

Carina J. Gronlund

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EDUCATION

2013 PhD University of Michigan School of Public Health, Department of Environmental Health Sciences
2008 MPH University of Michigan School of Public Health, Department of Environmental Health Sciences, Occupational and Environmental Epidemiology Sub-Plan
1999 BA University of Chicago, Biological Sciences, Honors and Specialization in Ecology and Evolution

EXPERIENCE

2019-present **Research Assistant Professor**, University of Michigan Institute for Social Research, Survey Research Center, Social Environment and Health Program, Ann Arbor, MI

2018 **Research Investigator**, University of Michigan Institute for Social Research, Survey Research Center, Social Environment and Health Program, Ann Arbor, MI

2015-2018 **Postdoctoral Research Fellow**, University of Michigan Department of Epidemiology, Center for Social Epidemiology and Population Health, Ann Arbor, MI

2013-2015 **Graham Sustainability Institute Dow Postdoctoral Research Fellow**, University of Michigan Department of Epidemiology, Center for Social Epidemiology and Population Health, Ann Arbor, MI

2009-2013 **Graduate Student Research Assistant/Associate**, University of Michigan Department of Environmental Health Sciences, Ann Arbor, MI

2007-2009 **Research Assistant**, University of Michigan Department of Environmental Health Sciences, Ann Arbor, MI

2007-2007 **Summer Intern**, Michigan Department of Community Health Healthy Homes Section, Lansing, MI

2000-2006 **Research Assistant**, Karmanos Cancer Institute Clinical Trials Office, Detroit, MI

1997-1999 **Research Assistant**, University of Chicago Department of Ecology and Evolution, Chicago, IL

1997-1997 **Research Assistant**, University of Chicago Hospitals Department of Planning and Evaluation, Chicago, IL

AWARDS

- *Environmental Health Sciences Chair's Award*, University of Michigan School of Public Health, April, 2013.
- *Best Poster Presentation*, University of Michigan School of Public Health Eighteenth Annual Environmental Health Sciences Research Symposium, February, 2013.
- *Best Student Abstract*, University of Michigan School of Public Health Symposium on Global Aging, October, 2008.
- *Environmental Health Sciences Academic Achievement Award*, University of Michigan School of Public Health, November, 2007.
- *First Place, Environmental Health Sciences MPH Poster Session*, University of Michigan School of Public Health, October, 2007.
- *Sigma Xi Science Prize* (awarded to the top three original undergraduate research papers), University of Chicago, May, 1999.

GRANTS, FELLOWSHIPS AND SCHOLARSHIPS

Current

Title: The cumulative health burdens of air pollution and heat in a changing climate under different local energy mix scenarios

Role: Principal Investigator

Sponsor: Michigan Lifestage Environmental Exposures and Disease (M-LEED) Center

Amount: \$35,000

Period: June, 2019-March, 2020

Goal: To conduct health impact assessments to quantify the health effects of 1) DTE Energy's proposed Integrated Resource Plan and more rapid coal power plant decommissioning schedules, 2) the health impacts of present and future extreme heat under varying scenarios, and 3) the cumulative impacts of emissions from electricity generation and extreme heat in the Detroit area under varying scenarios.

Title: The cumulative economic burden of air pollution health impacts and fuel poverty under different energy mix and utility rate scenarios

Role: Principal Investigator

Sponsor: Graham Sustainability Institute

Amount: \$10,000

Period: May, 2019-December, 2019

Goal: To inform the Michigan Public Service Commission's decision on DTE Energy's Integrated Resource Plan and proposed rates within an energy justice framework by quantifying the separate and combined economic burdens of air pollution health effects and fuel poverty.

Title: Anti-oxidant vitamin intake, air pollution and preterm birth in a Mexican pregnancy cohort

Role: Co-Investigator

Sponsor: Michigan Lifestage Environmental Exposures and Disease (M-LEED) Center (Supplement)

Amount: \$55,984

Period: January-December, 2019

Goal: The goal of this administrative supplement to M-LEED is to conduct epidemiological research to evaluate whether prenatal intake of anti-oxidant vitamins (from supplements and food) and prenatal air pollution exposure, both singly and jointly, are associated with preterm birth and reproductive tract inflammation in a cohort of 935 pregnant women based in Mexico City.

