

Corinne D. Engelman

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EDUCATION

- 2006 Ph.D. Epidemiology, University of Colorado Denver and Health Sciences Center, Denver, Colorado
Dissertation: *Effects of Vitamin D Genes on Measures of Insulin Secretion, Insulin Sensitivity and Adiposity: An Ancillary Study to the Insulin Resistance Atherosclerosis Study (IRAS) Family Study*
- 2002 M.S. Public Health, University of Colorado Health Sciences Center, Denver, Colorado
Thesis: *Calpain-10 gene, physical inactivity and type 2 diabetes mellitus: A possible gene-environment interaction*
- 1995 B.S. Biological Sciences, University of Wisconsin-Parkside, Kenosha, Wisconsin

POSITIONS HELD

- 2018-present Vice Chair, Population Health Sciences
University of Wisconsin School of Medicine and Public Health
- 2018-present Director, Population Health and Epidemiology Graduate Programs
University of Wisconsin School of Medicine and Public Health
- 2014-present Associate Professor (with tenure), Population Health Sciences
University of Wisconsin School of Medicine and Public Health
- 2007-2014 Assistant Professor, Population Health Sciences
University of Wisconsin School of Medicine and Public Health
- 2001-2006 Research Assistant, Department of Preventive Medicine and Biometrics
University of Colorado Denver and Health Sciences Center
- 1998-2006 Clinical Research Programmer/Analyst
Allos Therapeutics, Westminster, Colorado
- 1995-1998 Clinical Research Data Manager
Abbott Laboratories, Abbott Park, Illinois

AFFILIATE APPOINTMENTS

2018-present Faculty Trainer, Molecular and Applied Nutrition Training Program, UW
2018-present Faculty Trainer, Bio-Data Science Training Program, UW
2015-present Faculty Trainer, Genomic Sciences Training Program, UW
2014-present Faculty Trainer, Computation and Informatics in Biology and Medicine, UW
2014-present Faculty Trainer, Center for Demography and Ecology Training Program, UW
2013-present Faculty Trainer, Center for Demography of Health and Aging Training Program, UW
2013-present Affiliate, Alzheimer's Disease Research Center, UW
2007-present Affiliate, Genome Center of Wisconsin, UW
2007-present Affiliate, Institute on Aging, UW

HONORS AND AWARDS

2014 Elected for membership into the Delta Omega National Honorary Society in Public Health
2013 Population Health Sciences Outstanding Instructor Award
2012 Outstanding Young Investigator in Alzheimer's disease (selected by the Charleston Conference on Alzheimer's Disease Scientific Board)
2010 Selected for the AAMC Early Career Women Faculty Professional Development Seminar
2007 Teaching Academy Summer Institute Award (\$500 grant to support teaching project)
2005 Society of Epidemiologic Research Student Workshop Scholarship
2003 University of Alabama at Birmingham Short Course in Statistical Genetics Scholarship
2001 Public Health/Epidemiology Traineeship
1993-1995 Kenosha Foundation Scholarship

PROFESSIONAL MEMBERSHIP

American Society of Human Genetics
International Genetic Epidemiology Society
International Society to Advance Alzheimer Research and Treatment
Society for Epidemiologic Research

PROFESSIONAL ACTIVITIES

Editorial and Advisory Boards

2014-2015 Editor, Genetic Analysis Workshop 19 Proceedings
2014-2018 Member, Genetic Analysis Workshop Advisory Committee
2014-present Associate Editor, Journal of Alzheimer's Disease
2012-2013 Associate Editor, Genetic Analysis Workshop 18 Proceedings
2010-2011 Associate Editor, Genetic Analysis Workshop 17 Proceedings

Manuscript Review for the Following Journals

American Journal of Human Genetics, Genetic Epidemiology, Human Genetics, Epidemiology, American Journal of Epidemiology, Journal of Clinical Endocrinology and Metabolism, American Journal of Clinical Nutrition, Journal of Nutrition, Clinical Nutrition, Alzheimer's and Dementia Journal, Journal of Alzheimer's Disease, Neuroepidemiology, Acta Neuropathologica, Genes and

