

CYNTHIA LEIGH CURL

Department of Community and Environmental Health
Boise State University
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EDUCATION

University of Washington June 2014

PhD, Environmental and Occupational Health Sciences

Dissertation: "Characterizing dietary exposure to organophosphate pesticides for use in epidemiologic research"

Major Field: Exposure Assessment; Minor Field: Environmental Epidemiology

University of Washington August 2000

MS, Environmental and Occupational Health Sciences

Thesis: "Evaluation of organophosphate pesticide exposure in children of agricultural families"

Major Field: Biological and Environmental Monitoring; Minor Field: Agricultural Health and Safety

Swarthmore College June 1998

BA, Chemistry

PROFESSIONAL POSITIONS

Assistant Professor January 2015 – present

Department of Community and Environmental Health
Boise State University, Boise, ID

EPA Science to Achieve Results (STAR) Fellow August 2010 - August 2013

Department of Environmental and Occupational Health Sciences
University of Washington, Seattle, WA

Program Manager December 2006 - December 2014

MESA Air Study
University of Washington, Seattle, WA

Senior Scientist July 2004 – November 2006

Integral Consulting
Seattle, WA & Denver, CO

Research Scientist April 2003 – April 2004

Environment and Human Health, Inc.
North Haven, CT

Research Scientist September 2000 – March 2003

Pacific Northwest Agricultural Safety and Health (PNASH) Center
University of Washington, Seattle, WA

HONORS AND AWARDS

- 2019 Rising Star Award for the 2020 Gordon Research Conference on Environmental Endocrine Disruptors
- 2018 Science Communication Fellowship from Advancing Green Chemistry
- 2017 20 Pioneers Under 40 in Environmental Public Health by the Collaborative on Health & Environment
- 2017 Best Paper of 2016 by the International Society of Environmental Epidemiology
- 2017 Golden Apple Award for Excellence in Teaching
- 2017 ASSERT Fellow in the Center for Transformative Research at Boise State University
- 2016-17 OSHER Institute for Lifelong Learning Faculty Research Award
- 2015-17 Institute for Translational Health Sciences Rising Stars Career Development Award
- 2013-14 Magnuson Scholarship (Top Student in the University of Washington's School of Public Health)
- 2010-13 EPA Science to Achieve Results (STAR) Graduate Fellowship

FUNDING HISTORY

Current Funding:

1 K01 ES028745-01A1 (Curl). 9/18-8/21

National Institutes of Health (NIH). Total Costs: \$457,537

Measurement of Agricultural and Dietary Glyphosate Exposure among Pregnant Women

This career development award includes a research project to measure glyphosate exposure among pregnant women and a training plan to transition Dr. Curl from a junior faculty mentor to a fully independent investigator.

Role: Principal Investigator

Completed Funding:

Pacific Northwest Agricultural Safety and Health (PNASH) Pilot Program (Curl). 10/17-9/19

University of Washington. Total Costs: \$30,250

Recognizing and Reducing Safety Hazards in Northwest Potato Production

The purpose of this project is to assess workplace hazards in potato production and to assist growers in identifying and controlling these hazards.

Role: Principal Investigator

2018 Health Disparities Pilot Grant Program. (Curl) 8/18-6/19

Mountain West IDeA Clinical & Translational Research–Infrastructure Network (CTR-IN). Total Costs: \$59,970

Assessment of Risk Factors for Health Disparities among Latina Farm Workers

This pilot project is an interdisciplinary approach to assess risk factors for poor health among Latina farm workers in Idaho, including pesticide exposure and occupational hazards as well as social and cultural factors.

Role: Principal Investigator

GD_ID_0487 (Curl). 5/16-4/19

United States Department of Agriculture. Total Costs: \$654,843

Bromide Uptake in Crops Following Soil Fumigation with Methyl Bromide for PCN Eradication

This project investigates the potential for bromide uptake in crops subsequent to methyl bromide fumigation treatment to prevent unacceptable dietary exposures to livestock and humans.