Title: Causal mechanisms for sustainable adaptation to adverse heat and precipitation health effects, R00ES026198

Role: Principal Investigator

Sponsor: National Institute for Environmental Health Sciences

Amount: \$965,002

Period: March, 2019-February, 2022

Goal: To use novel data linkages while working with local officials and community leaders to understand the housing and health characteristics that increase vulnerability to heat- and precipitation-associated health effects to identify optimal and sustainable strategies for adapting to increasing extreme weather events.

Title: Evidence to improve heat warning effectiveness in reducing morbidity and mortality, R01ES029950

Role: Co-investigator

Sponsor: National Institute for Environmental Health Sciences

Amount: \$68,247 (Subcontract)

Period: January, 2019-October, 2022

Goal: Identify the optimal health-based and location-specific metrics for issuing heat alerts, to estimate the causal benefits of heat alerts, and to identify characteristics of individuals or communities associated with the greatest reductions in morbidity or mortality following heat alerts.

Title: Hazards SEES: Enhancing Emergency Preparedness for Critical Infrastructure Failure During Extreme Heat Events, NSF 1520803 (PI Stone/O'Neill).

Role: Postdoctoral Research Fellow

Sponsor: National Science Foundation (NSF)

Amount: \$2,350,000

Period: September, 2015-August, 2020

Goal: To assess the effectiveness of specific environmental, technological, and behavioral adaptations in mitigating a growing heat hazard in Atlanta, Detroit and Phoenix, and to estimate mortality and morbidity associated with simulated grid failure events during heat wave conditions in the three cities in response to current and future climate conditions.

Completed

Title: Community-engaged research to understand the co-vulnerabilities of cold- and heat-associated health effects and inform sustainable interventions

Role: Principal Investigator and M-LEEd Center Scientist

Sponsor: Michigan Lifestage Environmental Exposures and Disease (M-LEEd) Center

Amount: \$25,000

Period: May, 2018-March, 2019

Goal: Improve knowledge on how 1) housing conditions increase vulnerability to cold temperatures and 2) housing- and health-related vulnerabilities to cold correlate with heat vulnerabilities similar to those I am studying in my K99/R00 research.

Title: Causal mechanisms for sustainable adaptation to adverse heat and precipitation health effects, K99ES026198

Role: Principal Investigator

Sponsor: National Institute for Environmental Health Sciences

Amount: \$216,000

Period: March, 2017-February, 2019

Goal: To use novel data linkages while working with local officials and community leaders to understand the housing and health characteristics that increase vulnerability to heat- and precipitation-associated health effects to identify optimal and sustainable strategies for adapting to increasing extreme weather events.

Title: Community-Based Research on Heat Waves, Housing and Health in Detroit

Role: Collaborator

Sponsor: Michigan Institute for Clinical and Health Research

Period: June, 2017-May, 2018

Amount: \$40,000

Goal: To compare analyses of existing survey data done without community partner engagement to an analysis done with community partner engagement, and to identify actions to mitigate the adverse health effects of extreme heat in vulnerable Detroit communities.

Title: Increasing Climate Resiliency in Detroit through the Co-Analysis of Survey Data

Role: Collaborator

Sponsor: Michigan Center on Lifestage Environmental Exposures and Disease (M-LEEd)

Period: May, 2017-April, 2018

Amount: \$47,000

Goal: With guidance from the M-LEEd Community Outreach and Engagement Core, to analyze existing data obtained through funding from the National Science Foundation (NSF) and the Detroit Urban Research Center (Detroit URC) to address new research questions on how housing features and access/use of energy efficiency and weatherization services may be linked with reported heat-related health outcomes among 100 Detroit residents.

Title: Understanding disparities in extreme-heat health effects for sustainable solutions

Role: Principal Investigator

Sponsor: Postdoctoral Translational Scholars Program, Michigan Institute for Clinical and Health Research, University of Michigan

Amount: \$100,000

Period: June, 2015-August, 2017

Goal: To learn how housing, pre-existing health conditions and green space modify associations between heat and severe health events, with engagement with community and governmental stakeholders involved in climate change adaptation planning.

Title: Identifying and communicating sustainable strategies for reducing heat vulnerability in a changing climate.