Nutrition, Diabetes, International Journal of Obesity, International Journal of Endocrinology, European Journal of Human Genetics, BMC Genomics, Clinical Endocrinology, Hypertension, Diabetes Care, Diabetes/Metabolism Research and Reviews, American Journal of Hypertension, PLoS ONE, Journal of Steroid Biochemistry and Molecular Biology, Journal of Women's Health, Trends in Genetics

NIH Grant Review

- 2018 Ad hoc reviewer, NIH Novel Approaches to Diagnosing Alzheimer's Disease and Predicting Progression (R01)
- 2017 Ad hoc reviewer, NIH Biomarker Studies for Diagnosing Alzheimer's Disease and Predicting Progression (R01)
- 2016-2018 Reviewer, NIH Major Opportunities for Research in Epidemiology of Alzheimer's Disease and Cognitive Resilience Study Section (R01)
- 2016-2018 Reviewer, NIH Leveraging Existing Cohort Studies to Clarify Risk and Protective Factors for Alzheimer's Disease and Related Dementias Study Section (R01)

Other Review Work

- 2018 Reviewer, UW2020 Grant Program
- 2018-2019 Abstract Reviewer, Alzheimer's Association International Conference
- 2014 Reviewer, Center for Demography of Health and Aging Pilot Grant Program
- 2010-2016 Reviewer, Alzheimer's Association International Research Grant Program
- 2012-2017 Reviewer, Wisconsin Alzheimer's Disease Research Center Pilot Grant Program
- 2008-2014 Reviewer, Institute for Clinical and Translational Research Type 2 Pilot Grant Program
- 2011 Reviewer, Book prospectus for *Genetic Analysis of Complex Disease, Third Edition*, Wiley-Blackwell Publishing
- 2010 Reviewer, Book proposal for *Basic Genetic Epidemiology*, Garland Science Publishers
- 2008 Reviewer, Type 1 Diabetes Genetics Consortium Major Histocompatibility Complex (MHC) Fine Mapping Workshop

PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Vogt, NM, Romano KA, Darst BF, **Engelman CD**, Johnson SC, Carlsson CM, Asthana S, Blennow K, Zetterberg H, Bendlin BB, Rey FE. The gut microbiota-derived metabolite trimethylamine *N*-oxide is elevated in Alzheimer's disease. *Alzheimer's Research & Therapy*. 2018 Dec 22;10(1):124. PMID: PMC6303862.
2. Erickson CM, Schultz SA, Oh JM, Darst BF, Ma Y, Norton DL, Betthausen TJ, Gallagher CL, Carlsson CM, Bendlin BB, Asthana S, Hermann BP, Sager MA, Blennow K, Zetterberg H, **Engelman CD**, Christian BT, Johnson SC, Dubal DB, Okonkwo OC. *KLOTHO* heterozygosity attenuates *APOE4*-related amyloid burden in preclinical AD. (accepted by *Neurology*).
3. Darst BF, **Engelman CD**, Tian Y, Lorenzo Bermejo J. Data mining and methylation data: Methodology and main conclusions from the Genetic Analysis Workshop 20. *BMC Genetics*. 2018 Sep 17;19(Suppl 1):76. PMID: PMC6157271.
4. Kosciak RL, Norton DL, Allison SL, Jonaitis EM, Clark LR, Mueller KD, Hermann BP, **Engelman CD**, Gleason CE, Sager MA, Chappell RJ, Johnson SC. Characterizing the effects of sex, *APOE* ϵ 4, and literacy on mid-life cognitive trajectories: Application of Information-Theoretic model averaging and multi-model inference techniques to the Wisconsin Registry for Alzheimer's Prevention Study. *Journal of the International Neuropsychological Society*. 2018 Dec 7:1-15

