Environ Med* 55:300-309 (1998). PMID: PMC1757580
12. **Symanski E**, Kupper LL, Hertz-Picciotto I, Rappaport SM. Comprehensive evaluation of long-term trends in occupational exposure: Part 2. Predictive models for declining exposures. *Occup Environ Med* 55:310-316 (1998). PMID: PMC1757586
13. **Symanski E**, Chang C-C, Chan W. Long-term trends in exposures to nickel aerosols. *Am Ind Hyg Assoc J* 61:324-333 (2000). PMID: 10885881
14. **Symanski E**, Sällsten G, Barregård L. Variability in airborne and biological measures of exposure to mercury in the chloralkali industry: Implications for epidemiologic studies. *Environ Health Perspect* 108:569-573 (2000). PMID: PMC1638134
15. **Symanski E**, Chan W, Chang C-C. Mixed-effects models for the evaluation of long-term trends in exposure levels with an example from the nickel industry. *Ann Occup Hyg* 45:71-81 (2001). PMID: 11137701
16. Sweeney AM, **Symanski E**, Burau K, Kim Y, Humphrey HEB, Smith MA. Changes in serum PBB and PCB levels over time among women of varying ages at exposure. *Environ Res* 86:128-139 (2001). PMID: 11437459
17. **Symanski E**, Bergamaschi E, Mutti A. Inter- and intra-individual sources of variation in levels of urinary styrene metabolites. *Int Arch Environ Occup Health* 74:336-344 (2001). PMID: 11516068

18. Cooper SP, Burau K, Sweeney A, Robison T, Smith MA, **Symanski E**, Colt JS, Laseter J, Zahm SH. Prenatal exposure to pesticides: A feasibility study among migrant and seasonal farm workers. *Am J Ind Med* 40:578-585 (2001). PMID: 11675627
19. **Symanski E**, Sällsten G, Chan W, Barregård L. Heterogeneity in sources of exposure variability among groups of workers exposed to inorganic mercury. *Ann Occup Hyg* 45:677-687 (2001). PMID: 11718663
20. **Symanski E**, Greeson NMH. Assessment of variability in biomonitoring data using a large database of biological measures of exposure. *Am Ind Hyg Assoc J* 63:390-401 (2002). PMID: 12486772
21. Tee* PG, Sweeney AM, **Symanski E**, Gardiner JL, Gasior DM, Schantz SL. A longitudinal examination of factors related to changes in serum polychlorinated biphenyl levels. *Environ Health Perspect* 111:702-707 (2003). PMID: PMC1241478
22. **Symanski E**, Savitz DA, Singer PC. Assessing spatial fluctuations, temporal variability, and measurement error in estimated levels of disinfection by-products in tap water: Implications for exposure assessment. *Occup Environ Med* 61:65-72 (2004). PMID: PMC1757819
23. Delclos GL, Arif AA, Aday L, Carson A, Lai D, Lusk C, Stock T, **Symanski E**, Whitehead LW, Benavides FG, Antó JM. Validation of an asthma questionnaire for use in healthcare workers. *Occup Environ Med* 63:173-179 (2006). PMID: PMC2078145
24. **Symanski E**, Maberti S, Chan W. A meta-analytic approach for characterizing the within- and between- worker sources of variation in occupational exposure. *Ann Occup Hyg* 50:343-357 (2006). PMID: 16513810
25. Meyer TE, Coker AL, Sanderson M, **Symanski E**. A case-control study of farming and prostate cancer in African American and Caucasian men. *Occup Environ Med* 64:155-160 (2007). PMID: PMC2092527
26. **Symanski E**, Greeson NMH, Chan W. Evaluating measurement error in estimates of worker exposure assessed in parallel by personal and biological monitoring. *Am J Ind Med* 50:112-121 (2007). PMID: 17238141
27. Delclos GL, Gimeno D, Arif AA, Burau KD, Carson A, Lusk C, Stock T, **Symanski E**, Whitehead LW, Zock JP, Benavides FG, Antó JM. Occupational risk factors and asthma among health care professionals. *Am J Resp Critical Care Med* 175:667-675 (2007). PMID: PMC1899286
28. Sweeney AM, **Symanski E**. The influence of age at exposure to PBBs on birth outcomes. *Environ Res* 105:370-379 (2007). PMID: 17485077
29. Whitworth* KW, **Symanski E**, Coker AL. Childhood Lymphohematopoietic Cancer Incidence and hazardous air pollutants in Southeast Texas, 1995-2004. *Environ Health Perspec* 116:1576-1580 (2008). PMID: PMC2592281
30. **Symanski E**, Stock TH, Tee PG, Chan W. Demographic, Residential and behavioral determinants of elevated exposures to benzene, toluene, ethylbenzene and xylenes among the U.S. population: Results from 1999-2000 NHANES, *J Toxicol Environ Health* 72:915-924 (2009). PMID: 19557620
31. McHugh* M, **Symanski E**, Pompeii LA, Delclos GL. Prevalence of asthma among adult males and females in the United States: Results from the National Health and Nutrition

Examination Survey (NHANES), 2001-2004, *J Asthma* 46(8):759-66 (2009). PMID: 19863277

32. Lupo* PJ, **Symanski E**. A comparative analysis of modeled and monitored ambient levels of hazardous air pollutants in Texas: A novel approach using concordance correlation analyses, *J Air Waste Manage Assoc* 59:1278-1286 (2009). PMID: 19947109
33. Peck JD, Sweeney AM, **Symanski E**, Gardiner J, Silva MJ, Calafat AM, Schantz SL. Intra- and inter-individual variability of urinary phthalate metabolite concentrations in Hmong women of reproductive age, *J Exp Sci Environ Epidemiol* 20:90-100 (2010). PMID: PMC2929921
34. Yeh H-W, Chan W, **Symanski E**, Davis BR. Estimating transition probabilities for ignorable intermittent missing data in a discrete-time Markov chain, *Communications Stat – Simulation Computation* 39:433–448 (2010).
35. Lupo* PJ, **Symanski E**, Chan W, Mitchell LE, Waller DK, Canfield MA, Langlois, PH. Differences in exposure assignment between conception and delivery: the impact of maternal mobility, *Paediatric Perinatal Epidemiol* 24:200–208 (2010). PMID: 20415777
36. McHugh* MK, **Symanski E**, Pompeii LA, Delclos GL. Prevalence of asthma by industry and occupation in the US Working Population, *Am J Ind Med* 53:463-475 (2010). PMID: 20187006
37. Lupo* PJ, **Symanski E**, Waller DK, Chan W, Canfield MA, Langlois PH, Mitchell LE, Polytomous logistic regression as a tool for exploring heterogeneity across birth defect subtypes: An example using anencephaly and spina bifida, *Birth Defects Research Part A*, 88:701-705 (2010). PMID: 20740595
38. McHugh* MK, **Symanski E**, Pompeii LA, Delclos GL. The feasibility of adapting a population-based asthma-specific job exposure matrix to NHANES, *Am J Ind Med* 53:1220-4 (2010). PMID: 20632315
39. Lupo* PL, **Symanski E**, Waller DK, Chan W, Langlois PH, Canfield MA, Mitchell LE. Maternal exposure to ambient levels of benzene and neural tube defects among offspring in Texas, 1999-2004, *Environ Health Perspect* 119: 397-402 (2011) (online Oct 5 2010). PMID: PMC3060005
40. Whitworth* KW, **Symanski E**, Lai D, Coker AL. Kriged and modeled ambient air levels of benzene in an urban environment: an exposure assessment study, *Environ Health* 10:21 (2011) (doi:10.1186/1476-069X-10-21). PMID: PMC3070619
41. Rangel* KM, Delclos G, Emery R, **Symanski E**. Assessing maintenance of evaporative cooling systems in Legionellosis outbreaks, *J Occup Environ Hyg* 8:249-265 (2011). PMID: 21416443
42. de Oliveira Otto, MCC, Alonso, A, Lee, D-H, Delclos GL, Jenny NS, Jiang R, Lima JA, **Symanski E**, Jacobs DR and Nettleton JA. Dietary micronutrient intakes are associated with markers of inflammation but not with markers of subclinical Atherosclerosis. *J Nutr* 141:1508–1515 (2011). PMID: PMC3138642
43. Yeh H-W, **Symanski E**, Chan W. Intermittent Missing Observations in Discrete-Time Hidden Markov Models. *Communications in Statistics – Simulation and Computation* 41(2): 167 – 181 (2012).