Role: Principal Investigator

Sponsor: Dow Sustainability Fellowship, Graham Sustainability Institute at the University of Michigan

Amount: \$70,000

Period: September, 2013-August, 2015

Goal: To identify and then map social factors and characteristics of the urban environment, such as proximity to parks, walkability and air pollution levels, that potentially affect susceptibility to summer heat using data from multi-ethnic cohort studies of cardiovascular health, namely, the Multi-Ethnic Study of Atherosclerosis and the Jackson Heart Study.

Title: An examination of the health effects of heat on the elderly: Heat waves, heat interactions with air pollution, urban heat island effects and heat mitigation strategies

Role: Pre-doctoral Trainee

Sponsor: T32 Interdisciplinary Training Program Traineeship on Public Health and Aging (PI Mendes de Leon), National Institute on Aging, NIH

Amount: \$54,000

Period: July, 2011-June, 2013

Goal: To study the added effects of heat waves and characteristics of vulnerability to heat waves in a study of the association between temperature and hospital admissions, for multiple causes, among the elderly in 135 U.S. cities and using a life cycle assessment framework, to compare the use of central air conditioners in private residences to other heat mitigation strategies in the United States.

Title: National Occupational Research Agenda (NORA) Pre-Doctoral Scholarship

Role: Pre-doctoral Trainee

Sponsor: National Institute for Occupational Safety and Health Education and Research Center

Amount: \$25,000

Period: September, 2008-August, 2009

Goal: Pre-candidacy doctoral research related to occupational and environmental health.

Title: Rackham Graduate Student Research Grant

Role: Principal Investigator

Sponsor: University of Michigan Horace H. Rackham School of Graduate Studies

Amount: \$3,000

Period: February, 2009

Goal: To purchase Michigan mortality data to study how mortality among the elderly due to heat waves varies by neighborhood-wide urban heat island effects.

Title: Mate guarding in *Drosophila pegasa*

Role: Undergraduate researcher

Sponsor: Howard Hughes Undergraduate Summer Research Fellowship, University of Chicago

Amount: \$3,000

Period: June-August, 1998

Goal: To study reproductive behaviors in *Drosophila*.

TEACHING EXPERIENCE

Teaching Assistant, University of Chicago Department of Ecology and Evolution

January, 1999-March, 1999, Chicago, IL

Taught a lab section, graded quizzes and lab reports, and held office hours for the course "Environmental Ecology."

LECTURES

- *Mapping heat vulnerability*. Lecture in course Epid 684: Theory and Applications of Spatial Epidemiology, February, 2019.
- *Environmental exposures and aging*. Lecture in course Epid 677: Epidemiology of Aging, September, 2016, October, 2018.
- *Climate change, environment and aging*. Lecture in course Epid 677: Epidemiology of Aging, October, 2017.
- *Climate change and health in Michigan*. Lecture in UM Dearborn course ENST/ESCI 395: Seminar on Environmental Issues, February, 2017.
- *Climate change, health and the elderly*. Lecture in course EPID 813: Advanced Seminar on Public Health and Aging. January, 2016.
- *Vulnerability among the elderly to heat and heat waves in the U.S.* Lecture in course EPID 813: Advanced Seminar on Public Health and Aging. January, 2015.
- *Time series and case-crossover analyses in air pollution and temperature epidemiology*. Lecture in course EHS/EPID 675: Data Analysis for Environmental Epidemiology. April, 2013-2019.

CONSULTANCIES

- Building Resilience Against Climate Change, Michigan Department of Health and Human Services, 2015-2017.
- Evaluation of Turbidity of Public Water Supplies and Risk of Acute Gastrointestinal Illness, Drexel University, September-November, 2015.

SERVICE

- *Volunteer*, Jefferson East, Inc., Detroit, MI, June, 2008-present.
- *Committee member* of the Detroit City Council Green Task Force Climate Action Subcommittee, 2018-present.
- *Committee member* of the Detroit Climate Action Collaborative, an initiative of Detroiters Working for Environmental Justice, 2015-2018.
- *Reviewer* for the Harburg Award to graduate students in the Center for Social Epidemiology and Population Health, April, 2016 and April, 2017.
- *Abstract reviewer* for the American Public Health Association Annual Meeting, November, 2017.
- *Abstract reviewer* for the Great Lakes Adaptation Assessment for Cities Conference on Adaptation in the Great Lakes Region, June, 2014.
- *Peer reviewer* for Am J Epidemiol, Arch Gerontol Geriatr, BMJ Open, Curr Opin Environ Sustainability, Epidemiology, Environ Health, Environ Health Perspect, Environ Int, Environ Monit Assess, Environ Res, Int J Biometeor, Int J Environ Res Public Health, Int J Health Geogr, JAMA, JAMA Peds, J Expo Sci Environ Epidemiol, Nat Hazards, PLOS ONE and Sci Tot Environ. 2009-present.
- *Officer*, Environmental Health Student Association, January, 2008-December, 2008.