- Hong J*, Hatchell KE*, Bradfield JP, Andrew B, Alessandra C, Chao-Qiang L, Langefeld CD, Lu L, Lu Y, Lutsey PL, Musani SK, Nalls MA, Robinson-Cohen C, Roizen JD, Saxena R, Tucker KL, Ziegler JT, Arking DE, Bis JC, Boerwinkle E, Bottinger EP, Bowden DW, Gilsanz V, Houston DK, Kalkwarf HJ, Kelly A, Lappe JM, Liu Y, Michos ED, Oberfield SE, Palmer ND, Rotter JI, Sapkota B, Shepherd JA, Wilson JG, Basu S, de Boer IH, Divers J, Freedman BI, Grant SFA, Hakanarson H, Harris TB, Kestenbaum BR, Kritchevsky SB, Loos RJF, Norris JM, Norwood AF, Ordovas JM, Pankow JS, Psaty BM, Sanhgera DK, Wagenknecht LE, Zemel BS, Meigs J, Dupuis J, Florez JC, Wang T, Liu CT**, **Engelman CD****, Billings LK**. Trans-ethnic evaluation identifies novel low frequency loci associated with 25-hydroxyvitamin D concentrations. *J Clin Endocrinol Metab* 2018 Apr 1;103(4):1380-1392.

***Joint first authors; **Joint senior authors (consortium paper)**

- Engelman CD**, Darst BF, Bilgel M, Vasiljevic E, Kosciak RL, Jedynek BM, Johnson SC. The effect of rare variants in *TREM2* and *PLD3* on longitudinal cognitive function in the Wisconsin Registry for Alzheimer's Prevention. *Neurobiology of Aging* 2018 Jun;66:177. NIHMS ID: NIHMS939446.
- Darst BF, Malecki KC, **Engelman CD**. Using recursive feature elimination in random forest to account for correlated variables in high dimensional data. *BMC Genetics* 2018 Sep 17;19(Suppl 1):65. PMID: PMC6157185.
- Johnson SC, Kosciak RL, Jonaitis EM, Clark LR, Mueller KD, Berman SE, Bendlin BB, **Engelman CD**, Okonkwo OC, Hogan KJ, Asthana S, Carlsson CM, Hermann BP, Sager MA. The Wisconsin Registry for Alzheimer's Prevention: A review of findings and current directions. *Alzheimers Dement (Amst)*. 2017 Dec 8; 10:130-142. PMID: PMC5755749.
- Zuelsdorff ML, Kosciak RL, Okonkwo OC, Peppard PE, Hermann BP, Sager MA, Johnson SC, **Engelman CD**. Social support and verbal interaction are differentially associated with cognitive function in midlife and older age. *Aging, Neuropsychology and Cognition* 2017 Dec 15:1-17 (Epub ahead of print; doi: 10.1080/13825585.2017.1414769).
- Zuelsdorff ML, Kosciak RL, Okonkwo OC, Peppard PE, Hermann BP, Sager MA, Johnson SC, **Engelman CD**. Reliability of a novel social activity questionnaire. *Journal of Aging and Health* 2018 Feb;30(2):305-320. PMID: PMC5449232.
- Boots EA, Schultz SA, Clark LR, Racine AM, Darst BF, Kosciak RL, Carlsson CM, Gallagher CL, Hogan KJ, Bendlin BB, Asthana S, Sager MA, Hermann BP, Christian BT, Dubal DB, **Engelman CD**, Johnson SC, Okonkwo OC. *BDNF* Val66Met predicts cognitive decline in the Wisconsin Registry for Alzheimer's Prevention. *Neurology* 2017 May 30;88(22):2098-2106. PMID: PMC5447398.
- Schultz SA, Boots EA, Darst BF, Zetterberg H, Blennow K, Edwards DF, Kosciak RL, Carlsson CM, Gallagher CL, Bendlin BB, Asthana S, Sager MA, Hogan KJ, Hermann BP, Cook DB, Johnson SC, **Engelman CD**, Okonkwo OC. Cardiorespiratory fitness alters the influence of a polygenic risk score on biomarkers of AD. *Neurology* 2017 Apr 25;88(17):1650-1658. PMID: PMC5405766.