44. de Oliveira Otto MC, Alonso A, Lee DH, Delclos GL, Bertoni AB, Jiang R, Lima JA, **Symanski E**, Jacobs DR and Nettleton JA. Dietary intakes of Zinc and heme-Iron from red meat, but not from other sources, are associated with greater risk of metabolic syndrome and cardiovascular disease, *J Nutrition* 142: 526–533 (2012). PMID: PMC3278268
45. Lupo PJ, Langlois PH, Reefhuis J, Lawson CC, **Symanski E**, Desrosiers TA, Khodr ZG, Agopian AJ, Waters MA, Duwe KN, Finnell RH, Mitchell LE, Moore CA, Romitti PA, Shaw, GM. Maternal occupational exposure to polycyclic aromatic hydrocarbons: Effects on gastroschisis among offspring in the National Birth Defects Prevention Study, *Environ Health Perspect* 120:910-5 (2012). PMID: PMC3385431
46. Lupo PJ, **Symanski E**, Langlois PH, Lawson CC, Malik S, Gilboa SM, Lee LJ, Agopian AJ, Desrosiers TA, Waters MA, Romitti PA, Correa A, Shaw GM, Mitchell LE. Maternal occupational exposure to polycyclic aromatic hydrocarbons and congenital heart defects among offspring in the National Birth Defects Prevention Study, *Birth Defects Research Part A: Clinical and Molecular Teratology* 94:875–881 (2012). PMID: 22945317
47. Wendt* JK, **Symanski E**, Du XL. Estimation of asthma incidence among low-income children in Texas: A novel approach using Medicaid claims data, *Am J Epidemiol* 176: 744-750 (2012) DOI: 10.1093/aje/kws150. PMID: PMC3571251
48. Lopez-Olivo MA, Shah NA, Pratt G, Risser JM, **Symanski E**, Suarez-Almazor ME. Bisphosphonates in the treatment of patients with lung cancer and metastatic bone disease: A systematic review and meta-analysis, *Support Care in Cancer* 20:2985-2998 (2012). PMID: PMC3691019
49. Oluyomi AO, Whitehead LW, Burau KD, **Symanski E**, Kohl HW, Bondy M. Physical activity guideline in Mexican-Americans: Does the built environment play a role? *J Immigrant Minority Health* DOI 10.1007/s10903-012-9724-1(2012). PMID: 23054541
50. Cai Y, Lai D, Waller DK, Du X, Burau K, **Symanski E**. Statistical analysis of the day of the week effect on births in Harris County, Texas, *J Biol Systems* 21:1-8 (2013).
51. Du XL, Cai Y, **Symanski E**. Association between chemotherapy and cognitive impairments in a large cohort of patients with colorectal cancer. *Int J Oncol* 42:2123-2133 (2013). PMID: 23563930
52. Tong L, Ahn C, **Symanski E**, Lai D, Du XL. Temporal trends in the leading causes of death among a large national cohort of patients with colorectal cancer from 1975 to 2009 in the United States. *Annals Epidemiol* 24:411-417 (2014). PMID: 24529646
53. Park, E-S, Hopke PK, Oh M-S, **Symanski E**, Han D, Spiegelman, C. Assessment of source specific health effects associated with an unknown number of major sources of multiple air pollutants: A Unified Bayesian approach. *Biostatistics* 15 (3):484-497 (2014). DOI:10.1093/biostatistics/kxu004. PMID: 24622036
54. **Symanski E**, Davila M, Karpman McHugh, M., Waller, D.K., Zhang X, Lai D. Maternal exposure to fine particulate pollution during narrow gestational periods and newborn health in Harris County, *Maternal and Child Health Journal*, 18: 2003-2012 (2014). PMID: 24585411
55. Wendt* JK, **Symanski E**, Stock TH, Chan W, Du XL. Association of ambient air pollution and timing of initial asthma diagnosis among Medicaid-enrolled children in a metropolitan area, *Environ Res* 131:50-58 (2014). PMID: PMC4502952

56. Tong, L, Ahn C, **Symanski E**, Lai D, Du XL. Effects of newly developed chemotherapy regimens, comorbidities, chemotherapy-related toxicity on the changing patterns of the leading causes of death in elderly patients with colorectal cancer, *Ann Oncol*, 6:1234-42 (2014) PMID: PMC4110447
57. Beyda RM, Benjamins LJ, **Symanski E**, Swartz M, Risser WL, Eissa M. Azithromycin Efficacy in the Treatment of chlamydia trachomatis among detained youth, *Sexually Transmitted Diseases*, 41:592-594 (2014). PMID: 25211253
58. Tong L, Ahn C, **Symanski E**, Lai D, Du XL. Relative impact of earlier diagnosis and improved treatment on survival for colorectal cancer: A US database study among elderly patients. *Cancer Epidemiol* 38(6):733-740 (2014). PMID: 25454261
59. Lopez DS, Advani S, Tsilidis K, Hernandez M, Tsai C-L, **Symanski E**, Strom SS, Canfield S. Racial and ethnic differences in the association of metabolic syndrome with prostate-specific antigen levels in US men: NHANES 2001-2006, *J Men's Health*, 11:163-170 (2014).
60. Swartz MD, Cai Y, Chan W, **Symanski E**, Mitchell LE, Danysh HE, Langlois PH Lupo PJ. Air toxics and birth defects: A Bayesian hierarchical approach to evaluate multiple pollutants and spina bifida, *Environ Health* 14:16 (2015), DOI: 10.1186/1476-069X-14-16. PMID: PMC4429479
61. Pearce NE, Blair A, Vineis P, Ahrens W, Andersen A, Anto JM, Armstrong BK, Baccarelli AA, Beland FA, Berrington A, Bertazzi PA, Birnbaum LS, Brownson RC, Bucher JR, Cantor KP, Cardis E, Cherrie JW, Christiani DC, Cocco P, Coggon D, Comba P, Demers PA, Dement JM, Douwes J, Eisen EA, Engel LS, Fenske RA, Fleming LE, Fletcher T, Fontham E, Forastiere F, Frentzel-Beyme R, Fritschi L, Gerin M, Goldberg M, Grandjean P, Grimsrud TK, Gustavsson P, Haines A, Hartge P, Hansen J, Hauptmann M, Heederik D, Hemminki K, Hemon D, Hertz-Picciotto I, Hoppin JA, Huff J, Jarvholm B, Kang D, Karagas MR, Kjaerheim K, Kjuus H, Kogevinas M, Kriebel D, Kristensen P, Kromhout H, Laden F, Lebaillly P, LeMasters G, Lubin JH, Lynch CF, Lynge E, 't Mannetje A, McMichael AJ, McLaughlin JR, Marrett L, Martuzzi M, Merchant JA, Merler E, Merletti F, Miller A, Mirer FE, Monson R, Nordby K, Olshan AF, Parent M, Perera FP, Perry MJ, Pesatori AC, Pirastu R, Porta M, Pukkala E, Rice C, Richardson DB, Ritter L, Ritz B, Ronckers CM, Rushton L, Rusiecki JA, Rusyn I, JM Samet, Sandler DP, de Sanjose S, Schernhammer E, Seniori Costantini A, Seixas N, Shy C, Siemiatycki J, Silvermann DT, Simonato L, Smith AH, Smith MT, Spinelli JJ, Spitz MR, Stallones L, Stayner LT, Steenland K, Stenzel M, Stewart BW, Stewart PA, **Symanski E**, Terracini B, Tolbert PE, Vainio H, Vena J, Vermeulen R, Victora CG, Ward EM, Weinberg CR, Weisenburger D, Wesseling C, Weiderpass E, and Zahm SH. IARC Monographs: 40 Years of Evaluating Carcinogenic Hazards to Humans. *Environ Health Perspect* 123:507–514 (2015) <http://dx.doi.org/10.1289/ehp.1409149>. PMID: PMC4455595
62. Bangia* KS, **Symanski E**, Strom SS, Bondy M. A cross-sectional analysis of polycyclic aromatic hydrocarbons and diesel particulate matter exposures and hypertension among individuals of Mexican origin, *Environ Health*, 14(1):51. (2015) DOI:10.1186/s12940-015-0039-2. PMID: PMC4471931
63. O'Brien JL, Langlois PH, Lawson CC, Scheuerle A, Rocheleau CM, Waters MA, **Symanski E**, Romitti PA, Agopian AJ, Lupo PJ. Maternal occupational exposure to polycyclic aromatic hydrocarbons and craniosynostosis among offspring in the National Birth Defects Prevention Study, *Birth Defects Res Part A: Clinical Molec Teratology*, 106 (1): 55-60 (2016) DOI: 10.1002/bdra.23389. PMID:26033890