STUDENTS MENTORED

Dylan Kirby, MPH student, 2018-2019
 Anam Khan, PhD student, 2018-present
 Krista Latta, MPH student, 2018-2019
 Nathan Carpenter, Oberlin College senior and
 Doris Duke Conservation Scholar, 2018
 Cherrel Manley, BS, MICHR Summer Immersion
 Program, 2018

Amanda Schooner, MPH student, 2018
 Kyle Sullivan, MPH student, 2017-2018
 Jacqueline Cardoza, MPH student, 2017-2018
 Zoey Laskaris, PhD student, 2017-2018
 Miatta Buxton, PhD student, 2014-2016
 Trish Koman, PhD student, 2013-2016
 Adesuwa Ogbomo, MPH, 2014

Yi Wang, MPH, 2014
Alyssa Yang, MPH, 2013

Rachel Burkhart, MPH, 2013
Tess Gallagher, MPH, 2012

PROFESSIONAL ORGANIZATIONS

International Society for Environmental Epidemiology
American Public Health Association
Institute for Healthcare Policy and Innovation

LANGUAGE

French reading and speaking capabilities.

PAPERS IN PROGRESS/SUBMITTED

1. Conlon KC, Mallen E, **Gronlund CJ**, Berrocal VJ, Larsen L, O'Neill MS. *Mapping human vulnerability to extreme heat events: Are we using the right methods?* Environ Health Perspect. Revise and Resubmit.
2. **Gronlund CJ**, Yang AJ, Conlon KC, Burkhart RS, O'Neill MS, Park SK, Le HQ, Batterman SA, Wirth JJ, Wahl RL, Cameron L. *Total and direct associations between high temperatures and preterm births in Detroit, Michigan*. Submitted.
3. Ziegler T, Coomb C, Rowe Z, Clark SJ, **Gronlund CJ**, Lee M, Palacios A, Larsen LS, Reames TG, Schott J, Williams GO, O'Neill MS. *Shifting from "community-placed" to "community-based" research to advance health equity: Lessons learned from the Heatwaves, Housing, and Health: Increasing Climate Resiliency in Detroit (HHH) partnership*. Submitted.
4. Cardoza J,* **Gronlund CJ**, Rowe Z, Schott J, Lee M, Clark S, Williams G, Harlan S, Ziegler T, O'Neill M. *Air conditioning and heat-related illness in Detroit, Michigan, USA: A community-based participatory epidemiologic analysis*.
5. Chakalian PM, Harlan SL, Hondula DM, **Gronlund CJ**, Larsen LS, O'Neill MS. *Perceptions of Summertime Heat Risks and Their Associations with Heat-Related Illness and Protective Behaviors in Phoenix, AZ and Detroit, MI*.
6. **Gronlund CJ**, Berrocal V. *Modeling and comparing central air conditioning ownership and cold-season in-home thermal comfort using the American Housing Survey*.
7. Lanza K, Stone B, Chakalian P, **Gronlund CJ**, Hondula D, Mallen E, O'Neill M, Haardorfer R. *Behavior modification and heat vulnerability: How hot days and heat waves impact outdoor, indoor, and total physical activity levels of adults*.
8. Lanza K, Stone B, Chakalian P, **Gronlund CJ**, Hondula D, Larsen L, Mallen E. *Physical activity in the summer heat: How hot weather moderates the relationship between built environment features and outdoor physical activity of adults*.
9. Larsen LS, **Gronlund CJ**, Berrocal V, O'Neill MS. *Housing and neighborhood characteristics moderating the effect of outdoor on indoor temperatures in homes in Detroit, MI*.
10. **Gronlund CJ**, Zanolotti A, Wellenius GA, Schwartz JD, O'Neill MS. *Previous-three-week temperatures and vulnerability to extreme-heat-associated hospitalizations among the elderly in the United States*.
11. **Gronlund CJ**, Latta K, O'Neill MS. *The associations between precipitation and mortality in five counties in Ohio, USA, 2007-2012*.

