

MICHAEL DAVID WIRTH, MSPH, PhD

Curriculum Vitae
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Education

- 2012 **Ph.D., Epidemiology**, Department of Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC. Dissertation: Breast Cancer and Cortisol Secretion in Relation to the *PER3* VNTR, Chronotype, and Sleep (GPA=4.0)
- 2009 **M.S.P.H., Epidemiology**, Department of Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC. Master's Thesis: A Study of Shift Working Police Officers from Buffalo (GPA=4.0).
- 2007 **B.S., Biology major, Environmental Biology minor**, Wingate University, Wingate, NC, Honors Trustee Scholarship to Wingate Sciences Program (GPA=3.9).
- 2006 **National Science Foundation Molecular and Cellular Bioscience REU Program**, Wadsworth Center, Albany, NY. Research Mentor – Dr. April Burch, Research Project - Identify putative client proteins in Hsp90 in infected cells at various times with or without inhibitors through immunoprecipitations, and monitor localization of co-chaperones in cells treated with an inhibitor by immunofluorescence microscopy.

Research Interests

Circadian disruption including shift work, clock gene polymorphisms, sleep disruption, diurnal preference, and melatonin and cortisol secretion; cancer epidemiology; the Dietary Inflammatory Index with respect to shift work and chronic disease; occupational epidemiology; cancer screening; health disparities

Academic and Research History

- 2014-Present **Research Investigator**, Connecting Health Innovations (CHI) LLC, Columbia, SC (in joint appointment with USC). CHI is a relatively new company with the express intention of translating research findings to places of clinical relevance and public health need through commercializing research tools for use in clinical and public health settings. Involved in research related to: the development of mobile and web-based applications for the Dietary Inflammatory Index. Work emphasized: working with 'app' developers to create mobile and web-based applications, publishing research papers, drafting grant proposals, and developing posters/presentations for scientific meetings.
- 2012–Present **Research Assistant Professor**, Department of Epidemiology and Biostatistics and Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, Columbia, SC (2014-Present). **Post-Doctoral Fellow**, Cancer Prevention and Control Program (2012-2014). Involved in research projects related to: circadian disruption, cancer epidemiology, the Dietary Inflammatory Index, occupational populations (Buffalo Cardio-Metabolic Occupational Police Stress study), racial health disparities (e.g., Healthy Eating and

Activity Living in the Spirit intervention trial), colorectal cancer screening, and weight dissatisfaction. Work emphasized: publishing research papers, drafting grant proposals, developing posters/presentations for scientific meetings, guest lecturing, mentoring graduate students, and teaching courses.

2007 – 2012 **Graduate Research Assistant under Dr. James Burch, Dr. Robin Puett, Dr. James Hébert and Tom Hurley**, Cancer Prevention and Control Program, Department of Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC. Involved in research projects related to: circadian disruption, racial disparities, cancer, and environmental and occupational health. Work emphasized: assisting with data collection, statistical analyses, and development of manuscripts and posters for presentation in addition to my masters and dissertation work.

2003 – 2007 **Laboratory Assistant/Organic Chemistry Tutor/Student Center Supervisor**, Wingate University, Wingate, NC.

Peer-Reviewed Publications

1. Mazidi M, Shivappa N, **Wirth MD**, Hébert JR, Mikhailidis DP, Rizzo M, Kengne AP, Banach M. Cardiovascular Disease Risk Factors, singly or in combination are Associated with the Dietary Inflammatory Index in US adults. *Annals of Medicine* (revise and resubmit requested).
2. Mazidi M, Shivappa N, **Wirth MD**, Hébert JR, Kengne AP. Greater Dietary Inflammatory Index Score Is Associated with Higher Likelihood of Chronic Kidney Disease. *British Journal of Nutrition* (revise and resubmit requested).
3. McMahon DM, Burch JB, **Wirth MD**, Youngstedt SD, Harden JW, Hurley TG, Blair SN, Hand GA, Shook RP, Drenowatz C, Burgess S, Hébert JR. Persistence of Social Jetlag and Sleep Disruption Over Time. *Chronobiology International* (revise and resubmit requested).
4. Turner-McGrievy GM, Schoffman DE, Singletary C, Wright M, Crimarco A, **Wirth MD**, Shivappa N, Mandes T, West DS, Wilcox S, Drenowatz C, Hester A, McGrievy M. The Challenges of Using Commercial Wearable Physical Activity Trackers for Intervention. *Health Promotion Practice* (revise and resubmit requested).
5. Mazidi M, Gao H, Shivappa N, **Wirth MD**, Hébert JR, Kengne AP. The Relationship of Plasma *Trans* Fatty Acids with Dietary Inflammatory Index in the US NHANES Participants. *Lipids in Health and Disease* (revise and resubmit requested).
6. Mazidi M, Shivappa N, **Wirth MD**, Hébert JR, Vatanparast H, Kengne AP. The Association between Dietary Inflammatory Properties and Bone Mineral Density and Risk of Fracture in US Adults. *European Journal of Clinical Nutrition* (in press).
7. Babatunde OA, Adams SA, **Wirth MD**, Ebert JM, Sofge J, Choi SK, Harmon BE, Davis L, Drayton R, Hurley TH, Brandt HM, Armstead CA, Hébert JR. Predictors of participants' retention in a Randomized Controlled Trial to Test the Healthy Eating and Active Living in the Spirit (HEALS) intervention among African-American Church-Goers in South Carolina. *Ethnicity and Disease* 2017 (in press).
8. Zheng J, Guintier MA, Merchant A, **Wirth MD**, Zhang J, Stolzenberg-Solomon RZ, Steck SE. Dietary patterns and risk of pancreatic cancer: A systematic review. *Nutrition Reviews* 2017 (in press).
9. Shin D, Hur J, Cho E, Chung K, Shivappa N, **Wirth MD**, Hébert JR, Lee KW. Pre-Pregnancy Body Mass Index Is Associated with Dietary Inflammatory Index and C-Reactive Protein Concentrations during Pregnancy. *Nutrients* 2017 (EPUB ahead of print, PMID: PMC5409690).
10. Kotsakis GA, Chrepa V, Shivappa N, Hébert JR, **Wirth MD**, Koyanagi A, Tyrovolas S. Diet-Borne Systemic Inflammation is Associated with Prevalent Tooth Loss. *Clinical Nutrition* 2017 (EPUB ahead of print, PMID: 28633943).