Role: Principal Investigator

RS0215 (Curl). 6/15-5/17.

University of Washington Institute for Translational Health Sciences. Total Costs: \$15,000

Effect of an Organic Diet Intervention on Exposure to Agricultural Pesticides among Pregnant Women

This pilot study investigates the effect of a randomized, blinded six-month organic diet intervention on exposure to agricultural pesticides among a cohort of 20 pregnant women.

Role: Principal Investigator

Cooperative Agreements 6979 & 6995 (Curl). 10/15-4/16.

Idaho State Department of Agriculture. Total Costs: \$21,631

Methyl Bromide Literature Review & Sampling Plan.

These projects resulted in a literature review related to inorganic bromide uptake in plants following soil fumigation with methyl bromide, and a spatial sampling plan for alfalfa and soil in previously fumigated fields.

Role: Principal Investigator

193L101035 (Curl). 9/15-5/17

OSHER Institute for Lifelong Learning. Total Costs: \$5,000

Measuring in utero Pesticide Exposures among Newborns following a Maternal Diet Intervention

This project aims to understand the effect of a maternal organic diet during pregnancy on biological markers of pesticide exposure in newborns.

Role: Principal Investigator

PNASH Pilot Grant (Curl). 7/15 - 9/15.

Pacific Northwest Safety and Health Center. Total Costs: \$7,000

Developing Connections with Idaho's Agricultural Industry.

These pilot funds were intended to expand the PNASH network of agricultural stakeholders into Idaho.

Role: Principal Investigator

Student Grants:

PTOP Grant (Phinney). 2/19 – 6/19

Professional Training Opportunities Program (PTOP) in Occupational Health and Safety. Total Costs: \$5,860

Characterizing and Communicating Lessons Learned from Agricultural Pesticide Misuse

This training award is intended to support a student/staff member in gaining experience in occupational health sciences and specifically to evaluate the potential for partnership with the Idaho State Department of Agriculture to utilize data regarding Worker Protection Standard to improve worker safety.

Role: Mentor

PTOP Grant (Porter). 2/17-10/17

Professional Training Opportunities Program (PTOP) in Occupational Health and Safety. Total Costs: \$5,619

Job Hazard Analysis in Agriculture: Developing Tools to Evaluate the Effect of Alternative Production Systems on Worker Health

This training award is intended to support a student/staff member in gaining experience in occupational health sciences and specifically to evaluate the potential for differential hazards for workers on organic and conventional farms.

Role: Mentor

Higher Education Research Council (HERC) Fellowship (Penwell). 9/16-12/16

Institute for STEM and Diversity Initiatives. Total Costs: \$3,400

HERC Fellowship

This Fellowship award provides undergraduate students with the opportunity to conduct research with a Boise State University faculty member.