PEER-REVIEWED PUBLICATIONS

1. Buxton MA, Meraz-Cruz N, Sanchez BN, **Gronlund CJ**, Foxman B, Vadillo-Ortega F, O'Neill MS. *Evaluating environmental contributions to inflammation: Findings from concurrent repeated measures of systemic and reproductive tract cytokines during term pregnancy in Mexico City*. Sci Total Environ, 2019.
2. **Gronlund CJ**, Cameron L, Shea C, O'Neill MS. *Assessing the magnitude and uncertainties of the burden of selected diseases attributable to extreme heat and extreme precipitation under a climate change scenario in Michigan for the period 2041-2070*. Environ Health, 2019.
3. Buxton MA, Meraz-Cruz N, Sánchez BN, Foxman B, **Gronlund CJ**, O'Neill MS, Vadillo-Ortega F. *Inflammation during pregnancy: Characterization of cervico-vaginal cytokines in term births using longitudinal data*. Am J Perinatology, 2019.
4. **Gronlund CJ**, Sullivan K, Kefelgn Y, Cameron L, O'Neill MS. *Climate change and temperature extremes: a review of heat- and cold-related morbidity and mortality concerns of municipalities*. Maturitas, 2018, 114:54-59. DOI: 10.1016/j.maturitas.2018.06.002