11. Sen S, Rifas-Shiman SL, Shivappa N, **Wirth MD**, Hébert JR, Gold DR, Gillman MW, Oken E. Associations of prenatal and early life dietary inflammatory potential with childhood adiposity and cardiometabolic risk in Project Viva. *Pediatric Obesity* 2017 (EPUB ahead of print, PMID: 28493362).
12. Shivappa N, **Wirth MD**, Hurley TG, Hébert JR. Association between the Dietary Inflammatory Index and Telomere Length and C-Reactive Protein from the National Health and Nutrition Examination Survey-1999-2002. *Molecular Nutrition and Food Science* 2017 (EPUB ahead of print; PMID: PMC5380547).
13. Haslam A, **Wirth MD**, Robb SW. Relationship between Meditation Depth and Waking Salivary Alpha-Amylase Secretion among Long-Term MBSR Instructors. *Stress and Health* 2017; 33(3): 298-306 (PMID: 27677965).
14. **Wirth MD**, Shivappa N, Burch JB, Hurley TG, Hébert JR. The Dietary Inflammatory Index, Shift Work, and Depression: Results from the National Health and Nutrition Examination Survey. *Health Psychology* 2017; 36(8): 760-769 (PMID: 28557499).
15. Turner-McGrievy GM, Hales SB, Schoffman D, Valafar H, Brazendale K, Weaver G, Beets M, **Wirth MD**, Shivappa N, Mandes T, Hébert JR, Wilcox S, Hester A, McGrievy M. Choosing between Responsive-design Websites Versus Mobile Apps for Your Mobile Behavioral Intervention: Presenting Four Case Studies. *Translational Behavioral Medicine: Practice, Policy, and Research* 2017; 7(2): 224-232 (PMID: 27812798).
16. **Wirth MD**, Andrew ME, Burchfiel CM, Burch JB, Fekedulegn D, Hartley TA, Charles LE, Violanti JM. Association of Shiftwork and Immune Cells among Police Officers from the Buffalo Cardio-Metabolic Occupational Police Stress Study. *Chronobiology International* 2017; 34(6): 721-731 (PMID: 28488901).
17. Haslam A, Robb SW, Hébert JR, Huang H, **Wirth MD**, Shivappa N, Ebell MH. The Association between Dietary Inflammatory Index Scores and the Prevalence of Colorectal Adenoma. *Public Health Nutrition* 2017; 20(9): 1609-1616 (PMID: 28345504).
18. Kesse-Guyot E, Assmann KE, Andreeva VA, Touvier M, Neufcourt L, Shivappa N, Hébert JR, **Wirth MD**, Hercberg P, Galan P, Julia C. Long-term Association between the Dietary Inflammatory Index and Cognitive Functioning: Findings from the SU.VI.MAX Study. *European Journal of Nutrition* 2017; 56(4): 1647-1655 (PMID: 27055851).
19. Drenowatz C, **Wirth MD**, Grieve GL. Short-term and chronic effects of aerobic and resistance exercise on sleep in young men. *Journal of Preventive Medicine and Care* 2017; 1(4) 15-25.
20. Tyrovolas S, Koyanagi A, Kotsakis GA, Panagiotakos D, Shivappa N, **Wirth MD**, Hébert JR, Haro JM. Dietary Inflammatory Potential is Linked to Cardiovascular Disease Risk Burden in the US Adult Population. *International Journal of Cardiology* 2017; 1(240): 409-413 (PMCID: PMC5518308).
21. Zaslavsky O, Zelber-Sagi S, Hébert JR, Steck SE, Shivappa N, Tabung F, **Wirth MD**, Bu Y, Shikany J, Orchard T, Wallace R, Snetselaar L, Tinker L. Biomarker calibrated nutrient intake and healthy diet index associations with mortality risks among older and frail women from the Women's Health Initiative. *American Journal of Clinical Nutrition* 2017; 105(6): 1399-1407 (PMCID: PMC5445680)
22. Adjibade M, Andreeva VA, Lemogne C, Touvier M, Shivappa N, Hébert JR, **Wirth MD**, Hercberg S, Galan P, Julia C, Assmann KE, Kesse-Guyot. The Inflammatory Potential of the Diet Is Associated with Depressive Symptoms in Different Subgroups of the General Population. *The Journal of Nutrition* 2017; 147(5): 879-887 (PMID: 28356432).
23. **Wirth MD**, Shivappa N, Davis L, Hurley TG, Ortaglia A, Drayton R, Blair SN, Hébert JR. Construct Validation of the Dietary Inflammatory Index among African Americans. *Journal of Nutrition Health and Aging* 2017; 21(5): 487-491 (PMCID: PMC5547883).
24. **Wirth MD**, Murphy EA, Hurley TG, Hébert JR. Effect of cruciferous vegetable intake on oxidative stress biomarkers: differences by breast cancer status. *Cancer Investigation* 2017; 35(4): 277-287 (PMID: 28272911).
25. Molzof HE, **Wirth MD**, Burch JB, Shivappa N, Hébert JR, Johnson RL, Gamble KL. The Impact of Meal Timing on Cardiometabolic Syndrome Indicators in Shift Workers. *Chronobiology International* 2017; 34(3): 337-348 (PMCID: PMC5527274).