13. Clark LR, Berman SE, Rivera-Rivera LA, Hoscheidt SM, Darst BF, **Engelman CD**, Rowley HA, Carlsson CM, Asthana S, Turski P, Wieben O, Johnson SC. Macrovascular and microvascular cerebral blood flow in adults at risk for Alzheimer's disease. *Alzheimers Dement (Amst)* 2017 Jan 23;7:48-55. PMID: PMC5318539.
14. Darst BF, Kosciak RL, Racine AM, Oh JM, Krause RA, Carlsson CM, Zetterberg H, Blennow K, Christian BT, Bendlin BB, Okonkwo OC, Hogan KJ, Hermann BP, Sager MA, Asthana S, Johnson SC, **Engelman CD**. Pathway-specific polygenic risk scores as predictors of amyloid- β deposition and cognitive function in a sample at increased risk for Alzheimer's disease. *J Alzheimers Dis* 2017;55(2):473-484. PMID: PMC5123972.
15. Sippy R, Kolesar JM, Darst BF, **Engelman CD**. Prioritization of family member sequencing for the detection of rare variants. *BMC Proceedings* 2016 Oct 18;10(Suppl 7):227-231. PMID: PMC5133500.
16. Darst BF, **Engelman CD**. Transmission and decorrelation methods for detecting rare variants using sequencing data from related individuals. *BMC Proceedings* 2016 Oct 18;10(Suppl 7):203-207. PMID: PMC5133523.
17. **Engelman CD**, Greenwood CMT, Bailey JN, Cantor RM, Kent JW, Konig IR, Bermejo JL, Melton PE, Santorico SA, Schillert A, Wijsman EM, MacCluer JW, Almasy L. Genetic Analysis Workshop 19: methods and strategies for analyzing human sequence and gene expression data in extended families and unrelated individuals. *BMC Proceedings* 2016 Oct 18;10(Suppl 7):67-70. PMID: PMC5133501.
18. Clark LR, Kosciak RL, Nicholas CR, Okonkwo OC, **Engelman CD**, Bratzke LC, Hogan KJ, Mueller KD, Bendlin BB, Carlsson CM, Asthana S, Sager MA, Hermann BP, Johnson SC. Mild Cognitive Impairment in Late Middle Age in the Wisconsin Registry for Alzheimer's Prevention Study: Prevalence and Characteristics Using Robust and Standard Neuropsychological Normative Data. *Arch Clin Neuropsychol*. 2016 May 8 (Epub ahead of print). PMID: PMC5088607.
19. Clark LR, Racine AM, Kosciak RL, Okonkwo OC, **Engelman CD**, Carlsson CM, Asthana S, Bendlin BB, Chappell R, Nicholas CR, Rowley HA, Oh JM, Hermann BP, Sager MA, Christian BT, Johnson SC. Beta-amyloid and cognitive decline in late middle age: Findings from the Wisconsin Registry for Alzheimer's Prevention study. *Alzheimers Dement*. 2016 Jul;12(7):805-14. PMID: PMC4947439.
20. Givens ML, Malecki KC, Peppard PE, Palta M, Said A, **Engelman CD**, Walsh MC, Nieto FJ. Shiftwork, Sleep Habits, and Metabolic Disparities: Results from the Survey of the Health of Wisconsin. *Sleep Health* 2015 Jun;1(2):115-120. PMID: PMC4755509.
21. Millen AE, Meyers KJ, Liu Z, **Engelman CD**, Wallace RB, LeBlanc ES, Tinker LF, Iyengar SK, Robinson JG, Sarto GE, Mares JA. Association Between Vitamin D Status and Age-Related Macular Degeneration by Genetic Risk. *JAMA Ophthalmol*. 2015 Oct 1;133(10):1171-9. PMID: PMC4841267.
22. Darst BF, Kosciak RL, Hermann BP, La Rue A, Sager MA, Johnson SC, **Engelman CD**. Heritability of Cognitive Traits Among Siblings with a Parental History of Alzheimer's Disease. *J Alzheimers Dis* 2015 Jan; 45(4): 1149-55. PMID: PMC4398625.