64. **Symanski E**, Karpman McHugh M, Zhang X, Craft E, Lai D. Evaluating narrow windows of maternal exposure to ozone and preterm birth in a large urban area in Southeast Texas, *J Exp Sci Environ Epidemiol*, **26:167-172** (2016) | doi:10.1038/jes.2015.32 PMID: 25944700
65. **Symanski E**, Karpman M, Jimenez M, Lopez DS, Felknor SA, Upadhyaya M, Strom SS, Bondy ML. Using a community engaged approach to develop a bilingual survey about psychosocial stressors among individuals of Mexican origin, *J Health Care Poor Underserved*, **26:1456-1471** (2015).
66. Lupo PJ, Danysh HE, **Symanski E**, Langlois PH, Cai Y, S MD. Neighborhood-based socioeconomic position and risk of oral clefts among offspring. *Am J Pub Health*, **105: 2518-2525** (2015). DOI: 10.2105/AJPH.2015.302804
67. Payne-Sturges D, Korfmacher K, Cory-Slechta D, Jimenez M, **Symanski E**, Carr Shmool J, Dotson-Newman O, Clougherty J, French R, Levy J, Laumbach R, Rodgers K, Bongiovanni R, Scammell MK. Engaging communities in research on cumulative risk and social stress-environment interactions: Lessons learned from EPA's STAR Program, *Environ Justice*, **8(6):203-212** (2015).
68. Lee* LJ, **Symanski E**, Lupo PJ, Tinker SC, Razzaghi H, Hoyt AT, Pompeii LA, Canfield MA, Chan W. Use of the Occupational Information Network (O*NET) to assess workplace physical activity, sedentary behaviors, and emotional stressors during pregnancy, *Am J Ind Med*, **59(2):137-149** DOI 10.1002/ajim.22548 (2015).
69. Maypole-Keenan* CM, **Symanski E**, Stock TH, Waller, K. Association between ambient levels of polycyclic aromatic hydrocarbons and small for gestational age Hispanic infants born along the United States-Mexico Border, *J Immigrant Minority Health*, **18:143-149** (2016). First published online 01 March 2014 DOI 10.1007/s10903-014-9994-x.. PMID: 24585213.
70. Shim J, Pérez A, **Symanski E**, Nyitray AG. The association between serum 25-hydroxyvitamin D and human papillomavirus cervicovaginal infection in women in the United States, *J Infect Dis* **213(12):1886-92** (2016). Epub 2016 Feb 15. (2016). DOI 10.1093/infdis/jiw065.
71. Ma J, Yu X, **Symanski E**, Doody R and Chan W. A Bayesian approach in estimating transition probabilities of a discrete-time Markov chain for ignorable intermittent missing data. *Communications Statistics-Simulation Computation*, **45(7):2598-2616** (2016) (Available on-line (21 Aug 2014), DOI:10.1080/03610918.2014.911895)
72. Lopez DS, Advani S, Tsilidis KT, Wang R, Baillargeon J, Dobs A, **Symanski E**, Canfield S. Association of urinary phthalate metabolites with erectile dysfunction in racial and ethnic groups in the National Health and Nutrition Examination Survey (NHANES) 2001-2004, *Am J Men's Health*, (2016) Apr 1.pii: 1557988316641370. [Epub ahead of print]
73. **Symanski, E**, Lewis, P G T, Chen, TY, Chan, W, Lai, D, & Ma, X. Air toxics and early childhood acute lymphocytic leukemia in Texas, a population based case control study. *Environmental Health*, **15(1), 1** (2016).
74. Lee* LJ, **Symanski E**, Lupo PJ, Tinker SC, Razzaghi H, Chan W, Hoyt AT, Canfield MA. The role of maternal occupational physical activity and psychosocial stressors on selected adverse birth outcomes, *Occup Environ Med*, **1-8** (2016). doi:10.1136/oemed-2016-103715.
75. Han I, Guo Y, Afshar M, Stock TH, **Symanski E**. Comparison of trace elements in size-fractionated particles in a low socioeconomic status (SES) community and a high SES

community in Houston, TX. *Environ Monitoring Assessment*. 189: 67. (2017)
doi:10.1007/s10661-017-5780-2.

76. Han, I, **Symanski E**, Stock TH. Feasibility of Using Low-cost Portable Particle Monitors for Measurement of Fine and Coarse Particulate Matter in Urban Ambient Air, *J Air Waste Management Assoc*, 67, 330–340 (2017).
77. Whitworth KW, Han I, Afshar M, Mei Y, Berens PD, Sharma, SV, **Symanski E**. Accessing disadvantaged pregnant women in Houston, Texas and characterizing biomarkers of metal exposure: a feasibility study, *Int J Environ Res Pub Health*, 14(5), 474 (2017);
doi:10.3390/ijerph14050474.
78. Agopian AJ, Kim J, Langlois PH, Lee L, Whitehead LW, **Symanski E**, Herdt ML, Delclos GL. Maternal occupational physical activity and risk for orofacial clefts. *Am J Indus Med*, 7:627–634 (2017).
79. Whitworth KW, Marshall AK, **Symanski E**. Maternal Residential Proximity to Unconventional Gas Development and Adverse Birth Outcomes among a Diverse Urban Population in Texas PLoS ONE 12(7) (2017): <https://doi.org/10.1371/journal.pone.0180966>

Submitted Publications (*Indicates student's work in which E. Symanski was primary mentor and is named senior author)

80. Chen L, Chan W, **Symanski E**. On interaction through a statistical isobole, under review.
81. Whitworth K, Marshall A, **Symanski E**. Drilling and production activity related to unconventional gas development and severity of preterm birth, under review.
82. Han I, Samarneh L, **Symanski E**, Stock TH. 2017. Impact of transient noise and air pollution affected by truck and train traffic in underserved communities, under review.
83. Whitworth K, Rush E, Haug L, Sabaredzovic A, **Symanski E**, Longnecker M and Singer A. Oral contraceptive use as a determinant of plasma concentrations of perfluoroalkyl substances among women in the norwegian mother and child cohort (moba) study, under review.
84. Rammah A, Walker Whitworth K, Han I, Chan W, Jimenez MD, Strom SS, Bondy ML **Symanski E**. A mixed-methods study to examine the role of psychosocial stress and air pollution on hypertension in Mexican-origin Hispanics, under review.

Books and Book Chapters

1. **Symanski E**. Chapter 17, *Quantitative Surveying - Application of Variance Component Models to Exposure Assessment* in Perkins, J.L. *Modern Industrial Hygiene: Volume I Recognition and Evaluation of Chemical Agents*. 2nd edition, American Conference of Governmental Industrial Hygienists, Cincinnati (2008) 900 pp.
2. Committee on Contaminated Drinking Water at Camp Lejeune, *Contaminated Water Supplies at Camp Lejeune: Assessing Potential Health Effects*, National Research Council of the National Academies, The National Academies Press, Washington, D.C., 2009.
3. Committee to Review the Styrene Assessment in the National Toxicology Program 12th Report on Carcinogens, *Review of the Styrene Assessment in the National Toxicology Program 12th Report on Carcinogens*, National Research Council of the National Academies, The National Academies Press, Washington, D.C., 2014.

Non-refereed Publications, Conference Proceedings, and Letters to the Editor

1. Yager JW, Paradisin W, **Symanski E**, Rappaport SM. 'Sister chromatid exchanges induced in peripheral lymphocytes of workers exposed to low concentrations of styrene' in *Mutation and the Environment - Part C: Somatic and Heritable Mutation, Adduction and Epidemiology*, M. Mendelsohn and R. J. Albertini, eds., Wiley-Liss, New York, 1990, pp. 271-282. (Proceedings of the Fifth International Conference on Environmental Mutagens)
2. Rappaport SM, **Symanski E**, Lyles R, Kromhout H. *Letter to the editor*. Response to letters regarding *Am. Ind. Hyg. Assoc. J.* 54:654-662 (1993). *Am. Ind. Hyg. Assoc. J.* 55:875-877 (1994).
3. **Symanski E**, Hertz-Picciotto I. Blood lead levels in relation to menopause, smoking, and pregnancy history. *Menopause Digest* 3:10-13 (1996). (Invited article)
4. Rappaport SM, Tornero-Velez R, **Symanski E**, Kromhout H, Yu RC. *Letter to the editor*. Response to letter regarding *Risk Analysis* 17:279-292 (1997). *Risk Analysis* 18:669-671 (1998) [Letter].
5. Sweeney AM, **Symanski E**, Del Junco DJ. Response to Terrell et al.'s comments, *Environ Res*, 2008 [Letter].
6. Rangel* KM, Delclos G, Emery R, **Symanski E**. Response to Letter to the Editor regarding Journal of Occupational and Environmental Hygiene Volume 8, Number 4, April 2011: Rangel, KM, Delclos, G, Emery R and Symanski E, Assessing Maintenance of Evaporative Cooling Systems in Legionellosis Outbreaks. *J Occup Environ Hyg* [Letter].
7. de Oliveira Otto MC, Alonso A, Lee D-H, Delclos GL, Bertoni AG, Jiang R, Lima JO, **Symanski E**, Jacobs DR, Nettleton, JA. Reply to Brownstein *J. Nutr*, 142, 2012 [Letter].

Final Contract/Grant Reports

1. Cooper SP, Vernon S, Burau K, Hanis C, Smith MA, **Symanski E**, Sweeney A, Robison T, MacNaughton N. *Ascertainment of Exposures of Migrant Farmworker Children: A Feasibility Study*. Final Report, National Cancer Institute, March 1998.
2. **Symanski E**. *An Investigation of the Time-Varying Behavior of Nickel Exposure from 1977 to 1994*. Final Report, NiPERA, Inc., 23 October 1998.
3. **Symanski E**. *The Utility of Biomarkers as Exposure and Dose Measures*, Final Performance Report, Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health, Grant number K01 OH00166, 20 December 2001.
4. Walker KM, Coker AL, **Symanski E**, Lupo PJ. *A Preliminary Investigation of the Association between Hazardous Air Pollutants and Lymphohematopoietic Cancer Risk among residents of Harris County, Texas*, Report to the City of Houston, November 2006.
5. **Symanski E**. *Evaluation of Exposure Measurement Error*, Final Performance Report, Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health, Grant number 5 R03 OH 007834, December 2007.
6. Perkins, J., **Symanski E**, Coker A., Eggleston K. *A Study to Evaluate the Health Effects of Air Pollution in Bexar County with a Focus on Local Coal and Gas Fired Power Plants*, Final Report, CPS Energy, September 2009.