26. Julia C, Assmann K, Shivappa N, Hébert JR, **Wirth MD**, Hercberg S, Touvier M, Kesse-Guyot E. Long-term associations between inflammatory dietary scores in relation to long-term C-reactive protein status measured 12 years later: findings from the SU.VI.MAX cohort. *British Journal of Nutrition* 2017; 117(2):306-314 (PMID: 28166841).
27. Sardo Molmenti CL, Steck SE, Thomson C, Hibler E, Yang J, Shivappa N, Greenlee H, **Wirth MD**, Neugut AI, Jacobs ET, Hébert JR. Dietary inflammatory index and risk of colorectal adenoma recurrence: A pooled analysis. *Nutrition and Cancer* 2017; 69(2):238-247 (PMID: 28094571).
28. Harmon BE, **Wirth MD**, Boushey CJ, Wilkes LR, Draluck E, Shivappa N, Steck SE, Hofseth L, Haiman CA, Le Marchand L, Hébert JR. The Dietary Inflammatory Index is Associated with Colorectal Cancer Risk in the Multiethnic Cohort. *Journal of Nutrition* 2017; 147(3):430-4 (PMCID: PMC5320401).
29. Sokol A, **Wirth MD**, Manczuk M, Shivappa N, Zatonska K, Hurley TG, Hébert JR. Association between the Dietary Inflammatory Index, Waist-to-Hip Ratio and Metabolic Syndrome. *Nutrition Research* 2016; 36(11): 1298-1303 (PMCID: PMC5119948).
30. Neufcourt L, Assmann K, Fézeu L, Touvier M, Graffouillère L, Shivappa N, Hébert JR, **Wirth MD**, Hercberg S, Galan P, Julia C, Kesse-Guyot E. Prospective Association Between the Dietary Inflammatory Index and Cardiovascular Disease in the SUPplémentation en Vitamines et Minéraux AntioXydants (SU.VI.MAX) Cohort. *Journal of the American Heart Association* 2016; 5(3): e002735 (PMCID: PMC4943250).
31. Drenowatz C, Gribben N, **Wirth MD**, Hand GA, Shook RP, Burgess S, Blair SN. The Association of Physical Activity during Weekdays and Weekend with Body Composition in Young Adults. *Journal of Obesity* 2016; 2016: 1-8.
32. Babatunde OA, Adams SA, Eberth JM, **Wirth MD**, Choi SK, Hébert JR. Racial Disparities in Endometrial Cancer Epidemiology and Mortality-to-Incidence Ratios in South Carolina. *Cancer Causes and Control* 2016; 27(4): 503-511 (PMID: 26830900).
33. Panagos PG, Vishwanathan R, Penfield-Cyr A, Matthan NR, Shivappa N, **Wirth MD**, Hébert JR, Sen S. Breastmilk from Obese Mothers has Pro-Inflammatory Properties and Decreased Neuroprotective Factors. *Journal of Perinatology* 2016; 36(4): 284-290 (PMCID: PMC4888773).
34. Graffouillère L, Deschasaux M, Mariotti F, Neufcourt L, Shivappa N, Hébert JR, **Wirth MD**, Latino-Martel P, Hercberg S, Galan P, Julia C, Kesse-Guyot E, Touvier M. The Dietary Inflammatory Index Is Associated with Prostate Cancer Risk in French Middle-Aged Adults in a Prospective Study. *Journal of Nutrition* 2016; 146(4): 785-791 (PMCID: PMC4807649).
35. Sen S, Rifas-Shiman SL, Shivappa N, **Wirth MD**, Hébert JR, Gold DR, Gillman MW, Oken E. Dietary inflammatory potential during pregnancy is associated with lower fetal growth and breastfeeding failure: results from Project Viva. *The Journal of Nutrition* 2016; 146(4):728-736 (PMCID: PMC4807648).
36. Graffouillère L, Deschasaux M, Mariotti F, Neufcourt L, Shivappa N, Hébert JR, **Wirth MD**, Latino-Martel P, Hercberg S, Galan P, Julia C, Kesse-Guyot E, Touvier M. Prospective association between the Dietary Inflammatory Index and mortality – modulation by an antioxidant supplementation in the SU.VI.MAX randomized control trial. *American Journal of Clinical Nutrition* 2016; 103(3): 878-885 (PMCID: PMC4763501).
37. **Wirth MD**, Shivappa N, Hurley TG, Hébert JR. Association between Previously Diagnosed Circulatory Conditions and a Dietary Inflammatory Index. *Nutrition Research* 2016; 36(3): 227-233 (PMCID: PMC4774054).
38. **Wirth MD**, Hébert JR, Shivappa N, Hand GA, Hurley TG, Drenowatz C, McMahon D, Shook RP, Blair SN. Anti-inflammatory Dietary Inflammatory Index Scores are Associated with Healthier Scores on Other Dietary Indices. *Nutrition Research* 2016; 36(3): 214-219 (PMCID: PMC4773655).
39. Harmon BE, Chock M, Brantley E, **Wirth MD**, Hébert JR. Disease Messaging in Churches: Implications for Health Communication in African-American Communities. *Journal of Religion and Health* 2016; 55(4): 1411-1425 (PMCID: PMC4856583).