Role: Mentor

BIBLIOGRAPHY

PEER-REVIEWED PUBLICATIONS

- 1) **Curl CL** Adams K, Phinney R, Blua M. Grower perceptions of safety hazards and associated injuries among farmworkers involved in Northwest potato production. *Journal of Agromedicine*. 2019. [Submitted].
- 2) **Curl CL**, Spivak M, Phinney R. Synthetic pesticides and health in vulnerable populations: agricultural workers. *Current Environmental Health Reports*. 2019. [In Press].
- 3) **Curl CL**, Porter J, Penwell I, Phinney R, Ospina M, Calafat A. Effect of a 24-week randomized trial of an organic produce intervention on pyrethroid and organophosphate pesticide exposure among pregnant women. *Environment International*. 2019. [Epub ahead of print]. ***Selected as NIEHS Extramural Paper of the Month.**
- 4) Kaufman JD, **Curl CL**. Environmental health sciences in a translational research framework: More than benches and bedsides. *Environmental Health Perspectives*. 2019; 127(4):45001.
- 5) Miller KA, Spalt EW, Gasset AJ, **Curl CL**, Larson TV, Avol E, Allen RW, Vedal S, Szpiro AA, Kaufman JD. Estimating ambient-origin PM_{2.5} exposure for epidemiology: Observations, prediction and validation using personal sampling in the Multi-Ethnic Study of Atherosclerosis. *Journal of Exposure Science and Environmental Epidemiology*. 2019; 29(2):227-237.
- 6) Hazlehurst MF, Spalt EW, Nicholas TP, **Curl CL**, Davey ME, Burke GL, Watson KE, Vedal S, Kaufman JD. Contribution of the in-vehicle microenvironment to individual ambient-source nitrogen dioxide exposure: the Multi-Ethnic Study of Atherosclerosis and Air Pollution. *Journal of Exposure Science and Environmental Epidemiology*. 2018; 28(4):371-80.
- 7) Sadegh M, Pierce J, AghaKouchak A, Glenn NF, **Curl CL**. Will clean air fade away? *Eos Earth & Space Science News*. 2018; 99; doi.org/10.1029/2018EO090735.
- 8) Hazlehurst MF, Spalt EW, **Curl CL**, Davey ME, Vedal S, Burke GL, Kaufman JD. Integrating data from multiple time-location measurement methods for use in exposure assessment: the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *Journal of Exposure Science and Environmental Epidemiology*. 2017; 27(6):569-574.

- 9) Kaufman JD, Spalt EW, **Curl CL**, Hajat A, Jones MR, Kim SY, Vedal S, Szpiro AA, Gasset A, Sheppard L, Daviglus ML, Adar S. Advances in understanding air pollution and cardiovascular diseases: The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *Global Heart*. 2016; 11(3):343-352.
- 10) Kaufman JD, Adar SD, Barr RG, Budoff M, Burke G, **Curl CL**, Daviglus ML, Diez Roux AV, Gasset AJ, Jacobs DR, Kronmal R, Larson TV, Navas-Acien A, Olives C, Sampson PD, Sheppard L, Siscovick DS, Stein JH, Szpiro AA, Watson KE. Association between air pollution and coronary artery calcification within six metropolitan areas in the USA (the Multi-Ethnic Study of Atherosclerosis and Air Pollution): a longitudinal cohort study. *Lancet*. 2016; 388(10045): 696-704. ***Selected by the International Society of Environmental Epidemiology as the Best Environmental Epidemiology Paper of 2016**
- 11) Weuve J, Kaufman JD, Szpiro AA, **Curl CL**, Puett R, Beck T, Evans D, Mendes de Leon CF. Exposure to traffic-related air pollution in relation to progression in disability. *Environ Health Perspect*. 2016; 124(7):1000-1008.
- 12) Spalt EW, **Curl CL**, Allen RQ, Cohen M, Adar SD, Stukovsky KH, Avol E, Castro-Diehl C, Nunn C, Mancera-Cuevas K, Kaufman JD. Time-location patterns of a diverse population of older adults: the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *J Expo Sci Environ Epidemiol*. 2016; 26(4):349-355.
- 13) Spalt EW, **Curl CL**, Allen RW, Cohen M, Williams K, Hirsch JA, Adar SD, Kaufman JD. Factors influencing time-location patterns and their impact on estimates of exposure: the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *J Expo Sci Environ Epidemiol*. 2016; 26(4):349-355.
- 14) **Curl CL**, Beresford SA, Fenske RA, Nettleton JA, Kaufman JD. Estimating pesticide exposure from dietary intake and organic food choices in The Multi-Ethnic Study of Atherosclerosis (MESA). *Environ Health Perspect*. 2015; 123(5):475-83. ***Chosen as a "Science Selection" for the issue.**
- 15) Leary PJ, Kaufman JD, Barr RG, Bluemke DA, **Curl CL**, Hough CL, Lima JA, Szpiro AA, Van Hee VC, Kawut SM. Traffic related air pollution and the right ventricle: The Multi-Ethnic Study of Atherosclerosis. *Am J Respir Crit Care Med*. 2014; 189(9):1092-1100.
- 16) **Curl CL**, Beresford SA, Hajat A, Kaufman JD, Moore K, Nettleton JA, Diez-Roux AV. Associations of organic produce consumption with socioeconomic status and the local food environment: Multi-Ethnic Study of Atherosclerosis (MESA). *PLoS One*. 2013; Jul 31;8(7):e69778.
- 17) Kaufman JD, Adar S, Allen R, Barr RG, Budoff M, Burke G, Casillas A, Cohen M, **Curl CL**, Daviglus M, Diez Roux A, Jacobs D, Kronmal R, Larson T, Liu SLJ, Lumley T, Navas-Acien A, O'Leary D, Rotter JJ, Sampson P, Sheppard L, Siscovick D, Stein J, Szpiro A, Tracy R. Prospective study of particulate air pollution exposures, subclinical atherosclerosis, and clinical cardiovascular disease. The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *Am J Epidemiol*. 2012; 176(9):825-37.
- 18) Allen RW, Adar SD, Avol E, Cohen M, **Curl CL**, Larson T, Liu LJ, Sheppard L, Kaufman JD. Modeling the residential infiltration of outdoor PM_{2.5} in the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *Environ Health Perspect*. 2012; 120(6):824-30.
- 19) Gill EA, **Curl CL**, Adar SD, Allen RW, Auchincloss AH, O'Neill MS, Park SK, Van Hee VC, Diez Roux AV, Kaufman JD. Air pollution and cardiovascular disease in the Multi-Ethnic Study of Atherosclerosis. *Prog Cardiovasc Dis*. 2011; 53(3):353-60.
- 20) Griffith W, **Curl CL**, Fenske RA, Lu CA, Vigoren EM, Faustman EM. Organophosphate pesticide metabolite levels in pre-school children in an agricultural community: within- and between-child variability in a longitudinal study. *Environ Res*. 2011; 111(6):751-6.
- 21) Cohen MA, Adar SD, Allen RW, Avol E, **Curl CL**, Gould T, Hardie D, Ho A, Kinney P, Larson TV, Sampson P, Sheppard L, Stukovsky KD, Swan SS, Liu LJ, Kaufman JD. Approach to measuring participant pollutant exposures in the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). *Environ Sci Technol*. 2009; 43(13): 4687-93.