5. **Gronlund CJ**, Sheppard L, O'Neill MS, Adar S, Auchincloss A, Kaufman J, Lima JA, Madrigano J, Diez Roux AV. *Vulnerability to the cardiovascular effects of summer heat in six U.S. cities: Results from the Multi-Ethnic Study of Atherosclerosis (MESA)*. *Epidemiology*, 2018. *Epidemiology*. 2018 Nov;29(6):756-764. doi: 10.1097/EDE.0000000000000910.
6. Ogbomo A*, **Gronlund CJ**, O'Neill MS, Konen T, Cameron L, Wahl R. *Vulnerability to extreme-heat-associated hospitalization in three counties in Michigan, USA, 2000-2009*. *Int J Biometeor*, 2017, 61(5):833-843. DOI: 10.1007/s00484-016-1261-5
7. **Gronlund CJ**, Zanobetti A, Wellenius GA, Schwartz JD, O'Neill MS. *Vulnerability to renal, heat and respiratory hospitalizations during extreme heat among U.S. elderly*. *Climatic Change*, 2016, 136(3):631-645. DOI: 10.1007/s10584-016-1638-9.
8. Guentchev G, Rood RB, Ammann CM, Barsugli JJ, Berrocal V, O'Neill MS, **Gronlund CJ**, Ebi K, Vigh J, Koziol B, Cinquini L. *Evaluating the appropriateness of downscaled climate information for projecting risks of Salmonella*. *Int J Environ Res Public Health*, 2016, 13(3): 267. DOI: 10.3390/ijerph13030267.
9. **Gronlund CJ**, Berrocal VJ, White-Newsome JL, Conlon KC, O'Neill MS. *Vulnerability to extreme heat by individual characteristics and area green space and socio-demographic characteristics among the elderly in Michigan, 1990-2007*. *Environ Res*, 2014, 136:449-461. DOI: 10.1016/j.envres.2014.08.042.
10. **Gronlund CJ**, Humbert S, Shaked S, O'Neill MS, Jolliet O. *Characterizing the burden of disease of particulate matter for life cycle impact assessment*. *Air Qual Atmos Health*, 2014, 8:29-46. DOI: 10.1007/s11869-014-0283-6.
11. **Gronlund CJ**. *Racial and socioeconomic disparities in heat-related health effects and their mechanisms: a review*. *Curr Epidemiol Rep*, 2014, 1(3):165-173. DOI: 10.1007/s40471-014-0014-4.
12. **Gronlund CJ**, Zanobetti A, Schwartz JD, Wellenius GA, O'Neill MS. *Heat, heat waves and hospital admissions among the elderly in the United States, 1992-2006*. *Environ Health Perspect*, 2014, 122(11): 1187-1192. DOI:10.1289/ehp.1206132.
13. Bush KF, Fossani C, Li S, Mukherjee B, **Gronlund CJ**, O'Neill MS. *Extreme precipitation and beach closures in the Great Lakes region: evaluating risk among the elderly*. *Int J Environ Res Public Health*, 2014, 11(2): 2014-2032.
14. White-Newsome J, McCormick S, Sampson N, Buxton MA, O'Neill MS, **Gronlund CJ**, Catalano L, Conlon K, Parker EA. *Strategies to reduce the harmful effects of extreme heat events: a four-city study*. *Int J Environ Res Public Health*, 2014, 11(2), 1960-1988. DOI: 10.3390/ijerph110201960.
15. Zanobetti A, O'Neill MS, **Gronlund CJ**, Schwartz JD. *Susceptibility to mortality in weather extremes: effect modification by personal and small-area characteristics*. *Epidemiology*, 2013, 24(6), 809-19. DOI: 10.1097/01.ede.0000434432.06765.91.
16. White-Newsome JL, Brines SJ, Brown DG, Dvonch JT, **Gronlund CJ**, Zhang K, Oswald EM, Rood RB, O'Neill MS. *Validating satellite-derived land surface temperature with in-situ measurements: a public health perspective*. *Environ Health Perspect*, 2013, 121(8): 925-31. DOI: 10.1289/ehp.1206176.
17. Sampson N, **Gronlund CJ**, Buxton MA, Catalano L, White-Newsome JL, Conlon KC, O'Neill MS, McCormick S, Parker EA. *Staying cool in a changing climate: reaching vulnerable populations during heat events*. *Glob Environ Change*, 2013, 23(2): 475-84. DOI: 10.1016/j.goenvcha.2012.12.011.
18. Zanobetti A, O'Neill MS, **Gronlund CJ**, Schwartz JD, *Summer temperature variability and long-term survival among elderly people with chronic disease*. *Proc Natl Acad Sci USA*, 2012, 109(17): 6608-13. DOI: 10.1073/pnas.1113070109. DOI: 10.1073/pnas.1113070109.
19. Oswald EM, Rood RB, Zhang K, **Gronlund CJ**, O'Neill MS, White-Newsome JL, Brines SJ, Brown DJ. *An investigation into the spatial variability of near-surface air temperatures in the Detroit, MI metropolitan region*. *J Appl Meteorol Clim*, 2012, 51(7): 1290-1304. DOI: 10.1175/JAMC-D-11-0127.1.
20. Zhang K, Oswald EM, Brown DG, Brines SJ, **Gronlund CJ**, White-Newsome JL, Rood RB, O'Neill MS, *Geostatistical exploration of spatial variation of summertime temperatures in the Detroit metropolitan region*. *Environ Res*, 2011, 111(8): 1046-53. DOI: 10.1016/j.envres.2011.08.012.
21. Bush KF, Luber G, Kotha SR, Dhaliwal RS, Kapil V, Pascual M, Brown DG, Frumkin H, Dhiman RC, Hess J, Wilson ML, Balakrishnan K, Eisenberg J, Kaur T, Rood R, Batterman S, Joseph A, **Gronlund CJ**, Agrawal A, Hu H. *Impacts of climate change on public health in India: future research directions*. *Environ Health Perspect*, 2011, 119(6): 765-70. DOI: 10.1289/ehp.1003000.
22. O'Neill MS, Jackman DK, Wyman M, Manarolla X, **Gronlund CJ**, Brown DG, Brines SJ, Schwartz J, Diez-Roux AV. *U.S. local action on heat and health: are we prepared for climate change?* *Int J Public Health*, 2010, 55: 105-112.

23. White-Newsome JL, O'Neill MS, **Gronlund CJ**, Sunbury TM, Brines SJ, Parker E, Brown DB, Rood RB, Rivera Z. *Climate change, heat waves and environmental justice: advancing knowledge and action*. Environ Justice, 2009, 2(4): 197-205. DOI:10.1089/env.2009.0032.
 24. O'Neill MS, Carter R, Kish JK, **Gronlund CJ**, White-Newsome JL, Manarolla X, Zanobetti A, Schwartz JD. *Preventing heat-related morbidity and mortality: new approaches in a changing climate*. Maturitas, 2009, 64(2): 98-103.
 25. Reid CE, O'Neill MS, **Gronlund CJ**, Brines SJ, Brown DB, Diez-Roux AV, Schwartz J. *Mapping community determinants of heat vulnerability*. Environ Health Perspect, 2009, 117(11): 1730-36. DOI: 10.1289/ehp.0900683.
 26. **Gronlund CJ**, DeAngelis MD, Pruett-Jones S, Ward PS, Coyne JA. *Mate grasping in *Drosophila pegasa**. Behaviour, 2002, 139: 545-572.
 27. Price CS, Kim CH, **Gronlund CJ**, Coyne JA. *Cryptic reproductive isolation in the *Drosophila simulans* species complex*. Evolution, 2001, 55(1): 81-92.
- *Mentored student.