40. Montresor-López JA, Yanosky JD, Mittleman M, Sapkota A, He X, Hibbert J, **Wirth MD**, Puett RC. Short-term Exposure to Ambient Ozone and Stroke Hospital Admission: a Case-Crossover Analysis. *Journal of Exposure Science and Environmental Epidemiology* 2015; v2015: 1-5 (PMID: 26329139).
41. Neufcourt L, Assmann K, Fézeu L, Touvier M, Graffouillère L, Shivappa N, Hébert JR, **Wirth MD**, Hercberg S, Galan P, Julia C, Kesse-Guyot E. Prospective Association Between the Dietary Inflammatory Index and Metabolic Syndrome: Findings from the SU.VI.MAX Study. *Nutrition, Metabolism and Cardiovascular Disease* 2015; 25(11): 988-996 (PMID: 25482566).
42. **Wirth MD**, Hébert JR, Hand GA, Youngstedt SD, Hurley TG, Shook RP, Paluch AE, James SL, Blair SN. Association between Actigraphic Sleep Metrics and Body Composition. *Annals of Epidemiology* 2015; 25(10): 773-778 (PMCID: PMC4567903).
43. Adams SA, **Wirth MD**, Khan S, Murphy EA, Heiney SP, Davis L, Davis B, Drayton R, Hurley TG, Blair SN, Hébert JR. The Association of C-Reactive Protein and Physical Activity Among a Church-Based Population of African Americans. *American Journal of Preventive Medicine* 2015; 77: 137-140 (PMCID:PMC4490070).
44. Burch JB, Everson TM, Seth RK, **Wirth MD**, Chatterjee S. Trihalomethane exposure and biomonitoring for the liver injury indicator, alanine aminotransferase, in the United States population (NHANES 1999-2006). *Science of the Total Environment* 2015; 521-522 (2015): 226-234 (PMCID: PMC4462191).
45. **Wirth MD**, Shivappa N, Steck SE, Hurley TG, Hébert JR. The dietary inflammatory index is associated with colorectal cancer in the National Institutes of Health–American Association of Retired Persons Diet and Health Study. *British Journal of Nutrition* 2015; 113(11): 1819-1827 (PMCID: PMC4466003).
46. Turner-McGrievy GM, **Wirth MD**, Shivappa N, Wingard EE, Fayad R, Wilcox S, Frongillo EA Hébert JR. Randomization to plant-based dietary approaches leads to larger short-term improvements in Dietary Inflammatory Index scores and macronutrient intake compared to diets that contain meat. *Nutrition Research* 2015; 35(2): 97-106 (PMID: 25532675).
47. Adams SA, Heiney SP, Brandt HM, **Wirth MD**, Khan S, Johnson H, Davis L, Wineglass C, Warren-Jones TY, Felder T, Drayton R, Davis B, Farr DE, Hébert JR. A Comparison of a Centralized Versus De-Centralized Recruitment Schema in Two Community-Based Participatory Research Studies for Cancer Prevention. *Journal of Community Health* 2015; 40(2):251-259 (PMCID: PMC4315761).
48. **Wirth MD**, Blake CE, Hébert JR, Sui X, Blair SN. Metabolic Syndrome and Discrepancy between Actual and Self-Identified Good Weight: Aerobics Center Longitudinal Study. *Body Image* 2015; 13: 28-32 (PMCID: PMC4369422).
49. **Wirth MD**, Jagers J, Blair SN, Hébert JR, Youngstedt SD, Dudgeon W, Hand GA. Association of Markers of Inflammation with Sleep and Physical Activity among People Living with HIV or AIDS. *AIDS and Behavior* 2015; 19(6): 1098-1107 (PMCID: PMC4433614).
50. **Wirth MD**, Burch J, Shivappa N, Violanti J, Burchfiel C, Fekedulegn D, Andrew M, Hartley T, Miller DB, Mnatsakanova A, Charles L, Vena JE, Hébert JR. Association of a Dietary Inflammatory Index with Inflammatory Indices and the Metabolic Syndrome among Police Officers. *Journal of Occupational and Environmental Medicine* 2014; 56(9): 986-989 (PMCID: PMC4156884).
51. **Wirth MD**, Brandt HM, Dolinger HD, Hardin JW, Sharpe PA, Eberth JM. Examining Connections between Screening for Breast, Cervical, or Prostate Cancer and Colorectal Cancer Screening. *Colorectal Cancer* 2014; 3(3): 253-263 (PMCID: PMC4134878).
52. **Wirth MD**, Burch JB, Hebert JR, Kowtal P, Kapoor A, Steck SE, Hurley TG, Gupta PC, Pednekar MS, Youngstedt SD, Zhang H, Sarin R. Case-Control Study of Breast Cancer in India: Role of *PERIOD3* Clock Gene Length Polymorphism and Chronotype. *Cancer Investigation* 2014; 32(7): 321-329 (PMCID: PMC4100474).
53. **Wirth MD**, Blake CE, Hébert JR, Sui X, Blair SN. Chronic Weight Dissatisfaction Predicts Type 2 Diabetes Risk: Aerobic Centers Longitudinal Study. *Health Psychology* 2014; 33(8): 912-919 (PMCID: PMC4115022).
54. **Wirth MD**, Burch J, Shivappa N, Steck SE, Hurley TG, Vena JE, Hébert JR. Dietary Inflammatory Index Scores Differ by Shift Work Status: NHANES 2005-2010. *Journal of Occupational and Environmental Medicine* 2014; 56(2): 145-148 (PMCID: PMC3922825).