7. **Symanski E.** *Hazardous Air Pollutants and Lymphohematopoietic Cancer Incidence in Houston 1995-2003*, Final Progress Report, National Cancer Institute (NCI), Grant number 5R03CA128106, Final Report, November 30, 2010
8. **Symanski E.** *The Southwest Center For Occupational And Environmental Health, A NIOSH-funded Education and Research Center*, Final Progress Report for the period July 1, 2005-June 30, 2011, National Institute of Occupational Safety and Health, Grant number T42 OH008421, September 28, 2011.
9. Park E-S, **Symanski E**, Han D, Spiegelman C. *Development of Enhanced Statistical Methods for Assessing Health Effects Associated with an Unknown Number of Major Sources of Multiple Air Pollutants*, Final Report, Health Effects Institute, February 16, 2013.
10. **Symanski E.** *Tracking Air Pollutants and Newborn Health*, Final Progress Report, National Institute of Environmental Health Sciences, Grant number 5R21ES017347, August 30, 2013.
11. **Symanski, E.** *Early Life Exposures to Air Toxics and the Risk of Early Childhood Leukemia*, Final Progress Report, National Cancer Institute, Grant number 5R03CA162172, August 26, 2015.
12. **Symanski E.** *The Southwest Center For Occupational And Environmental Health, A NIOSH-funded Education and Research Center*, Final Progress Report for the period July 1, 2011-June 30, 2015, National Institute of Occupational Safety and Health, Grant number T42 OH008421, September 30, 2015.

Published Abstracts and Presentations (*Indicates student's work in which E. Symanski was primary mentor)

1. Rappaport SM, Kromhout H, **Symanski E**, Kupper LL. *Assessment of Exposure Between Workers in "Homogeneous" Groups*. American Industrial Hygiene Association Conference & Exposition, Boston, Massachusetts, June 1-5, 1992.
2. **Symanski E.** *Assessing Exposures - Is Biased Sampling Really Necessary?* Invited lecture, fall conference of the Carolinas section of the American Industrial Hygiene Association, Myrtle Beach, South Carolina, October 14-15, 1993.
3. **Symanski E**, Hertz-Picciotto I. *Blood Lead Levels in Relation to Menopause*. 27th annual meeting of the Society for Epidemiologic Research (SER), Miami, Florida, June 15-19, 1994 (*Am J Epidemiol* 139:S74, 1994).
4. Tornero-Velez R, **Symanski E**, Kromhout H, Yu RC, Rappaport SM. *Compliance Versus Risk in Assessing Occupational Exposures*. Society for Risk Analysis Annual Meeting, New Orleans, Louisiana, December 1996.
5. **Symanski E.** *Time-dependent Sources of Variation in Occupational Exposure*. Invited lecture, Department of Occupational Medicine, University of Göteborg, Göteborg, Sweden, September 25, 1997.
6. **Symanski E.**, Sällsten G, Barregård L. *Variability in Airborne and Biological Measures of Exposure to Mercury Vapour*. ISEE/ISEA 1999 Conference, Athens, Greece, September 4-7, 1999 (*Epidemiol* 10 (S1):101, 1999).
7. Greeson* N, **Symanski E.** *Assessment of Within- and Between-worker Sources of Variation in Biological and Airborne Measures of Exposure*. American Industrial Hygiene Association

Conference & Exposition, Graduate student poster session (Awarded best poster of the session), Orlando, Florida, May 20-25, 2000.

8. **Symanski E.** *Assessment of Within- and Between-Worker Sources of Variation in Exposure to Workplace Contaminants.* Invited lecture, Greater Houston Industrial Hygiene Council Meeting, Houston, Texas, June 29, 2000.
9. **Symanski E.** *Implications of Variability in Biological Measures of Exposure for Epidemiologic Studies: Do the Errors Matter?* Invited lecture, Department of Epidemiology, College of Human Medicine, Michigan State University, Lansing, Michigan, April 12, 2001.
10. Sweeney AM, del Junco DJ, **Symanski E**, Cooper SP, Fox E, Staub L, Garzon A, Wu X. *Serum dioxin, P450 Genes, and Neural Tube Defects among Offspring of Vietnam Veterans.* Invited lecture (A. Sweeney), Yale Vietnam Conference, New Haven, CT, September 14, 2002.
11. **Symanski, E.** *Exposure Variability: Truth, Assumptions, and Consequences.* Invited lecture, Department of Environmental Health Sciences, University of Michigan, School of Public Health, Ann Arbor, MI, March 28, 2003.
12. Delclos GL, Arif A, Aday LA., Bartholomew K, Carson AI, Lai D, Lusk C, Stock T, **Symanski E**, Whitehead LW. *Reliability and Validity of an Asthma Questionnaire for Healthcare Workers.* NORA 2003 Symposium: Working Partnerships Research to Practice Conference, Washington DC, June 23-24, 2003.
13. Maberti* S, **Symanski E.** *Effect of Long-term Trends on the Estimation of the Within- and Between-worker Variance Components. An Application in the nickel industry.* American Industrial Hygiene Association Conference & Exposition, Graduate student poster session. Atlanta, Georgia, May 8-13, 2004.
14. Maberti* S., **Symanski E.** *A Retrospective Evaluation of Nickel exposures under Non-stationary Scenarios.* American Industrial Hygiene Association Conference & Exposition, Anaheim, California, May 21-26, 2005.
15. Maberti* S, **Symanski E.** *An Evaluation of Patterns of Homogeneity in Exposure among Job Groups across Different Industries. Implications for epidemiologic studies.* American Industrial Hygiene Association Conference & Exposition, Anaheim, California, May 21-26, 2005.
16. Meyer* TE, Coker AL, Sanderson M, **Symanski, E.** *Reduction of Exposure Misclassification in a Case-control Study of Farming-related Exposures and Prostate Cancer.* Joint meeting of the Society for Epidemiologic Research (SER) and the Canadian Society for Epidemiology and Biostatistics (CSEB), Toronto, Ontario Canada, June 27-30, 2005.
17. **Symanski E.** *Statistical Approaches for Modeling Intra-and inter-individual sources of variation in biological measures of exposure.* Invited Lecture, Special Session entitled, Analytical and Biological Variability: Impact on Interpretation of Biomonitoring Results, 28th International Congress of Occupational Health (ICOH), Milan, Italy, 13 June 2006.
18. Walker* KM, Coker AL, **Symanski E**, Lupo PJ. *A Preliminary Investigation of the Association between Hazardous Air Pollutants and Lymphohematopoietic Cancer Risk among Houstonians,* Presentation to the City of Houston, Grand Rounds, 10 January 2007.
19. **Symanski E.** *A Preliminary Investigation of the Association between Hazardous Air Pollutants and Lymphohematopoietic Cancer Risk in Harris County, Texas, 1995-2003,* Presentation to the Deer Park Community Advisory Council, 22 February 2007.

20. Tee* PG, Selwyn BJ, **Symanski E**, Sweeney AM, Burau KD. *Assessing the Relationship of Phthalate Monoester Exposure to Gonadotropin Levels among US Women aged 35-60 Years, NHANES 1999-2002*. Twentieth Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER), Boston, Massachusetts, June 18-19, 2007.
21. Walker* KM, Coker AL, **Symanski E**. *A Preliminary Analysis of Hazardous Air Pollutants and Lymphohematopoietic Cancer in Harris County, Texas*, 40th Annual Society for Epidemiologic Research Meeting, Boston, Massachusetts, June 19-22, 2007.
22. Yeh* H-W, Chan W, **Symanski E**. *Recovering the Estimated Slope of an Unobservable Predictor in a Simple Regression*, Joint Statistical Meeting, Salt Lake City, Utah, July 29, 2007.
23. Walker* KM, **Symanski E**, Coker A. *A Preliminary Investigation of the Association between Hazardous Air Pollutants and Lymphohematopoietic Cancer Risk in Harris County, Texas, 1995-2003*, Presentation to Mother's for Clean Air, 13 August 2007.
24. **Symanski E**, Smith MA. *Exposure-Dose-Health Effects: Understanding the Links*. Presentation to the Deer Park Community Advisory Council, 22 October 2007.
25. McHugh* MK, **Symanski E**, Delclos GL *The Role of Gender and Age in the Prevalence of Asthma in The United States, 1999-2004*, 41th Annual Society for Epidemiologic Research Meeting, Chicago, Illinois, June 24-27, 2008.
26. Lupo PJ*, **Symanski E**. *A Comparative Analysis of Monitored Ambient Hazardous Air Pollutant Levels with Modeled Estimates from the Assessment System for Population Exposure Nationwide*. Invited Talk. Joint Annual Conference of the International Society for Environmental Epidemiology and the International Society of Exposure Analysis, Pasadena, CA, October 12-16, 2008.
27. Whitworth KW*, **Symanski E**, Coker AL. *Childhood Lymphohematopoietic Cancer Incidence and Hazardous Air Pollutants in Southeast Texas, 1995-2004*, 2008 NIH National Graduate Student Research Festival, Rockville, MD, September 11-12, 2008.
28. Lupo PJ*, **Symanski E**, Chan W, Mitchell LE, Waller DK, Canfield MA, Langlois, PH. *Exposure Misclassification in Studies of Adverse Birth Outcomes: Assessing Effects due to Residential Mobility*, 42nd Annual Society for Perinatal Epidemiologic Research Meeting, Pasadena, CA, June 22-23, 2009.
29. Park ES, **Symanski E**, Han D, Spiegelman C. *Development of Enhanced Statistical Models for Assessing Health Effects Associated with an Unknown Number of Major Sources of Multiple Air Pollutants*, 2010 Health Effects Institute Annual Conference, Alexandria, VA, April 25-27, 2010.
30. de Oliveira Otto, MC, Alonso, A. Lee, D.H. et al. Delclos, GL, Jenny, NS, Jiang R, Lima JA, **Symanski E**, Jacobs DR and Nettleton JA. *Associations of dietary intakes of magnesium, zinc and antioxidants with markers of inflammation in the Multi-Ethnic Study of Atherosclerosis (MESA)*. A.C. Camargo Global Meeting in Translational Sciences, Sao Paulo, Brazil, April 2010.
31. Oluyomi A, Bondy M, Whitehead L, Burau K, **Symanski E**. *Using Geographical Information Systems (GIS) to Create Objective Measures of the Built Environment: Toward Assessing Built Environment Correlates of Physical Activity and Obesity*, 9th International Conference on Urban Health 2010, October 27-29, 2010.