- 22) Fenske RA, Lu C, **Curl CL**, Shirai JH, Kissel JC. Biologic monitoring to characterize organophosphorus pesticide exposure among children and workers: An analysis of recent studies in Washington State. *Environ Health Perspect.* 2005; 113(11):1651-7.
- 23) Kissel JC, **Curl CL**, Kedan G, Lu CA, Griffith W, Barr DB, Needham LL, Fenske RA. Comparison of organophosphorus pesticide metabolite levels in single and multiple daily urine samples collected from pre-school children in Washington State. *J Expo Anal Environ Epidemiol.* 2005; 15(2):164-71.
- 24) Fenske RA, Kissel JC, Shirai JH, **Curl CL**, Galvin K. Agricultural task not predictive of children's exposure to OP pesticides. *Environ Health Perspect.* 2004; 112(15):A865-6.
- 25) **Curl CL**, Fenske RA, Elgethun K. Organophosphorus pesticide exposure to urban and suburban pre-school children with organic and conventional diets. *Environ Health Perspect.* 2003; 111(3):377-82.
*Chosen as a "Science Selection" for the issue.
- 26) Doran EM, Fenske RA, Kissel JC, **Curl CL**, Simcox NJ. Impact of dermal absorption factors in occupational exposure assessment: comparison of two models for agricultural reentry workers exposed to azinphosmethyl. *Appl Occup Environ Hyg.* 2003; 18(9): 669-77.
- 27) Fenske RA, **Curl CL**, Kissel JC. The effect of the 14-day agricultural restricted entry interval of azinphosmethyl exposures in a group of apple thinners in Washington state. *Toxicol Pharmacol.* 2003; 38(1): 91-7.
- 28) Thompson B, Coronado G, Grossman J, Puschel K, Soloman C, Islas I, **Curl CL**, Shirai J, Kissel J, Fenske R. Pesticide take-home pathway among children of agricultural workers: study design, methods, and baseline findings. *J Occup Environ Med.* 2003; 45(1): 42-53.
- 29) **Curl CL**, Fenske RA, Kissel JC, Shirai JH, Moate TF, Griffith W, Coronado G, Thompson B. Evaluation of take-home organophosphorus pesticide exposure among agricultural workers and their children. *Environ Health Perspect.* 2002; 110(12): A787-92 *Chosen as a "Science Selection" for the issue.
- 30) Fenske RA, Kedan G, Lu C, Fisker-Andersen J, **Curl CL**. Assessment of organophosphorus pesticide exposures in the diets of preschool children in Washington State. *J Expo Anal Environ Epidemiol.* 2002; 12: 21-28.
- 31) Moate TF, Furia M, **Curl CL**, Muniz JF, Yu J, Fenske RA. Size exclusion chromatographic cleanup for the determination of organophosphorus pesticide residues in household and vehicle dust. *J Assoc Offic Anal Chem.* 2002; 85(1): 36-43.