55. Hébert JR, **Wirth MD**, Harmon BE, Davis L, Hurley TG, Davis B, Murphy EA, Shivappa N, Wilcox S, Adams SA, Brandt HM, Blake CE, Steck SE, Blair SN. C-Reactive Protein in African Americans: A Diet and Lifestyle Randomized Community Trial. *American Journal of Preventive Medicine* 2013; 45(4):430-440 (PMCID: PMC3779347).
56. **Wirth MD**, Burch J, Violanti J, Burchfiel C, Fekedulegn D, Andrew M, Zhang H, Miller DB, Youngstedt SD, Hébert JR, Vena JE. Association of the Period 3 Clock Gene Length Polymorphism with Salivary Cortisol Secretion among Shift-Working Police Officers. *Neuroendocrinology Letters* 2013; 34(4):27-37 (PMCID: PMC3655703).
57. **Wirth MD**, Vena JE, Smith EK, Bauer SE, Violanti J, Burch JB. The Epidemiology of Cancer among Police Officers. *American Journal of Industrial Medicine* 2013; 56(4): 439-453 (PMCID: 3655699).
58. **Wirth MD**, Burch J, Violanti J, Burchfiel C, Fekedulegn D, Andrew M, Zhang H, Miller DB, Hébert JR, Vena JE. Shiftwork duration and the awakening cortisol response among police officers. *Chronobiology International* 2011; 28:446-457 (PMCID: PMC3655701).

Non-Refereed Publications/Letters to the Editor

59. Steck SE, Shivappa N, Tabung FK, Harmon BE, **Wirth MD**, Hurley TG, Hébert JR. The Dietary Inflammatory Index: A New Tool for Assessing Diet Quality Based on Inflammatory Potential. *The Digest: The Research Dietetic Practice Group of the Academy of Nutrition and Dietetics* 2014; 49:1-9 (non-Refereed publication).
60. Hébert JR, Shivappa N, Tabung F, Steck SE, **Wirth MD**, Hurley TG. On the use of the dietary inflammatory index in relation to low-grade inflammation and markers of glucose metabolism in the Cohort study on Diabetes and Atherosclerosis Maastricht (CODAM) and the Hoorn study. *American Journal of Clinical Nutrition* 2014; 99:1520-1520 (PMID: 24847105, letter to the editor).

Invited Book Chapters

1. **Wirth MD**, Burch JB, Vena JE. Cancer incidence among police officers. 2014. In: *Dying for the Job: Police Work Exposure and Health*. Charles C Thomas, Springfield, Illinois, USA.
2. Baughman P, Fekedulegn D, Charles LE, Gu JK, Ma C, Violanti JM, **Wirth MD**, Mnatsakanova A, Hartley TA, Andrew ME, Burchfiel CM. Health Hazards of Shift Work. 2014. In: *Dying for the Job: Police Work Exposure and Health*. Charles C Thomas, Springfield, Illinois, USA.
3. Burch JB, **Wirth MD**, Yang X. Disruption of circadian rhythms and sleep: role in carcinogenesis. 2013. In: Kushida CA (Ed), *Encyclopedia of Sleep*. Elsevier, Oxford, UK.

Conference Oral Presentations or First Author Posters

1. **Wirth MD**, Shivappa N, Hurley TG, Burch JB, Hébert JR. Association between the Dietary Inflammatory Index (DII) and depressive symptoms from the National Health and Nutrition Examination Survey. *Food & Nutrition Conference & Expo, October 2016, Boston, Massachusetts (Poster)*.
2. **Wirth MD**, Shivappa N, Davis L, Hurley TG, Ortaglia A, Drayton R, Blair SN, Hébert JR. The Dietary Inflammatory Index is Associated with Inflammatory Biomarkers among a Population of African Americans from South Carolina *Association for Cancer Research: The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved, November 2015, Atlanta, Georgia (Poster)*.
3. **Wirth MD**, Hébert JR, Brandt HM, Davis L, Davis B, Harmon BE, Hurley TG, Drayton R, Adams SA, Blair SN. Effects of the Healthy Eating and Active Living in the Spirit (HEALS) Educational and Behavioral Intervention on Inflammation among an African-American Faith Community. *American Association for Cancer Research: The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved, November 2014, San Antonio, Texas (Poster)*.