23. Malecki KC, **Engelman CD**, Peppard PE, Nieto FJ, Grabow ML, Bernardinello M, Bailey E, Walsh MC, Lo J, Martinez-Donate A. The Wisconsin Assessment of the Social and Built Environment (WASABE). A Multi-dimensional Objective Audit Instrument for Examining Neighborhood Effects on Health. *BMC Public Health* 2014 Nov 13; 14: 1165. PMID: PMC4289353.
24. Sung YJ, Korthauer KD, Swartz MD, **Engelman CD**. Methods for collapsing multiple rare variants in whole genome sequence data. *Genet Epidemiol* 2014 Aug; 38(S1): S13-20. PMID: PMC4558905.
25. Yao C, Leng N, Weigel KA, Lee KE, **Engelman CD**, Meyers KJ. Prediction of genetic contributions to complex traits using whole genome sequencing data. *BMC Proceedings* 2014 Jun; 8(Suppl 1): S68. PMID: PMC4143683.
26. Bickeböllner H, Bailey JN, Beyene J, Cantor RM, Cordell HJ, Culverhouse RC, **Engelman CD**, Fardo DW, Ghosh S, König IR, Lorenzo Bermejo J, Melton PE, Santorico SA, Satten GA, Sun L, Tintle NL, Ziegler A, MacCluer JW, Almasy L. Genetic Analysis Workshop 18: Methods and strategies for analyzing human sequence and phenotype data in members of extended pedigrees. *BMC Proceedings* 2014 Jun; 8(Suppl 1): S1. PMID: PMC4143625.
27. **Engelman CD**, Bo R, Zuelsdorff M, Steltenpohl H, Kirby T, Nieto FJ. Epidemiologic study of the C-3 epimer of 25-hydroxyvitamin D₃ in a population-based sample. *Clin Nutr* 2014 Jun; 33(3): 421-5. PMID: PMC3884039.
28. **Engelman CD**, Kosciak RL, Jonaitis EM, Hermann BP, La Rue A, Sager MA. Investigation of *TREM2* variant in the Wisconsin Registry for Alzheimer's Prevention. *Neurobiology of Aging* 2014 Jun; 35(6): 1252-4. PMID: PMC3961539.
29. Litzelman K, Witt WP, Gangnon RE, Nieto FJ, **Engelman CD**, Mailick MR, Skinner HG. Association between Informal Caregiving and Cellular Aging in the Survey of the Health of Wisconsin: The Role of Caregiving Characteristics, Stress, and Strain. *Am J Epidemiol* 2014 Jun; 179(11): 1340-52. PMID: PMC4036217.
30. Warren Andersen S, Trentham-Dietz A, Gangnon RE, Hampton JM, Figueroa JD, Skinner HG, **Engelman CD**, Klein BE, Titus LJ, Egan KM, Newcomb PA. Reproductive windows, genetic loci, and breast cancer risk. *Ann Epidemiol* 2014 May; 24(5): 376-82. PMID: PMC4164346.
31. Boardman LA, Litzelman K, Seo S, Johnson RA, Vanderboom RJ, Kimmel GW, Cunningham JM, Gangnon RE, Engelman CD, Riegert-Johnson DL, Potter J, Haile R, Buchanan D, Jenkins MA, Rider DN, Thibodeau SN, Petersen GM, Skinner HG. The Association of Telomere Length with Colorectal Cancer Differs by the Age of Cancer Onset. *Clinical and Translational Gastroenterology* 2014 Mar; 5: e52. PMID: PMC3972691.
32. Bailey EJ, **Engelman CD**, Walsh MC, Bersch AJ, Martinez-Donate AP, Peppard PE, Nieto FJ, Malecki KC. Predictors of Discordance Between Perceived and Objective Neighborhood Data. *Ann Epidemiol* 2014 Mar; 24(3): 214-21. PMID: PMC3947547.
33. Warren Andersen S, Trentham-Dietz A, Gangnon RE, Hampton JM, Skinner HG, **Engelman CD**, Klein BE, Titus LJ, Egan KM, Newcomb PA. Breast cancer susceptibility loci in association with

age at menarche, age at natural menopause and the reproductive lifespan. *Cancer Epidemiol* 2014 Feb; 38(1): 62-5. PMID: PMC4023814.