REFEREED CONFERENCE SYMPOSIA

- 1) Evidence-Based Research on Interventions to Reduce Personal Exposures to Environmental Pollutants, International Society of Exposure Science Conference. Utrecht, The Netherlands. Co-Chair, October 2016.

REFEREED CONFERENCE PROCEEDINGS/ABSTRACTS (Mentored trainees starred)

- 1) **Curl CL**, Phinney R, Meierotto L, Som Castellano R. Assessment of Risk Factors for Health Disparities among Latina Farmworkers. October 2019. NIH IDEa Western Regional Conference. Las Vegas, NV. (Oral)
- 2) Meierotto L, Som Castellano R, **Curl CL**. Latina farmworkers engaging nature: situated perspectives on environment, justice and health. November 2019. American Anthropological Association. Vancouver, British Columbia, Canada. (Oral)
- 3) **Curl CL**, Torres C, Meierotto L, Som Castellano R. Occupational risk factors for health disparities among Latina farm workers in southern Idaho. August 2019. International Society for Environmental Epidemiology. Utrecht, The Netherlands. (Poster)
- 4) Phinney R*, Adams K, Blua M, **Curl CL**. Recognizing and reducing safety hazards in Northwest potato production. August 2019. Western Agricultural Safety and Health Conference. Seattle, WA. (Poster)