4. **Wirth MD**, Brandt HM, Dolinger HD, Hardin JW, Sharpe PA, Eberth JM. Associations between previous breast, cervical, or prostate cancer screenings and colorectal cancer screening adherence. *Center for Colon Cancer Research at the University of South Carolina, January 2014, Columbia, South Carolina (Poster)*.
5. **Wirth MD**, Blake CE, Hébert JR, Sui X, Blair SN. Chronic Weight Dissatisfaction Predicts Type 2 Diabetes Risk: The Aerobic Center Longitudinal Study. *19th Annual Diabetes Fall Symposium at the Medical University of South Carolina, September 2013, North Charleston, South Carolina (Poster)*.
6. **Wirth MD**, Adams SA, Davis L, Hurley TG, Davis B, Murphy EA, Shivappa N, Heiney SP, Blair SN, Hebert JR. The Effect of Physical Activity of Inflammation among a Church-Based Population of African Americans. *James E. Clyburn Health Disparities Lecture at the University of South Carolina, April 2013, Columbia, South Carolina (Poster)*.
7. **Wirth MD**, Burch JB, Steck SE, Hurley TG, Sarin R, Gupta PC, Hebert JR. Circadian Disruption Indicators and Breast Cancer Risk among Women in India. *International Society for Environmental Epidemiology, August 2012, Columbia, South Carolina (Oral Presentation)*.
8. **Wirth MD**, Burch JB, Violanti J, Burchfiel C, Fekedulegn D, Andrew M, Zhang H, Miller DB, Vena J. Shift Work Duration and Patterns of Salivary Cortisol among Police Officers. *South Carolina Public Health Association, May 2010, Myrtle Beach, South Carolina (Oral Presentation)*.
9. **Wirth MD**, Burch A. The Effects of Hsp90 Inhibitors on HSV-I Early Infection. *Alpha Chi National Convention, March 2007, San Antonio, Texas (Oral Presentation)*.

Invited Presentations

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| Mar, 2016 | Colloquium Series at the Cancer Prevention and Control Program, University of South Carolina, "Diet-Associated Inflammation: Substrate for Mechanisms Underlying Cancer and Other Chronic Diseases", Columbia, SC |
| Feb, 2016 | The College of Nursing's Cancer Survivorship Center Research Forum, "Shift in Research Paradigms and Thought Processes, Past, Present, and Future", Columbia, SC. |
| Mar, 2015 | On behalf of Connecting Health Innovations, LLC for Blue Cross Blue Shields Group Leader (Customer) Workshops, "The Dietary Inflammatory Index (DII), a Breakthrough Collaboration", Charleston, SC. |
| Feb, 2015 | Colloquium Series at the Cancer Prevention and Control Program, University of South Carolina, "The Creation and Evolution of The Dietary Inflammatory Index", Columbia, SC |
| Nov, 2014 | Colloquium Series at the Cancer Prevention and Control Program, University of South Carolina, "Health Impacts of Circadian Disruption with Modification by Lifestyle Factors", Columbia, SC. |
| April, 2014 | Colloquium Series at the Cancer Prevention and Control Program, University of South Carolina, "Sleep Disruption, Physical Activity, and Inflammation among People Living with HIV/AIDS", Columbia, SC. |
| Jan, 2013 | Brownbag Seminar Series for the Department of Epidemiology and Biostatistics, University of South Carolina, "Circadian Disruption Indicators and Health Impacts from the BCOPS and BRCA GEL Studies", Columbia, SC. |

Teaching History

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| Fall, 2017 | Research Methods for Nurses, NURS 790 (role: instructor), University of South Carolina (3 credit hours) |
| Fall, 2017 | Principles of Epidemiology, EPID 410 (role: instructor), University of South Carolina (3 credit hours) |
| Spring, 2017 | Application of Basic Statistics for Nursing Practice and Service Management, NURS717 (role: instructor), University of South Carolina (3 credit hours) |

- Fall, 2016 Principles of Epidemiology, EPID 410 (role: instructor), University of South Carolina (3 credit hours)
- Spring, 2016 Principles of Epidemiology, EPID 410 (role: instructor), University of South Carolina (3 credit hours, flipped classroom format)
- Spring, 2015 Principles of Epidemiology, EPID 410 (role: instructor), University of South Carolina (3 credit hours)
- Fall, 2010 Principles of Epidemiology, EPID 410 (role: teaching assistant), University of South Carolina (3 credit hours)

Invited Class Lectures

- Fall, 2017 Seminar in Epidemiology (EPID745, University of South Carolina), 'Thesis Process Tips from Beginning to End'
- Spring, 2017 Principles of Epidemiology (EPID 410, University of South Carolina), 'Cohort Studies'
- Spring, 2017 Cancer Epidemiology (EPID 746, University of South Carolina), 'Evaluating Cause: Chronobiology and Circadian Disruption'
- Fall, 2016 Endocrinology of Exercise and Health (EXSC777, University of South Carolina) 'Hormones and Circadian Physiology'
- Fall, 2016 Epidemiology Methods III (EPID 802, University of South Carolina), 'SBIR/STTR'
- Fall, 2016 Seminar in Epidemiology (EPID745, University of South Carolina) 'Current Research Topics and Interests: Circadian Biology, Diet, and Chronic Disease'
- Spring, 2016 Seminar in Epidemiology (EPID845, University of South Carolina) 'Entrepreneurial Approaches to Epidemiology'
- Fall, 2015 Endocrinology of Exercise and Health (EXSC777, University of South Carolina) 'Hormones and Circadian Physiology'
- Fall, 2015 Seminar in Epidemiology (EPID745, University of South Carolina), 'Thesis Process Tips from Beginning to End'
- Fall, 2015 Epidemiology Methods III (EPID 802, University of South Carolina), 'SBIR/STTR'
- Spring, 2015 Cancer Epidemiology (EPID 746, University of South Carolina), 'Evaluating Cause: Chronobiology and Circadian Disruption'
- Spring, 2015 Seminar in Epidemiology (EPID 7100, University of Georgia), 'Shift Work and Other Circadian Disrupters'
- Fall, 2014 Seminar in Epidemiology (EPID745, University of South Carolina), 'Thesis Process Tips from Beginning to End'
- Spring, 2014 Cancer Biology (BIOL A540, University of South Carolina-Aiken), 'Circadian Disruption and Cancer'
- Spring, 2014 Seminar in Epidemiology (EPID 845, University of South Carolina), 'Discussion Panel: Time Management'
- Spring, 2014 Cancer Epidemiology (EPID 8410, University of Georgia), 'Chronobiology and Cancer'
- Fall, 2013 Discussion Panel (The Cancer Prevention and Control Program), 'Career Development Workshop'
- Fall, 2013 Seminar in Epidemiology (EPID745, University of South Carolina), 'Thesis Process Tips from Beginning to End: Extension to Dissertation Work'
- Spring, 2013 Cancer Epidemiology (EPID 746, University of South Carolina), 'Evaluating "Cause" – Chronobiology and Circadian Disruption'
- Spring, 2013 Biological Basis of Public Health (EPID 725, University of South Carolina), 'Introduction to Cancer Biology'