32. de Oliveira Otto, MC, Alonso, A. Lee, D.H. et al. Delclos, GL, Bertoni AB, Jiang R, Lima JA, **Symanski E**, Jacobs DR and Nettleton JA *Dietary micronutrients and incident metabolic syndrome, type II diabetes and cardiovascular disease in the Multi-Ethnic Study of Atherosclerosis*. American Heart Association - Nutrition, Physical Activity and Metabolism and Cardiovascular Disease Epidemiology and Prevention 2011 Scientific Sessions, Atlanta, GA, March 2011.
33. Park ES, **Symanski E**, Han D, Spiegelman C. *Development of Enhanced Statistical Models for Assessing Health Effects Associated with an Unknown Number of Major Sources of Multiple Air Pollutants*, 2011 Health Effects Institute Annual Conference, Boston, MA, May 1-3, 2011.
34. Lupo PJ, **Symanski E**, Langlois PH, Gilboa SM, Malik S, Lawson CC, Agopian A, Correa A, Desrosiers T, Romitti PA, Shaw GM, Mitchell LE and the National Birth Defects Prevention Study. *Maternal occupational exposure to polycyclic aromatic hydrocarbons (PAHs) and congenital heart defects (CHDs) in offspring*. Annual Meeting of the Society of Pediatric and Perinatal Epidemiologic Research, Montreal, Canada, June 20-21, 2011.
35. Lupo PJ, Langlois PH, **Symanski E**, Finnell RH, Reefhuis J, Agopian A, Lawson CC, Duwe KN, Moore CA, Romitti PA, Shaw GM, Mitchell LE and the National Birth Defects Prevention Study. *Maternal occupational exposure to polycyclic aromatic hydrocarbons (PAHs) and gastroschisis in offspring*. Annual Meeting of the Society of Pediatric and Perinatal Epidemiologic Research, Montreal, Canada, June 20-21, 2011.
36. Lupo PJ, **Symanski E**, Langlois PH, Gilboa SM, Malik S, Lawson CC, Agopian A, Correa A, Desrosiers T, Romitti PA, Shaw GM, Mitchell LE and the National Birth Defects Prevention Study. *Maternal occupational exposure to polycyclic aromatic hydrocarbons (PAHs) and congenital heart defects (CHDs) in offspring*. 3rd North American Congress of Epidemiology, Montreal, Canada, June 21-24, 2011.
37. Lupo PJ, Langlois PH, **Symanski E**, Finnell RH, Reefhuis J, Agopian A, Lawson CC, Duwe KN, Moore CA, Romitti PA, Shaw GM, Mitchell LE and the National Birth Defects Prevention Study. *Maternal occupational exposure to polycyclic aromatic hydrocarbons (PAHs) and gastroschisis in offspring*. 3rd North American Congress of Epidemiology, Montreal, Canada, June 21-24, 2011.
38. Park ES, **Symanski E**, Han D, Spiegelman C. *Linking unknown source exposures to health effects*, 2011 Joint Statistical Meetings (JSM), Miami Beach, FL, July 30-August 4, 2011.
39. Park ES, **Symanski E**, Han D, Spiegelman C. *Development of enhanced statistical models for assessing health effects associated with an unknown number of major sources of multiple air pollutants*, 2013 Health Effects Institute Annual Conference, San Francisco, CA, April 13-16, 2013.
40. Langlois PH, Hoyt AT, Lupo PJ, Lawson CC, Waters MA, Desrosiers TA, Shaw GM, Romitti PA, Lammer EJ, **Symanski E**, Reefhuis J, Malik S; *National birth defects prevention study. maternal occupational exposure to polycyclic aromatic hydrocarbons and risk of selected birth defects*. Annual Meeting of the Teratology Society, Tucson, AZ, June 22-26, 2013.
41. Lupo PJ, **Symanski E**, Langlois PH, Swartz MD, Cai Y, Chan W. *Neighborhood environment and oral clefts: An assessment of air toxics and neighborhood-based socioeconomic position*. Environment and Health – Conference of International Society of Environmental Epidemiology, International Society of Exposure Science, and International Society of Air Quality and Climate, Basel, Switzerland, August 19-23, 2013.

42. Lee* LJ, Lupo PJ, Canfield MA, Chan W, Hoyt AT, Pompeii LA, Razzaghi H, Tinker SC, **Symanski E**. *Use of the O*NET to assess occupational exposures in a study of adverse pregnancy outcomes*. 12th Annual Regional National Occupational Research Agenda Young/New Investigators Symposium, Salt Lake City, UT, April 17-18, 2014.
43. Levin J, **Symanski E**, Casanova V, Rios J, Cooper J. *NIOSH responds to training needs in U.S. Public Health Region 6*. American College of Occupational and Environmental Medicine (ACOEM), San Antonio, TX, April 27, 2014
44. Lopez DS, Advani S, Tsilidis KK, Daniel CR, Wang R, **Symanski E**, Canfield S. *Association of urinary phthalate metabolites with erectile dysfunction in racial and ethnic groups in NHANES 2001-2004*. American Urological Association Meeting, May 14-19, New Orleans, LA, 2015.
45. Swartz MD, Cai Y, Chan W, **Symanski E**, Mitchell LE, Danysh H, Langlois P, Lupo PJ. *Using Bayesian hierarchical models to simultaneously evaluate multiple pollutants associated with Spina Bifida*. Joint Statistical Meetings, Seattle, WA, August 2015.
46. Shim J, Pérez A, **Symanski E**, Nyitray AG. *The association between vitamin D and human papillomavirus cervicovaginal infection in the United States*. 30th International Papillomavirus Conference & Clinical and Public Health Workshops (HPV 2015), Lisbon, Portugal, September 17-21, 2015.
47. Marshall A, **Symanski E**, Whitworth KW. *Maternal residential proximity to unconventional gas development (UGD) and adverse birth outcomes in the Barnett Shale area, TX, 2010-2012*. Poster presented at the 2016 UTHealth Student Research Day, Houston, TX, March 31, 2016.
48. Marshall A, **Symanski E**, Whitworth KW. *Maternal residential proximity to unconventional gas development (UGD) and adverse birth outcomes in the Barnett Shale area, TX, 2010-2012*. The 2016 Epidemiology Congress of the Americas, Miami, Florida, June 21-24, 2016.
49. Whitworth KW, Marshall A, **Symanski E**. *Assessing exposure to unconventional gas development and its association with preterm birth in the Barnett Shale, Texas*. 2016 Conference of the International Society for Environmental Epidemiology, Rome, Italy, September 1-4, 2016.
50. Han I, Samarneh L, **Symanski, E**. *Effects of train and truck traffic on noise levels in urban communities*. Acoustical Society of America. Boston, MA, June 25- 29, 2017.
51. Han I, Afshar M, **Symanski E**. *Characterization of Particulate Air Pollution in a Community near the Port of Houston*. National Environmental Monitoring Conference, Washington DC, August 7-11, 2017.

TEACHING

Solo Taught

PH 2120: Man's Impact on the Environment
Spring 2007; Summer 2007; Fall 2007; Spring 2008

PH 2170: Methods for Exposure Assessment
Spring 1998; Fall 1999; Fall 2001; Fall 2003;
Fall 2004; Fall 2005; Spring 2006; Fall 2006

PH 2498: Methods for Exposure Assessment II
Spring 2002

PH 2498: Monte Carlo Analysis and Simulation
Spring 2005

PH 2110: Overview of Environmental Health
Spring 2003; Spring 2004

PH 2710: Epidemiology III
Fall 2009, Spring 2011; Fall 2011; Fall 2012; Fall 2013; Fall 2014; Fall 2015,
Fall 2016, Fall 2017

PH 2760 Occupational Epidemiology
Summer 2017

Team Taught

PH 2710: Epidemiology III (formerly Advanced Epidemiologic Methods I)
Fall 2007; Fall 2008

PH 2498: Statistical and Computer Applications in Environmental Risk Assessment
Spring 2001

PH 2498: Seminar in Environmental Sciences
Spring 2002; Spring 2005

Contributor (periodic)

PH 2101: Contemporary Issues in Environmental and Occupational Health
PH 2110: Overview of Environmental Health
PH 2120: Man's Impact on the Environment
PH 2998: Occupational Epidemiology
PH 2998: Environmental Epidemiology
PH 2998: Molecular Epidemiology

ADVISING

Postdoctoral Fellows

- **P. Grace Tee-Lewis**, SWCOEH, December 2014 – present, Air Pollution and Health Effects
- **Misha Karpman**, SWCOEH, May 2013-May 2015, Air Pollution and Preterm Birth
- **Anushuya Ramakrishnan**, SWCOEH, January 2013-May 2015, Air Pollution and Newborn Health

Current students

Doctoral Advisees

- **Whitney Harrison**, PhD student, Epidemiology, Spring 2014 – present.