- 5) Som Castellano R, Meierotto L, **Curl CL**. Considering well-being: Definitions and challenges for Latina farm workers in southern Idaho. August 2019. Annual Meeting of the Rural Sociological Society. Richmond, VA. (Oral)
- 6) **Curl CL**, Meierotto L, Som Castellano R. Assessment of risk factors for health disparities among Latina farm workers. June 2019. Annual Meeting of the Mountain West IDEa Clinical and Translational Research-Infrastructure Network (CTR-IN). Las Vegas, NV. (Oral)
- 7) Phinney R*, Adams K, Blua M, **Curl CL**. Recognizing and reducing safety hazards in Northwest potato production. April 2019. Graduate Student Showcase. Boise, ID. (Poster)
- 8) Meierotto L, Som Castellano R, **Curl CL**. Health and well-being disparities among Latina farm workers in southwestern Idaho. March 2019. Society for Applied Anthropology. Portland, OR. (Oral)
- 9) Phinney R*, Adams K, Blua M, **Curl CL**. Recognizing and reducing safety hazards in Northwest potato production. January 2019. Cascadia Annual Symposium on Environmental, Occupational and Public Health. Blaine, WA. (Poster) ***Awarded top student poster.**
- 10) Shewmaker GE, **Curl CL**. Inorganic bromide concentrations in crops following soil fumigation with methyl bromide. November 2018. American Society of Agronomy & Crop Science Society of Agronomy. Baltimore, MD. (Poster)
- 11) **Curl CL**, Calafat A, Ospina M, Penwell I, Porter, J, Wheatley, J. Effect of a longitudinal, randomized organic diet intervention on 2,4-D, pyrethroid, and organophosphate pesticide exposures among pregnant women. August 2018. Joint meeting of the International Society of Exposure Science and Environmental Epidemiology. Ottawa, Canada. (Oral)
- 12) **Curl CL** and Adams K. Recognizing and reducing safety hazards in Northwest potato production. February 2018. North American Agricultural Safety Summit. Scottsdale, AZ. (Poster)
- 13) **Curl CL**, Marshall JM, Moll M, Morra M, Porter J, Rogers C, Shewmaker G. Assessment of inorganic bromide concentrations in crops following soil fumigation with methyl bromide. October 2017. 27th Annual Meeting of the International Society of Exposure Science. Durham, NC. (Poster)
- 14) Penwell I*, Porter J, Spain A, **Curl CL**. Partnering with WIC to study dietary exposure to agricultural pesticides during pregnancy. April 2017. National WIC Association Annual Conference. Philadelphia, PA. (Poster)
- 15) Porter J* and **Curl CL**. Effect of a randomized, blinded organic diet intervention on pesticide exposure among pregnant women. October 2016. 26th Annual Meeting of the International Society of Exposure Science. Utrecht, The Netherlands. (Oral)
- 16) Porter J* and **Curl CL**. Manganese-based pesticides and their potential adverse health effects in Idaho agricultural workers. April 2015. Undergraduate Research Conference, Boise State University. Boise, ID. (Poster)
- 17) **Curl CL**, Beresford S, Fenske R, Fitzpatrick A, Lu A, Nettleton J, Kaufman J. Association between long-term dietary exposure to organophosphate pesticides and neurocognition: the Multi-Ethnic Study of Atherosclerosis (MESA). August 2014. 26th Annual Meeting of the International Society of Environmental Epidemiology. Seattle, WA. (Oral)
- 18) **Curl CL**, Fenske RA, Lu C, Nettleton J, Kaufman J. Assessing chronic organophosphate pesticide exposure with food frequency questionnaires and self-reported organic food consumption. January 2014. University of Washington/ University of British Columbia/Simon Fraser University Annual Symposium on Environmental, Occupational and Population Health. Blaine, WA. (Oral)
- 19) **Curl CL**, Fenske RA, Lu C, Nettleton J, Kaufman J. Assessment of dietary exposure to organophosphorus pesticides using food frequency questionnaires and information on organic food consumption habits. August 2013. Joint Conference of the International Societies of Exposure Science, Environmental Epidemiology, and Indoor Air Quality. Basel, Switzerland. (Poster, Awarded 3rd Place in Student Poster Competition).

- 20) **Curl CL**, Fenske RA, Lu C, Nettleton J, Kaufman J. Dietary exposure to organophosphorus pesticides in the Multi-Ethnic Study of Atherosclerosis (MESA). October 2012. 22nd Meeting of the International Society of Exposure Science. Seattle, WA. (Poster)
- 21) **Curl CL**, Adar SD, Cohen MA, Hinckley-Stukovsky K, Allen R, Mancera-Cuevas K, Nunn C, Castro C, Christman C, Dwight C, Kaufman J. An evaluation of time-location data: The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air). October 2008. Joint Conference of the International Societies of Exposure Science and Environmental Epidemiology. Pasadena, CA. (Poster)
- 22) **Curl CL** and Alderman N. Nutrition and physical activity environments in Connecticut public schools. December 2005. 133rd Annual Meeting of the American Public Health Association. Philadelphia, PA. (Oral)
- 23) **Curl CL**, Elgethun K, Fenske RA. Organophosphorus pesticide exposure to urban and suburban pre-school children with organic and conventional diets. August 2002. Joint Conference of the International Societies of Exposure Analysis and Environmental Epidemiology. Vancouver, BC. (Oral)
- 24) **Curl CL**, Kedan G, Lu C, Fisker-Andersen, Fenske RA. Evaluation of pesticide exposure in the diets of preschool children using duplicate diet sampling. November 2001. 11th Annual Meeting of the International Society of Exposure Analysis. Charleston, SC. (Oral)