34. **Engelman CD**. Towards personalized prevention of obesity: Can vitamin D negate the *FTO* effect? *Diabetes* 2014 Feb; 63(2): 405-6. (Invited editorial).
35. Meyers KJ, Mares JA, Igo Jr. RP, Truitt B, Liu Z, Millen AE, Klein M, Johnson EJ, **Engelman CD**, Karki CK, Blodi B, Gehrs K, Tinker L, Wallace R, Robinson J, LeBlanc ES, Sarto G, Bernstein PS, SanGiovanni JP, Iyengar SK. Genetic Evidence for Role of Carotenoids in Age-Related Macular Degeneration in the Carotenoids in Age-Related Eye Disease Study (CAREDS). *Invest Ophthalmol Vis Sci* 2014 Jan; 55(1): 587-99. PMID: PMC3908680.
36. Cunningham JM, Johnson RA, Litzelman K, Skinner HG, Seo S, **Engelman CD**, Vanderboom R, Kimmel GW, Gangnon RE, Riegert-Johnson D, Baron JA, Potter JD, Haile R, Buchanan DD, Jenkins MA, Rider DN, Thibodeau SN, Petersen GM, Boardman LA. Telomere length varies by DNA extraction method: implications for epidemiologic research. *Cancer Epidemiol, Biomarkers Prev* 2013 Nov; 22(11): 2047-54. PMID: PMC3827976.
37. Boardman LA, Johnson RA, Viker KB, Hafner KA, Jenkins RB, Riegert-Johnson DL, Smyrk TC, Litzelman K, Seo S, Gangnon RE, **Engelman CD**, Rider DN, Vanderboom RJ, Thibodeau SN, Petersen GM, Skinner HG. Correlation of Chromosomal Instability, Telomere Length and Telomere Maintenance in Microsatellite Stable Rectal Cancer: A Molecular Subclass of Rectal Cancer. *PLoS ONE* 2013 Nov; 8(11). PMID: PMC3836975.
38. Zuelsdorff ML, **Engelman CD**, Friedman EM, Kosciak RL, Jonaitis EM, La Rue A, Sager MA. Stressful Events, Social Support, and Cognitive Function in Middle-aged Adults with a Family History of Alzheimer's Disease. *J Aging Health* 2013 Sep; 25(6): 944-59. PMID: PMC3769466.
39. **Engelman CD**, Kosciak RL, Jonaitis EM, Okonkwo OC, Hermann BP, La Rue A, Sager MA. Interaction between two cholesterol metabolism genes influences memory: Findings from the Wisconsin Registry for Alzheimer's Prevention. *J Alzheimers Dis* 2013 Aug; 36(4): 749-57. PMID: PMC3759032.
40. Warren Andersen S, Trentham-Dietz A, Gangnon RE, Hampton JM, Figueroa JD, Skinner HG, **Engelman CD**, Klein BE, Titus LJ, Egan KM, Newcomb PA. The associations between a polygenic score, reproductive and menstrual risk factors and breast cancer risk. *Breast Cancer Res Treat* 2013 Jul; 140(2): 427-34. PMID: PMC3799826.
41. Meyers KJ, Johnson EJ, Bernstein PS, Iyengar SK, **Engelman CD**, Karki CK, Liu Z, Igo Jr. RP, Truitt B, Klein M, Snodderly DM, Blodi B, Gehrs K, Sarto G, Wallace R, Robinson J, LeBlanc E, Hageman G, Tinker L, Mares JA. Genetic determinants of macular pigments in women of the Carotenoids in Age-Related Eye Disease Study. *Invest Ophthalmol Vis Sci* 2013 Mar; 54(3): 2333-45. PMID: PMC3626525
42. Hale L, Hill TD, Friedman E, Nieto FJ, Galvao LW, **Engelman CD**, Malecki KM, Peppard PE. Perceived neighborhood quality, sleep quality, and health status: Evidence from the Survey of the Health of Wisconsin. *Soc Sci Med* 2013 Feb; 79: 16-22. PMID: PMC3733364.