Honors and Awards

- 2012 Awarded 2012 Alice Hamilton Award Honorable Mention from NIOSH, Epidemiology and Surveillance Category for manuscript entitled 'Shiftwork duration and the awakening cortisol response among police officers'.
- 2010 Inducted into Delta Omega Honorary Society, Mu Chapter
- 2010 Inducted into Golden Key International Honor Society
- 2003 – 2007 Selected to Dean's and President's List every semester at Wingate University
- 2006 Inducted into Alpha Chi Undergraduate Honor Society

Professional Service and Memberships

Scientific Conference Services

- Aug, 2014 Panelist for session titled 'Innovation and Entrepreneurialism: The Dietary Inflammatory Index', SC Regional Cancer Health Disparities Program (GMAP) Conference, Columbia, SC.
- Aug, 2012 Chair for session titled 'Occupation and Cancer', International Society for Environmental Epidemiology 24th Annual Conference, Columbia, SC.

Peer-Review Services

- 2017 Peer Reviewer for *Nutrients; Gut; Public Health Nutrition; Nature and Science of Sleep; Journal of Physical Activity and Health; PLOS ONE; Chronobiology International* (4 manuscripts); *Nutrition and Dietetics; Stress; Journal of Occupation Medicine and Toxicology; Nutrition and Cancer*.
- 2016 Peer Reviewer for *Chronobiology International* (3 manuscripts); *International Journal of Public Health; Medicine & Science in Sports & Exercise; European Journal of Clinical Nutrition; Public Health Nutrition; Nutrition and Cancer* (2 manuscripts); *American Journal of Industrial Medicine; Body Image; International Journal of Molecular Science; American Journal of Clinical Nutrition; British Journal of Nutrition; PLOS ONE; Oncotarget*.
- 2015 Peer Reviewer for *Journal of Academy of Nutrition and Dietetics; Industrial Health; AIDS and Behavior* (2 manuscripts); and *PLOS ONE; Chronobiology International; Stress; Diabetes, Obesity, and Metabolism; Body Image; Nutrition Research*.
- 2014 External Peer Reviewer for a National Institute of Occupational Safety and Health (NIOSH) intramural grant.
- 2014 Peer Reviewer for *Mayo Clinic Proceedings; Cancer Medicine; Archives of Environmental and Occupational Health; Psychoneuroendocrinology* (2 manuscripts); *Biomedical and Environmental Sciences*; and *Physiology and Behavior*.
- 2012 Peer Reviewer for *Psychoneuroendocrinology*.

Organizational Memberships

- 2017-Present Member of the Society for Epidemiologic Research (SER)
- 2014-Present Member of the Society for Research on Biological Rhythms (SRBR)
- 2013-Present Member of the American Public Health Association (APHA)
- 2015-2016 Member of the American Association for Cancer Research (AACR)
- 2013-2014 Member of the International Society for Environmental Epidemiology (ISEE)
- 2010-2011 Member (student) of the South Carolina Public Health Association (SCPHA)

Media Coverage

- Oct, 2014 Interviewed by Sarah Trotto, National Safety Council's *Safety + Health*, "Exploring shift worker health".
- Mar, 2017 Interviewed by Mike Caulo, Life of a Fighter Podcast, "Creators of the World's First Dietary Inflammatory Index".

Academic Service

Departmental Committees

- 2017-Present Member of the Curriculum Committee for the Department of Epidemiology and Biostatistics, University of South Carolina.
- 2014-2015 Co-Chair for the Fun & Frolic Committee for the Department of Epidemiology and Biostatistics, University of South Carolina.