- **Amal Rammah**, PhD candidate, Environmental and Occupational Health Sciences *Exposure to Ambient Air Pollutants and Fetal Death in Harris County, Texas*, Fall 2014-present.

Doctoral Dissertation Committees, Member

- **Ting-Yu (Jeff) Chen**, PhD, Biostatistics student, Summer 2015-present.
- **Jihe Kim**, PhD candidate, Epidemiology, *Evidence from Genome-, Exome-Wide Association Studies for Severe Diabetic Retinopathy among Mexican Americans with Type II Diabetes in Starr County, Texas*, Fall 2014-present.
- **Chih-Hsien Wu**, PhD candidate, Biostatistics, *Analysis of Bivariate Longitudinal Discrete Data – A Joint Continuous Time Markov Chains Approach*, Fall 2014-present.

Masters Advisees

- **Connor Cordray**, MPH student, Epidemiology, Fall 2015-present
- **Sarah Littlejohn**, MPH student, Epidemiology, Fall 2016-present
- **Shanze Zar**, MPH Student, Epidemiology, Fall 2016-present

Masters Committees

- **Eveleen Darby**, MS student, Biostatistics, *Effects of Cognitive Changes on Survival for Persons with Alzheimer Disease – Joint Modeling Analysis*, July 2015-present.
- **Elise Rush**, MS student, Epidemiology, thesis proposal in progress, November 2015-present.

Former students

PhD Graduates

- **Laura Lee**, PhD, Epidemiology, Summer 2015, *Maternal Workplace Emotional Stressors and Physical Activity and Adverse Birth Outcomes*.

Current Position: Epidemiologist; Naval Medical Research Unit, San Antonio, TX.

- **Chih-Chin Liu**, PhD, Environmental Health Sciences, May 2012, *Impact of Traffic Pollution on Telomere Length and Chronic Diseases: Results from the Multi-Ethnic Study of Atherosclerosis and the Mexican-American Cohort Study*.

Current Position: Biostatistician, Alkermes, Boston, MA.

- **Philip J. Lupo**, PhD, Epidemiology, Summer 2009, *Determining Associations and Assessing Methodological Issues in a Case-Control Study of Hazardous Air Pollutants and Neural Tube Defects*.

Current Position: Assistant Professor, Baylor College of Medicine, Houston, TX

- **Silvia Maberti**, PhD, Environmental Health Sciences, Spring 2005, *Assessing Homogeneity in Workplace Exposure Under Stationary and Non-Stationary Scenarios*.

Current Position: Senior Industrial Hygienist, ExxonMobil Biomedical Sciences, Inc., Houston, TX.

- **Coty Maypole**, PhD, Environmental Health Sciences, Fall 2012, *Associations Between Ambient Levels of Combustion Pollutants and Small for Gestational Age Infants in Texas*.

Current Position: Adjunct Instructor, Univ. of Maryland University College Europe

- **Michelle Karpman McHugh**, PhD, Environmental Health Sciences, Summer 2009, *Disparities in Asthma Prevalence: The Influence of Sociodemographic and Workplace Factors*.

Current Position: Program Manager, SWCOEH, Houston, TX.

- **Judith K. Wendt**, PhD, Epidemiology, May 2012, *Pediatric Asthma Incidence in Texas and Associations with Ambient Ozone Levels in an Urban Area. An Analysis using Medicaid Claims Data*.

Current Position: Epidemiologist, Shell Health, Houston, TX

- **Kristina Walker Whitworth**, PhD, Epidemiology, Spring 2009, *Hazardous Air Pollutants and Childhood Lymphohematopoietic Cancer in Southeast Texas, 1995-2004*.

Current Position: Assistant Professor, UTHealth School of Public Health, San Antonio, TX

Former Doctoral Advisees

- **Hiroshi Awata**, PhD candidate, Environmental Health Sciences, Spring 2012-January 2015.
- **Annette Sue Dayton**, DrPH student, Occupational and Environmental Health, Fall 2008.
- **Ning Xue**, PhD student, Spring 2006-Fall 2007 (Returned to China).

Doctoral Dissertation Committees, Member

- **Ali Bahar**, PhD, Environmental Health Sciences, Summer 2006, *Low-Level Serum Arsenic and its Effect on Insulin and the Glucose/Insulin Ratio of Non-Diabetic Fasting Human Subjects*.
- **Jason Burnett**, PhD, Behavioral Sciences, August 2012, *Mistreatment and Self-Neglect in Community Dwelling Older Adults: Studies of Construct Validity, Measurement Invariance and Latent Classes*.
- **Heather M. Highland**, PhD, Graduate School of Biomedical Sciences, Spring 2015.
- **Richard Jimenez**, DrPH, Health Services Research, Fall 2005, *Implementing and Evaluating a Web-Based Close Call Reporting System at an Urban Hospital*.
- **Shang-Ying Liang**, PhD, Biostatistics, Fall 2010, *A Novel Method for Evaluating an Interaction Effect of Correlated Continuous Covariates in a Linear Model*.

- **Marcia Oliveira**, PhD, Environmental Health Sciences, Fall 2010, *Micronutrients Intake and their Associations with Markers of Inflammation, Subclinical Atherosclerosis, Cardiovascular Diseases, Type II Diabetes and Metabolic Syndrome.*
- **Abiodun O. Oluyomi**, PhD, Environmental Health Sciences, Spring 2011, *Objective Assessment of the Built Environment and its Relationship to Physical Activity and Obesity.*
- **Lockwood G. Taylor**, PhD, Epidemiology, Fall 2009, *The Association Between Maternal Use of SSRIs During Pregnancy and Adverse Birth Outcomes.*
- **Patricia G. Tee**, PhD, Epidemiology, Fall 2007, *Phthalate Exposure among US Women, NHANES 1999-2002: Relationship to Serum Gonadotropin Levels.*
- **Rosenie Thelus**, PhD, Epidemiology, Spring 2010, *Early life risk factors and puberty.*
- **Liyue Tong**, PhD, Epidemiology, Fall 2013, *Impact of advances in diagnosis and treatment on the leading causes of death and increasing survival in patients with colorectal cancer.*
- **Hung-Wen Yeh**, PhD, Biostatistics, Spring 2007, *Estimating Parameters in Markov Models for Longitudinal Studies with Missing Data or Surrogate Outcomes.*

Doctoral Qualifying Examination Committees

- **Hiroshi Awata**, PhD student, Environmental Health Sciences, Spring 2008-Spring 2009.
- **Jason Burnett**, PhD student, Behavioral Sciences, Fall 2009-Summer 2010.
- **Aisha Dickerson**, PhD student, Epidemiology, Summer 2011.
- **Alice B. Djotsa**, PhD student, Environmental and Occupational Health Sciences, Spring 2012-Spring 2014.
- **Brandy Ann Greenhill**, DrPH student, Environmental and Occupational Health Sciences, Fall 2007-Spring 2010.
- **Stephen K. Gruschkus**, PhD student, Epidemiology, Summer 2006-Fall 2007.
- **Erin Koers**, PhD, Epidemiology, Summer 2007-Spring 2008.
- **Amy Hansen**, PhD student, Epidemiology, Spring 2011-Summer 2012.
- **Laura Lee**, PhD student, Epidemiology, Fall 2011-Spring 2013.
- **Coty Maypole**, PhD student, Environmental Health Sciences, Summer 2008-Spring 2009.
- **Allison Ottenbacher**, PhD student, Epidemiology, Fall 2007-Spring 2008.
- **Patricia G. Tee**, PhD, Epidemiology, Qualifying Committee, Spring 2001-Fall 2007.
- **Dipali Venkataraman Rinker**, PhD student, Behavioral Sciences, Spring 2009-Summer 2011.

- **Judith K. Wendt**, PhD student, Epidemiology, Spring 2007-Spring 2009.