INVITED ORAL PRESENTATIONS

- 1) Organic food: to eat or not to eat? Osher Lifelong Learning Institute. Boise, ID. November 2019.
- 2) Assessment of insecticide and herbicide exposure among Latina farmworkers and pregnant women: challenges and opportunities in working with vulnerable populations. University of Illinois Interdisciplinary Environmental Toxicology Seminar Series. Urbana, IL. September 2019.
- 3) Organic food and agricultural workers. Public Health Education & Development (PHED) Idaho. Boise, ID. April 2019.
- 4) Healthy Planet = Healthy People. Boise State University's Earth Day Celebration. Boise, ID. April 2018.
- 5) Understanding the effect of agricultural production on farmworkers, agricultural communities and consumers. College of Health Science Board of Ambassadors Meeting. Boise, ID. October 10, 2017.
- 6) The importance of Science for Idaho's Land and Water Resources: A Lightening Talk. Boise State University's Celebrate Science Event. Boise, ID. April 2017.
- 7) Exposure to agrochemicals: Understanding the effect of agricultural production on workers, families and communities. St. Luke's/Boise State University Research Collaboration Forum. Boise, ID. November 2016.
- 8) What are buying when we buy organic food? Idaho Academy of Nutrition and Dietetics Annual Meeting. Pocatello, ID. April 2016.
- 9) Agricultural health and safety. Snake River Chapter of the American Society of Safety Engineers. Boise, ID. March 2016.
- 10) Agricultural Health and Safety. SafetyFest of the Great Northwest. Boise, ID. January 2016.
- 11) Current topics in agricultural health and safety. Idaho Chapter of the American Industrial Hygiene Society. Boise, ID. November 2015.
- 12) Dietary exposure to organophosphate pesticides. 12th Annual Meeting of Pediatric Environmental Health Scholars. Reston, VA. December 2013.
- 13) Pesticides & food: What are the health risks? University of Washington School of Public Health Public Health Café. Seattle, WA. January 2013.
- 14) Pesticides in our food: Does eating organic matter? Pacific Science Center and KCTS 9 Public Television's Science Café. Tacoma, WA. November 2013.

SELECTED MEDIA COVERAGE

PBS	Salon
New York Times	Gimlet Media's "Science Vs." Podcast
TIME Magazine	Civil Eats
Huffington Post	Fast Company & Inc.
The Conversation	NPR Boise State Public Radio
Bloomberg	Chicago Tribune
NBC News	Newswire
Consumer Reports	Philly Voice

PROFESSIONAL ACTIVITIES**BOISE STATE UNIVERSITY SERVICE***University-Level Service*

- 2019 Judge, Graduate Student Research Showcase
- 2018- Affiliate Faculty, Human Environment Systems, College of Innovation and Design
- 2017- Member, Research Subcommittee of the Information Technology Planning & Prioritization Council
- 2017- Member, Boise State University Faculty Research Advisory Misconduct Committee
- 2016- Member, Boise State University Biomedical Institutional Review Board

College-Level Service

- 2017- Member, College of Health Sciences Research Strategic Planning Committee
- 2016-17 Member, College of Health Sciences Promotion and Tenure Committee
- 2015 Member, College of Health Sciences Change in Employee Compensation Task Force

Department-Level Service

- 2017- Internal Representative, Environmental and Occupational Health Advisory Board
- 2015-19 Chair / Member, CEH, Faculty Search Committee