PRESENTATIONS

- *Total and direction associations between high temperatures and preterm births in Detroit, MI*. Poster presentation, Thirtieth Conference of the International Society for Environmental Epidemiology, Ottawa, Canada, August, 2018.
- *Vulnerability to the cardiovascular effects of ambient heat in six U.S. cities: results from the Multi-Ethnic Study of Atherosclerosis (MESA)*. Poster presentation, Thirtieth Conference of the International Society for Environmental Epidemiology, Ottawa, Canada, August, 2018.
- *Preterm birth and heat in Detroit*. Oral presentation to the Michigan Department of Health and Human Services, April, 2018.
- *Association between high temperature and pre-term birth in a high-risk city*. Poster presentation, American Public Health Association's 2017 Annual Meeting and Expo, Atlanta, GA, November, 2017.
- *Housing disparities in extreme-heat mortality in the Industrial Midwest*, Oral presentation, Climate Changes Health: Ensuring Environmental Justice Underlies Public Health's Climate Change Work, a Summit of the American Public Health Association Environment Section, Spelman College, Atlanta, GA, November, 2017.
- *Assessing the burden of disease due to climate change in Michigan*, Epidemiology/Biostatistics Seminar Series, Michigan State University, Lansing, MI, April, 2017.
- *Pragmatic projections of climate-associated health effects in Michigan, USA*. Poster presentation, Twenty-Eighth Conference of the International Society for Environmental Epidemiology, Rome, Italy, September, 2016.
- *Vulnerability to extreme-heat-associated hospitalization in three counties in Michigan, USA, 2000-2009*. Poster presentation, 2016 Epidemiology Congress of the Americas, Miami, FL, June, 2016.
- *Climate change and health in Detroit*, Climate and Health Science Café, Detroit Hispanic Development Corporation, Detroit, MI, March, 2016.
- *Climate change and health, the researcher's perspective*. Panelist, Health Equity Speaker Series, University of Michigan School of Public Health, Ann Arbor, MI, November, 2015.
- *Heat vulnerability in Michigan*, Oral presentation, Michigan's Premier Public Health Conference, by the Michigan Association for Local Public Health, Thompsonville, MI, October, 2015.
- *Vulnerability to the cardiovascular effects of summer heat in six U.S. cities: Results from the Multi-Ethnic Study of Atherosclerosis (MESA)*, Poster presentation, Reimagining Health in Cities: New Directions in Urban Health Research, Philadelphia, PA, September, 2015.
- *Climate change and public health in Detroit*. Oral presentation, Public Health Forum on Climate Change in Detroit, Detroit Climate Action Collaborative, Detroit, MI, August, 2015.
- *Vulnerability among the elderly to extreme heat-associated cardiovascular mortality in Michigan, 2000-2009*. Oral presentation, Twentieth International Congress of Biometeorology, Cleveland, OH, October, 2014.
- *Vulnerability to heat-associated hospital admissions among the elderly in the United States by individual and area-level characteristics, 1992-2006*. Oral presentation, Twenty-Sixth Conference of the International Society for Environmental Epidemiology, Seattle, WA, August, 2014.