Thesis/Dissertation Committee and Independent Studies

- 2016 Independent Study for Samira Khan, Department of Health Promotion, Education, and Behavior, University of South Carolina (Completed).
- 2014-2016 Doctoral dissertation committee member for William Lindbald, Department of Epidemiology and Biostatistics, University of Georgia, "The Role of Circadian Disruption in Determining Risk for Specific Molecular Subtypes of Breast Cancer: A Study of Light-at-night, Chronotype, and Breast Cancer Subtype in Georgia" (ABD).
- 2016-2017 Doctoral dissertation committee member for Daria McMahon, Department of Epidemiology and Biostatistics, University of South Carolina, "Effects of chronotype on behavioral outcomes from the Energy Balance study" (Completed).
- 2015-2017 Master's thesis committee for Molly Harris, Department of Exercise Science, University of South Carolina, "Recreational Athletes' Habits of Sleep and Predisposing Factors of Exertional Heat Illness" (Completed).
- 2016-2017 Master's thesis committee for Caitlin Hart, Department of Exercise Science, University of South Carolina, "Hydration Knowledge in Recreational Athletes" (Completed).
- 2016-Present Master's thesis chair for Susannah Small, Department of Epidemiology and Biostatistics, University of South Carolina, "Effects of a Mindfulness Based Intervention on Diurnal Cortisol in Cancer Survivors" (in progress).
- 2017-Present Master's thesis chair for Meghan Holst, Department of Epidemiology and Biostatistics, University of South Carolina (in progress).
- 2017-Present Master's thesis chair for Megan Buss, Department of Epidemiology and Biostatistics, University of South Carolina (in progress).
- 2016-Present Master's thesis chair for Amber Watson, Department of Epidemiology and Biostatistics, University of South Carolina, "The Longitudinal Analysis of Cardiorespiratory Fitness for Those with and without Type II Diabetes" (in progress)
- 2016-Present Doctoral dissertation committee for Jiali Zheng, Department of Epidemiology and Biostatistics, University of South Carolina (in progress).
- 2017-Present Doctoral dissertation committee for Malcolm Bevel, Department of Epidemiology and Biostatistics, University of South Carolina (in progress).

Undergraduate Research Director/Chair/Committee Member

- 2016-2017 Thesis Director for Blaire Brooks, Undergraduate Honors College Thesis, University of South Carolina, "The Skin Cancer Health Crisis and Recommended Intervention Methods" (completed).

2016

Mentor for Taylor Lamia, Undergraduate Summer Research Opportunities from Rutgers University.

Previous Support

Behavioral-Biomedical Interface Program (BBIP) 2009-2011 – NIH/NIGMS T32 pre-doctoral research. This interface program aims to prepare behavioral scientists in training to biomedical/biological content and methods so that they will function effectively as members of interdisciplinary research teams.

Project Title: Mindfulness intervention to improve symptomology among cancer survivors; focus on sleep and stress improvement. **Principal Investigator:** Drs. Michael Wirth, Sara Wagner Robb, and Mark O'Rourke.

Agency: Greenville Health System: Transformative Research See Grant. **Period:** 2015-2016. **Project Costs:** \$39,782 includes matching funds from the University of South Carolina Institute for the Advancement of Healthcare. **Objectives:** This study will provide preliminary data examining the relationship between mindfulness-based stress reduction and improvement in sleep and stress among cancer patients. This data will better inform the development of a larger grant proposal. **Role:** Co-PI (0%, in kind).

Project Title: Developing the Use of the Dietary Inflammatory Index among Children (C-DII). **Principal Investigator:** Drs. Nitin Shivappa and Michael Wirth. **Agency:** USDA. **Period:** 2016-2017. **Project Costs:** \$99,794 total. **Objectives:** This Phase I SBIR grant is designed to modify an existing Dietary Inflammatory Index (DII) for use among children (C-DII). This mechanism will seek to create a standard world database of dietary intake among children for standardization purposes. This mechanism also will construct validate the C-DII and examine associations with inflammatory-related conditions among children. **Role:** Co-PI (14% of 9 month grant period).

Active Grant Funding

Project Title: Developing the Dietary Inflammatory Index for Clinical Application. **Co-Principal Investigators:** Nitin Shivappa and Michael Wirth. **Agency:** National Institutes of Health. **Type:** SBIR. **Period:** 2014-2016. **Project Costs:** \$1,811,151 Direct, additional \$50,000 provided in matching funds by SC Launch. **Objectives:** The Dietary Inflammatory Index (DII) is a tool that will form the basis of counseling/instructional systems aimed at helping patients and their providers to control chronic, systemic inflammation by improving diet. Phase I will focus on developing the reporting systems (i.e., mobile/web applications) used by the patient. Phase II will build upon Phase I which includes an intervention trial based on DII response-associated recommendations aimed at reducing chronic inflammation. **Role:** Co-PI (75% year 1, 100% year 2, 50% year 3).

Project Title: Timing of Food Consumption, Weight Loss, and Inflammation among African-American Women. **Principal Investigator:** Dr. Michael Wirth. **Agency:** National Cancer Institute (NCI) Geographic Management of Cancer Health Disparities Program (GMap) Region 1 North Research Project Support Application. **Period:** 2016-2017. **Project Costs:** \$10,000 Total. **Objectives:** Using the The Sistas Inspiring Sistas through Activity and Support (SISTAS) Program, this study will examine whether the Dietary Inflammatory Index (DII) differs by meal time or type. Additionally, this project will determine if meal timing or the DII influenced the outcomes of the intervention (e.g., inflammation, breast density, weight loss) **Role:** PI (7.5% Year 1).

Project Title: A watermelon focused dietary inflammatory index counseling system to reduce systemic inflammation. **Program Investigator:** Nitin Shivappa **Agency:** National Watermelon Promotion Board. **Period:** 2017. **Project Costs:** \$26,362 total. **Objectives:** The overall objective of this proposal is to determine if a

refined and modified watermelon-focused DII counselling system can reduce levels of chronic inflammation.

Role: Co-investigator (0.6 total calendar months).