43. **Engelman CD**, Meyers KJ, Iyengar SK, Liu Z, Karki CK, Igo, Jr RP, Truitt B, Robinson J, Sarto GE, Wallace R, Blodi BA, Klein ML, Tinker L, LeBlanc ES, Jackson RD, Song Y, Manson JE, Mares JA, Millen AE. Vitamin D intake and season modify the effects of the *GC* and *CYP2R1* genes on 25-hydroxyvitamin D concentrations. *J Nutr* 2013 Jan; 143(1): 17-26. PMID: PMC3521459
44. Ghosh S, Bickeböllner H, Bailey J, Bailey-Wilson JE, Cantor R, Culverhouse R, Daw W, Destefano AL, **Engelman CD**, Hinrichs A, Houwing-Duistermaat J, König IR, Kent J Jr, Laird N, Pankratz N, Paterson A, Pugh E, Suarez B, Sun Y, Thomas A, Tintle N, Zhu X, Ziegler A, Maccluer JW, Almasy L. Identifying rare variants from exome scans: the GAW17 experience. *BMC Proceedings* 2011 Nov; 5(S9): S1: 1-4. PMID: PMC3287821
45. Bueno Filho JS, Morota G, Tran QT, Maenner MJ, Vera-Cala LM, **Engelman CD**, Meyers KJ. Analysis of human mini-exome sequencing data using a Bayesian hierarchical mixture model: Genetic Analysis Workshop 17. *BMC Proceedings* 2011 Nov; 5(S9): S93: 1-8. PMID: PMC3287935
46. Ye KQ and **Engelman CD**. Detecting Multiple Causal Rare Variants in Exome Sequence Data. *Genet Epidemiol* 2011 Nov; 35(S1): 18-21. PMID: PMC3271433
47. **Engelman CD**. Vitamin D recommendations: the saga continues. *J Clin Endocrinol Metab* 2011 Oct; 96(10): 3065-6. (Invited editorial)
48. Kluczynski MA, LaMonte MJ, Mares JA, Wactawski-Wende J, Smith AW, **Engelman CD**, Andrews CA, Snetselaar LG, Sarto GE, Millen AE. Duration of Physical Activity and Serum 25-hydroxyvitamin D Status of Postmenopausal Women. *Ann Epidemiol* 2011 Jun; 21(6): 440-9. PMID: PMC3090482
49. Nieto FJ, Peppard PE, **Engelman CD**, McElroy JA, Galvao LW, Friedman EM, Bersch AJ, Malecki KC. The Survey of the Health of Wisconsin (SHOW), a novel infrastructure for population health research: rationale and methods. *BMC Public Health* 2010 Dec; 10: 785. PMID: PMC3022857
50. **Engelman CD**, Meyers KJ, Ziegler JT, Taylor KD, Palmer ND, Haffner SM, Fingerlin TE, Wagenknecht LE, Rotter JI, Bowden DW, Langefeld CD, Norris JM. Genome-wide association study of vitamin D concentrations in Hispanic Americans: The IRAS Family Study. *J Steroid Biochem Mol Biol* 2010 Oct; 122(4): 186-92. PMID: PMC2949505
51. Bendlin BB, Carlsson CM, Gleason CE, Johnson SC, Sodhi A, Gallagher CL, Puglielli L, **Engelman CD**, Ries ML, Xu G, Wharton W, Asthana S. Midlife predictors of Alzheimer's disease. *Maturitas* 2010 Feb; 65(2): 131-7. PMID: PMC2895971
52. Maenner MJ, Denlinger LC, Langton A, Meyers KJ, **Engelman CD**, Skinner HG. Detecting gene-by-smoking interactions in a genome-wide association study of early-onset coronary heart disease using random forests. *BMC Proceedings* 2009 Dec; 3(S7): S88: 1-5. PMID: PMC2795991
53. Yao L, Zhong W, Zhang Z, Maenner MJ, **Engelman CD**. Classification tree for selection of single-nucleotide polymorphism (SNP)-by-SNP interactions related to heart disease: Framingham Heart Study. *BMC Proceedings* 2009 Dec; 3(S7): S83: 1-6. PMID: PMC2795986