Masters Advisees

- **Komal Bangia**, MPH, Epidemiology, December 2011. *A Cross-Sectional Analysis of the Association Between Polycyclic Aromatic Hydrocarbons and Diesel Particulate Matter Exposures and Hypertension Among Individuals of Mexican Origin Residing in Houston, TX.*
- **Duane Allen Beasley**, MPH, Fall 2010, Environmental and Occupational Health Sciences (capstone).
- **Rebecca Beyda**, MS, Epidemiology, Spring 2013, *Azithromycin Efficacy in Treatment of Chlamydia Trachomatis.*
- **Gregory M. Broyles**, MPH, Occupational and Environmental Health, Summer 2009, *Evaluation of a Solid Phase Microextraction Method for Community-Based Monitoring of 1,3-Butadiene and Benzene in Houston, Texas.*
- **Gary Chang**, MPH, Environmental and Occupational Health Sciences, Spring 2011 (capstone).
- **Ting-Yu (Jeff) Chen**, MS, Biostatistics, Summer 2013. *The effect of exposure to air toxics on age of diagnosis and subtype of childhood leukemia in Texas.*
- **Jonathan H. Drewry**, MPH, Occupational and Environmental Health, Summer 2001, *The essential services as a measure of public health performance in the Lower Rio Grande Valley of Texas.*
- **Rachel Kathleen Gamble**, MPH student, Occupational and Environmental Health, Spring 2007-Summer 2008 (petitioned successfully to DrPH program).
- **Danielle Hansen**, MPH, Environmental and Occupational Health Sciences, May 2012 (capstone).
- **Nicole M.H. Greeson**, MS, Environmental Health Sciences, August 2001, *Assessment of Within- And Between Worker Sources of Variation in Biomarkers of Exposure.*
- **Quoc-Vu Hangoc**, MPH, Occupational and Environmental Health, Fall 1998, *Childhood Lead Poisoning in the City of Houston: an Underestimated Problem.*
- **Melanie Miller Kelly**, MPH student, Occupational and Environmental Health, Spring 2003-Spring 2007.
- **Kathleen Michelle Maness**, MPH student, Occupational and Environmental Health, Spring 2007-Fall 2007.
- **Lacey Marie Mcquinn**, MPH, Epidemiology, Spring 2011, *Cross-Sectional Study Examining the Role of Acculturation in Self-reported Hypertension among Mexican Americans in Harris County, Texas.*
- **Darryl Nosome**, MPH, Epidemiology, Summer 2012, *Identification of Genetic Risk Factors for Cerebellar Mutism in Pediatric Brain Tumor Patients.*

- **Jennifer L. Palmer**, MS student, Environmental Health Sciences, Spring 2003-Spring 2004.
- **Nate Parker**, MPH, Epidemiology, Spring 2012 (capstone).
- **Kelly Marie Rangel**, MS, Epidemiology, Spring 2009, *Assessing Maintenance of Evaporative Cooling Systems in Legionellosis Outbreaks*.
- **Lindsey Sheree Scott**, MS student, Epidemiology, Spring 2008.
- **Rhandi Selde**, MS, Environmental Health Sciences, Fall 2004, *The Role of Carbon Dioxide in the Loss of Hydrazines from Chamber Atmospheres*.
- **Jinhee Shim**, MS, Epidemiology, December 2014, *The Association between in Women in Serum 25-hydroxyvitamin D and Human Papillomavirus Cervicovaginal Infection the United States: National Health and Nutrition Examination Survey (NHANES) 2003-2006*.
- **Sara Nicole Staggs**, MPH, Summer 2009, Epidemiology, *Homeless Mortality in Harris County in 2008*.
- **Jennifer Stanley**, MS student, Epidemiology, Summer 2008-Spring 2011.
- **Jennifer L. Thompson**, MPH, Occupational and Environmental Health, Spring 2000, *The Prevalence of Alcohol Misuse in the Workplace with Respect to Gender, Job-type and Family Support*.
- **Rachel Ventrca**, MPH student, Occupational and Environmental Health, Fall 2002-Spring 2004.
- **Christine Yang**, MS, Epidemiology, Spring 2015, *Metabolic Syndrome and Erectile Dysfunction in Us Men*.

Masters Committees, Member

- **Elizabeth Michelle Baxter (Shosa)**, MPH student, Community Health Practice, Spring 2006-Spring 2010.
- **Claire Allen**, MPH student, Health Services Organization, Fall 1997-Summer 2001.
- **Diane Bodurka-Bevers**, MPH student, Health Services Organization, Fall 2001-Spring 2008.
- **Yi Cai**, MS, Biostatistics, Summer 2011, *A Comparison of Two Statistical Methods for Analysis of Day of the Week Effect on Births from 2005-2007 in Harris County*.
- **Marjorie Elkins**, MPH student, Community Health Practice, Fall 1998.
- **Maria E. Fernandez**, MPH, Health Promotion, Summer 2007, *Depression, Interpersonal Violence and Lack of Social Support as Barriers to Cervical Cancer Screening among Recently Immigrated Latinas*.
- **Margaret Adele Gale-Rowe**, MPH, Disease Control, Spring 2004, *Predictors of Hepatitis B Immunization Status in College Students*.

- **Laurens Holmes**, MPH, Disease Control, Summer 2001, *A Meta-analytic Study of Testosterone, Dihydrotestosterone, Sex Hormone Binding Globulin, Androstenedione and Prostatic Adenocarcinoma.*
- **Ling Jing**, MPH, Disease Control, Spring 2005, *Predictors of Patient Satisfaction with Primary Healthcare Providers in a U.S. Based National Survey.*
- **Daniel Kalb**, MPH, Health Promotion, Fall 2002, *Comparing Medical Records and Patient Exit Interviews to Determine how often Physicians Discuss Behavior Change with Chronic Disease Patients.*
- **Melissa Kress**, MPH student, Community Health Practice, Fall 2000-Fall 2001.
- **Hui Lui**, MS, Biostatistics, Summer 2011, *Slope Estimation in a Parametric Measurement Error Model-A Simulation Study.*
- **Rohitash Mehta**, MPH student, International and Family Health, Fall 2005-Summer 2008.
- **Heather Melton**, MPH student, Disease Control, Fall 1999-Fall 2002.
- **Susan B. Randers**, MPH, Community Health Practice, Summer 2003, *Factors Affecting the Rise and Fall of Mental Health Reform, 1963 To 1996: an Examination Of Kingdon's Theory of Public Policy Formation.*
- **Suzanne Moore**, MS, Epidemiology, Fall 2009, *Pancreatic Cancer Deaths in Texas Veterans.*
- **Veronica Rath**, MS student, Environmental Sciences, Spring 1997.
- **Rosa Michelle Schmidt**, MPH, Epidemiology, Summer 2003, *Depressive Symptoms Among Young Mothers: Prevalence, Risk and Resiliency.*
- **Nimit A. Shah**, MPH, Epidemiology, Summer 2011, *Bisphosphonates for Metastatic Bone Disease in Lung Cancer: A Systematic Review with Meta-analysis.*
- **Pamela H. Sheridan**, MPH student, Health Promotion, Fall 2006-Fall 2010.
- **Shivani Shinde**, MPH student, Epidemiology, Fall 2007-Spring 2011.
- **Sharon Silver**, MS, Epidemiology, Fall 2000, *Effect of Follow-Up Time on Risk Estimates: A Longitudinal Examination of The Relative Risks of Leukemia and Multiple Myeloma in a Rubber Hydrochloride Cohort.*
- **Janice K. Smith**, MPH, International and Family Health, Fall 2002, *Maternal Mortality in Nicaragua: Identifying Causes and Overcoming Barriers to Implementation of Evidence-Based Practices in a Rural Setting.*
- **Penney M. Stanch**, MPH, Occupational and Environmental Health, Spring 2007, *Use of Light Intensity, Temperature, and Humidity to Verify Exposure Location.*
- **Lindsey B. Stulin**, MPH, Community Health, Spring 2006, *Abstinence-Only Education: Is Anyone Listening?*

- **Chiamaka N. Umeh**, MPH, Community Health, Fall 2003. *Knowledge, Beliefs and Attitudes About HIV/AIDS and Sources of Information Among Health Care Professionals in Two States in Nigeria.*
- **Tracy H. Urech**, MPH, Health Services Organization, Summer 2006. *Hospital Community Effects on Racial Disparities in Cardiac Procedures after Acute Myocardial Infarction.*
- **Helena VonVille**, MPH, Spring 2008, Health Services Research, *A Project to Improve the Information Seeking Skills and Increase the Use of Evidence-Based Research In Public Health Practice.*
- **Ling Wang**, MPH student, Disease Control, Fall 2004.
- **Suzanne Wheat**, MPH, Community Health, Spring 2004. *Adolescent Snacking Behavior and Prevalence of Cardiovascular Risk Factors.*
- **Katherine A. Wingfield**, MPH, Health Services Organization, Fall 2004. *Physician-Assisted Suicide: Collection and Assessment of the Laws in the United States.*
- **Asca Zavala**, MPH, Health Services Organization, Summer 2006. *Ex-Ante Analysis of the HIPAA Policy: A Study to Identify Common Concerns and Solutions in an Effort to Enhance Dialogue among Stakeholders.*
- **Sumaiya E. Zobairi**, MPH, International and Family Health, Spring 2007, *Dietary Counseling: A Contextual Approach.*

SERVICE

Editorial Board Appointments

- International Advisory Board, *The Annals of Occupational Hygiene*, 2001-2016.