- *Individual-level and area-level vulnerability to heat among the elderly in Michigan, 1990-2007*. Speaker, University of Michigan Center for Social Epidemiology and Public Health Seminar Series, February, 2013.
- *Individual and neighborhood-level vulnerability to extreme-heat-related mortality among the elderly in Michigan, 1990-2007*. Oral presentation, Great Lakes Adaptation Assessment for Cities Conference on Adaptation in the Great Lakes Region, June, 2014.
- *Individual and neighborhood-level vulnerability to extreme-heat-related mortality among the elderly in Michigan, 1990-2007*. Poster presentation, University of Michigan Geriatrics Center Research Symposium, April, 2013, University of Michigan School of Public Health Eighteenth Annual Environmental Health Sciences Research Symposium, February, 2013, and the Twenty-Fourth Conference of the International Society for Environmental Epidemiology, Columbia, SC, August, 2012.
- *The added heat wave effect in the association between temperature and hospital admissions among the elderly in 129 U.S. cities*. Poster presentation, Twenty-Third Conference of the International Society for Environmental Epidemiology, Barcelona, Spain, September, 2011.
- *Dose-response, severity, characterization factors and burden of disease of particulate matter for life cycle assessment*. Platform presentation (on my behalf by Shanna Shaked) at the Society of Environmental Toxicology and Chemistry North America Thirty-First Annual Conference in Portland, OR, November, 2010 and poster presentation at the University of Michigan School of Public Health Sixteenth Annual Toxicology Symposium, February, 2011.
- *Identifying heat-related vulnerabilities, programs, and public perception of risk in Detroit*. Co-speaker with Natalie Sampson, Preparing for the Health Impacts of Increased Heat: A Workshop for Community Decision-Makers, Detroit, MI, December, 2010.
- *Heat waves, impervious surfaces, and hospital admissions among the elderly in U.S. cities*. Poster presentation, Twenty-First Conference of the International Society for Environmental Epidemiology, Dublin, Ireland, August, 2009.
- *Hospital admissions of the elderly during heat waves in five U.S. cities, 1985-2003*. Oral presentation, Twentieth Conference of the International Society for Environmental Epidemiology, Pasadena, CA, October, 2008.
- *Healthy Homes University: A program to reduce children's asthma symptoms in Michigan*. Poster presentation, Environmental Health Sciences MPH Poster Presentations, University of Michigan, Ann Arbor, MI, October, 2007.
- *Mate grasping in *Drosophila pegasa**. Oral presentation, Annual Meeting of the Society for the Study of Evolution, Madison, WI, June, 1999.

PROFESSIONAL TRAINING

- CLIMATE 588: Regional Climate: Downscaling Techniques and Applications. University of Michigan, Ann Arbor, MI, January-April, 2018.
- Spatial Statistics for Epidemiologic Data, Epidemiology Summer Session, University of Michigan, Ann Arbor, MI, July, 2017.
- Introduction to Bayesian Statistics, Inter-university Consortium for Political and Social Research, University of Michigan, Ann Arbor, MI, July, 2017.
- High Impact Principles and Practices for STEM Education, eight-week online course, Center for Research on Learning and Teaching, University of Michigan, Ann Arbor, MI, June-August, 2016.
- Causal Mediation Analysis, Half-Day Workshop by Tyler VanderWeele, Epidemiology Congress of the Americas, Miami, FL, June, 2016.
- Reach the Decision Makers Program, online and in-person training for scientists and community members in promoting science and health-based policies at the U.S. Environmental Protection Agency, Washington, DC, September, 2015-April, 2016.
- Methods in Community-Based Participatory Research, University of Michigan Graduate Summer Session in Epidemiology, July 6-10, 2015.

WORKSHOPS

- *University of Michigan M-LEEaD/Wayne State University CURES Annual Symposium: Making Your First Research Team a Success. Ann Arbor, MI, May, 2019.

- City of Detroit Office of Sustainability, Sustainability Action Agenda Health and Environment Workshops, Detroit, MI, June, August, and November, 2018.
- Climate Changes Health: Ensuring Environmental Justice Underlies Public Health's Climate Change Work, a Summit of the American Public Health Association Environment Section, Spelman College, Atlanta, GA, November 4, 2017.
- Evaluation of Turbidity of Public Water Supplies and Risk of Acute Gastrointestinal Illness, Drexel University, Philadelphia, PA, October 15, 2015.
- 2014 Georgia Institute of Technology Urban Climate Institute Meeting on Urban Warming and Public Health, Atlanta, GA, July 9-10, 2014.
- Centers for Disease Control and Prevention Indo-U.S. Program on Environmental and Occupational Health Workshop on Climate Change and Health, Goa, India, August 30-September 2, 2009.
- Third Biannual Workshop on Climate and Health, Summer Colloquium on Climate and Health, National Center for Atmospheric Research, Boulder, CO, July 13-17, 2009.

*Co-organizer.