LOCAL AND REGIONAL SERVICE

- 2019 Member, Treasure Valley Food Coalition & Boise Farmer's Market Transition Team
- 2018- External Advisory Board Member, Northwest Center for Occupational Health and Safety
- 2018- Member, Northwest Center for Occupational Health and Safety Pilot Projects Review Panel
- 2016- Member, Boise Chamber of Commerce Food and Agriculture Industry Board

NATIONAL AND INTERNATIONAL SERVICE

- 2018- Associate Editor, Journal of Agromedicine
- 2017- Editorial Review Board, International Journal of Environmental Research and Public Health
- 2017- Editorial Review Board, Journal of Exposure Science and Environmental Epidemiology
- 2017-2018 Student/New Researcher Committee, International Society of Exposure Science Conference

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

- International Society for Children's Health and the Environment
- International Society of Environmental Epidemiology
- International Society of Exposure Science (Member of the Publications Committee)

SCIENTIFIC JOURNAL REVIEW

Environment International

Environmental Health Perspectives

Environmental Research

Environmental Science and Technology

Occupational and Environmental Medicine

Pediatrics

Public Health Nutrition

TEACHING

- 2017 Golden Apple Award for Excellence in Teaching (Honorable Mention)
- Instructor for Epidemiology (HLTHST 480. Each semester, Spring 2015-Spring 2018, Spring 2019). 40 students per semester. Course Evaluation Scores (average): **4.7/5.0**.
- Invited educator for Osher Lifelong Learning Institute, Boise State University. Organic Food: To Eat or Not to Eat? 2019
- Guest lecturer in Toxicology for Environmental and Occupational Health (Boise State University, EOHS435, 2019)
- Guest lecturer in Introduction to Health Science and Public Health (Boise State University, HLTH110, 2019)
- Guest lecturer in Food & Society (Boise State University, SOC 497/ENV 498, 2018)
- Guest lecturer in Rural Sociology (Boise State University, SOC 426, 2018)
- Guest lecturer in Occupational Safety and Health (Boise State University ENVHLTH 415, 2016 & 2018)
- Guest lecturer in Public Health (Boise State University, HLTHST 304, 2017)
- Guest lecturer in Health Science Studies Capstone (Boise State University HLTHST 400, 2016-2018)
- Guest lecturer in Special Topics in Sociology (Boise State University SOC 497, 2016)
- Guest lecturer in Food and Ethics (Boise State University UF 200, 2016)
- Guest lecturer in Food Safety and Health (University of Washington NUTR545/ENVHLTH540, 2014)
- Guest lecturer in Harvest to Health (University of Washington NUTR302, 2014)

ADVISING AND MENTORING*Graduate Students*

Christopher Herrera	2019-	<i>MS in Health Science Studies</i>
Rachel Phinney	2018-	<i>MS in Health Science Studies</i>

Graduate Thesis Committee Service

Jessica Porter	2018-2019	<i>MS in Environmental and Occupational Health (UW)</i>
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Undergraduate Students

Karen Sanchez	2019	<i>Student Volunteer</i>
Alondra Murillo	2019	<i>Student Volunteer</i>
Emily Pape	2019	<i>Student Volunteer</i>
Justin Nelson	2017	<i>Student Volunteer</i>
Abigail Thomas	2017	<i>Student Volunteer</i>

Dana Kerins	2017	<i>For Credit Internship</i>
Rachel Phinney	2017	<i>For Credit, Graduate-Level Independent Study</i>
Makaela Bournazian	2016-2017	<i>Student Volunteer</i>
Jon Wheatley	2016-2017	<i>For Credit Internship</i>
Ian Penwell	2016-2017	<i>HERC Fellowship</i>
Hope Murray	2016	<i>For Credit Internship</i>
Jessica Porter	2015-2016	<i>Research and Teaching Assistantship</i>
Corinne Stinette	2015	<i>Student Volunteer</i>