Membership in Professional Organizations

- American Industrial Hygiene Association
- British Occupational Hygiene Society
- International Society for Environmental Epidemiology
- Society for Epidemiologic Research

Invited Journal Referee

- *American Industrial Hygiene Association Journal*
- *American Journal of Industrial Medicine*
- *American Journal of Respiratory and Critical Care Medicine*
- *Annals of Occupational Hygiene*
- *Atmospheric Environment*
- *Cancer Causes and Control*
- *Environmental Health Perspectives*
- *Environmental Pollution*
- *Epidemiologic Perspectives*
- *Epidemiology*
- *Journal of the Air & Waste Management Association*
- *Journal of Environmental Management*

- *Journal of Exposure Science and Environmental Epidemiology*
- *Journal of Human and Ecologic Risk Assessment*
- *Journal of Occupational and Environmental Hygiene*
- *Journal of Occupational and Environmental Medicine*
- *Journal of Toxicology and Environmental Health*
- *Occupational and Environmental Medicine*
- *Science of the Total Environment*
- *Toxicology Letters*

Professional Service

- Member, IARC Working Group for *Monograph on the Carcinogenicity of Benzene*, 2017-present.
- Member, Advisory Committee to the Texas Cancer Registry (Texas Department of State Health Services), September 2016 – present.
- Advisory Board Member, Texas Occupational Health & Safety Surveillance (OHSS) Program (Texas Department of State Health Services), August 2015-present.
- Reviewer, Texas Department of State Health Services (TX DSHS) report, “Assessment of the Occurrence of Cancer, East Harris County, TX, 1995-2012”, July 2015.
- Member, Review of National Cancer Institute (NCI) Intramural Research Programs -- Occupational & Environmental Epidemiology Branch, Rockville, MD, July 27-29, 2015.
- Member, NIH Grant Review, Hubs of Interdisciplinary Research and Training in Global Environmental and Occupational Health (GEOHealth) – Research and Research Training Grants, March 2015.
- Member, Committee to Review the Styrene Assessment in the NTP 12th Report on Carcinogens, The National Academies, National Research Council, October 2013 – June 2014.
- Reviewer, NIH Teleconference Review on Superstorm Sandy Studies, April 2, 2013.
- Invited workshop participant, ILSI HESI *Emerging Issue Workshop: Evaluating Causality in Epidemiology*, Research Triangle Park, October 22-23, 2012.
- Reviewer, NIH Study Section, *Infectious Disease, Reproductive Health, and Asthma/Pulmonary Conditions (IRAP)*, Washington, DC, June 11-12, 2012.
- Reviewer, NIH Study Section, *Infectious Disease, Reproductive Health, and Asthma/Pulmonary Conditions (IRAP)*, Santa Monica, CA, February 10-11, 2011.
- Reviewer, Stage 1 NIH Challenge Grants, May-June 2009.
- Invited Participant, *Future Directions for the National Birth Defects Prevention Study*, September 9-September 10, 2008, Atlanta, Georgia.
- Reviewer, National Urban Air Toxics Research Center (NUATRC), Outside reviewer of final report submitted to the NUATRC, June 2008.

- Member, Committee on Contaminated Drinking Water at Camp Lejeune, The National Academies, National Research Council, August 2007-June 2009.
- Member, Human Health Subcommittee of the Board of Scientific Counselors (BOSC), US Environmental Protection Agency, Mid-cycle Review of the EPA's Human Health Program, November 2006-2007.
- Human Health Subcommittee of the Board of Scientific Counselors (BOSC), US Environmental Protection Agency, Review of the EPA's Human Health Research Program, February 1, 2005 – January 31, 2006.
- ASPH Environmental Health Workgroup, November 2004 – November 2005.
- Advisory Board, Mothers for Clean Air (MfCA), Houston, TX, October 2004-October 2008.
- Invited reviewer, Collaborative Health Research Projects for Natural Sciences and Engineering Research Council of Canada (NSERC), December 2004- January 2005.
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP), Characterization of Epidemiology Data Relating to Prostate Cancer and Exposure to Atrazine (Meeting held on July 17-18, 2003, Arlington, VA)
- Technical editor, Chapter 15 (*Comprehensive Exposure Assessment*) in The Occupational Environment-Its Evaluation and Control, 3rd edition, AIHA press, summer 2002.
- Grant reviewer, Pilot Project program, Center for Environmental and Rural Health, Texas A&M University, May 2002.
- Co-Instructor, Professional Development Course on *Exposure Assessment Strategies and Statistics*, American Industrial Hygiene Association Conference and Exposition, San Diego, CA, June 1-2, 2002.
- Invited reviewer, external review of (two) manuscripts requested by the National Institute for Occupational Safety and Health (NIOSH) prior to submission to peer-reviewed journals, Fall 2001.
- Invited reviewer, IUPAC Recommendation: Exposure Assessment Using the Logbook Method, for Pure and Applied Chemistry (PAC), published by the International Union of Pure and Applied Chemistry (IUPAC), Fall 2001.
- Technical auditor, Professional Development Course on *Exposure Assessment Strategies and Statistics*, American Industrial Hygiene Association Conference and Exposition, New Orleans, LA, June 1-2, 2001.
- Exposure Assessment Committee, American Industrial Hygiene Association (AIHA), 2001-present.
- Reviewer, chapter in Handbook of Chemical Health and Safety, American Chemical Society, summer 1997.

University Service

UT Health

- UT Health Regent's Outstanding Teaching Awards Review Committee, March 2012.

- Burroughs Wellcome Foundation Planning Committee, Spring 2008.
- School of Public Health representative, Multicultural Affairs Committee, 2001-2003.
- School of Public Health representative, Nominating Committee, 1999-2001.

UTHealth School of Public Health (UT SPH)

Junior Faculty Mentoring Committees, Primary Mentor

- Dr. Kristina Whitworth, Fall 2012-present.
- Dr. Inkyu Han, January 2012-present.
- Dr. David Lopez, January 2012-present
- Dr. Phillip Lupo, September 2010-present.
- Dr. Lisa Pompeii, January 2007-Spring 2012.
- Dr. Soledad Vela Acosta, Spring 2005-Fall 2008.

Junior Faculty Mentoring Committees, Mentoring Committee

- Dr. Jennifer Nettleton, Spring 2008-Spring 2012.
- Dr. Kristina Mena, Spring 2007-Fall 2008.
- Dr. Eva Shipp, Spring 2008-Summer 2010.
- Dr. Ann Cheek, Spring 2005-Spring 2007.
- Dr. Gwangpyo Ko, Fall 2004.

Other Service

- Member, Epidemiology, Human Genetics, and Environmental Sciences, Preliminary Examination Committee (Epidemiology), January 2016-onwards.
- Chair, Research Council, UTHealth School of Public Health, March 2016-present.
- Member, Human Genetics, and Environmental Sciences, Preliminary Examination Committee (Epidemiology), January 2016-onwards.
- Member, R. Palmer Beasley, MD, Faculty Award for Innovation Committee, July 2016 – present.
- Chair, Faculty Search Committee, Faculty positions in Occupational Medicine and Industrial Hygiene, August 2014-present.
- Member, Center Council, UTHealth School of Public Health, Fall 2013-March 2016.
- Member, Epidemiology, Human Genetics, and Environmental Sciences, Preliminary Examination Committee (Epidemiology), March 2011-Jan 2014.
- Member, Epidemiology, Human Genetics and Environmental Sciences, Core Curriculum Committee (Epidemiology), March 2008-present.
- Member, Epidemiology, Human Genetics and Environmental Sciences, Admissions Committee (Epidemiology), Spring 2009-January 2011.
- Member, Faculty Search Committee, EOHS, January 2011-Spring 2012.

- Member, Faculty Search Committee, Comparative Outcomes Research (10 positions), Fall 2010-Fall 2011.
- Member, Faculty Search Committee, Director, Environmental and Occupational Health Sciences, Fall 2009-Spring 2010.
- Member, Faculty Search Committee, Gene-Environment faculty position, February 2009-Spring 2010.
- Member, Teaching Evaluation Committee, January 2009-Spring 2011.
- Member, Faculty Search Committee, Four faculty positions in Epidemiology, May 2008-present.
- Member, Annual Activities Review Committee, School of Public Health, November 2007-January 2008.
- Member, Admissions Committee, Division of Epidemiology and Disease Control, September 2007-present.
- Interim Faculty Co-Chair, Academic Council, January 2007-August 2007.
- Member, Academic Council, Representative for the Division of Environmental and Occupational Health Sciences, February 2004-August 2007.
- Curriculum Coordinator, Division of Environmental and Occupational Health Sciences, February 2004-August 2007.
- Member, Nominations Committee, Director for the Environmental and Occupational Health Division, UT SPH, August 2003-October 2003.
- Member, Academic Council Planning Committee, June 2003-August 2003.
- Member, MPH Culminating Experience Committee, October 2002-August 2003.
- Chair, Environmental Sciences Web Page Committee, February 2003-July 2003
- Search Committee, Two faculty positions in Environmental Sciences, March 2002-December 2002.
- Organizer, External Review and Site Visit of the Environmental Sciences Discipline, September 11-13, 2001.
- Faculty representative, Search Committee, Director of Student Affairs for the School of Public Health, February 2001-May 2001.
- Member, Advisory Board for the Community-based Public Health Program at the School of Public Health, Fall 2000-present.
- Environmental Sciences representative, UT SPH Admissions Committee, Fall 1997-Summer 2003.
- Member, Annual Activities Review Committee, 1999-2000 Academic year.

- Member, Facility Master Plan User Group, Exterior Space and Sustainable Development Issues, 1999.
- Presenter, New Faculty Orientation, July and November 1999. Presenter, Opportunities in Public Health for Mathematics and Science Majors, May 26-28, 1999.
- Chair, Ad hoc committee to develop performance objectives for MPH students seeking a concentration in Environmental Sciences, 1998.
- Chair, Ad hoc committee to update admissions requirements for Environmental Sciences, 1998.
- Chair, Ad hoc committee to evaluate curriculum in Industrial Hygiene/Occupational Health, 1998.