54. González-Recio O, López de Maturana E, Vega AT, **Engelman CD**, Broman KW. Detecting single-nucleotide polymorphism by single-nucleotide polymorphism interactions in rheumatoid arthritis using a two-step approach with machine learning and a Bayesian threshold least absolute shrinkage and selection operator (LASSO) model. *BMC Proceedings* 2009 Dec; 3(S7): S63: 1-5. PMID: PMC2795964
55. Shim H, Chun H, **Engelman CD**, Payseur BA. Genome-wide association studies using single-nucleotide polymorphisms versus haplotypes: an empirical comparison with data from the North American Rheumatoid Arthritis Consortium. *BMC Proceedings* 2009 Dec; 3(S7): S35: 1-6. PMID: PMC2795933
56. **Engelman CD**, Baurley JW, Chiu YF, Joubert BR, Maenner MJ, Murcay CE, Shi G, Gauderman, WJ. Detecting Gene-Environment Interactions in Genome-Wide Association Data. *Genet Epidemiol* 2009 Nov; 33(S1): S68-73. PMID: PMC2924567
57. An P, Mukherjee O, Chanda P, Yao L, **Engelman CD**, Huang C, Zheng T, Kovac IP, Dubé M, Liang X, Li J, Andrade M, Culverhouse R, Malzahn D, Manning AK, Clarke GM, Jung J, Province MA. The Challenge of Detecting Epistasis (GxG Interactions): Genetic Analysis Workshop 16. *Genet Epidemiol* 2009 Nov; 33(S1): S58-67. PMID: PMC3692280
58. Young KA, **Engelman CD**, Langefeld CD, Hairston KG, Haffner SM, Bryer-Ash M, Norris JM. Association of plasma vitamin D levels with adiposity in Hispanics and African Americans. *J Clin Endocrinol Metab* 2009 Sep; 94(9): 3306-13. PMID: PMC2741711
59. Schmitz KJ, Skinner HG, Bautista LE, Fingerlin TE, Langefeld CD, Hicks PJ, Haffner SM, Bryer-Ash M, Wagenknecht LE, Bowden DW, Norris JM, **Engelman CD**. Association of 25-hydroxyvitamin D with Blood Pressure in Predominantly 25-hydroxyvitamin D Deficient Hispanic and African Americans. *Am J Hypertens* 2009 Aug; 22(8): 367-70. PMID: PMC2865679
60. **Engelman CD**, Fingerlin TE, Langefeld CD, Hicks PJ, Rich SS, Wagenknecht LE, Bowden DW, Norris JM. Genetic and environmental determinants of 25-hydroxyvitamin D and 1,25-dihydroxyvitamin D levels in Hispanic and African Americans. *J Clin Endocrinol Metab* 2008 Sep; 93(9): 3381-8. PMID: PMC2567851
61. **Engelman CD**, Brady HL, Baron AE, Norris JM. Comparison between two analytic strategies to detect linkage to obesity with genetically determined age of onset: the Framingham Heart Study. *BMC Genetics* 2003; 4(S1): S90: 1-5. PMID: PMC1866531
62. James K, Weitzel L, **Engelman CD**, Zerbe G, Norris JM. Genome scan linkage results for longitudinal systolic blood pressure phenotypes in subjects from the Framingham Heart Study. *BMC Genetics* 2003; 4(S1): S83: 1-5. PMID: PMC1866523
63. Parikh CR, McCall D, **Engelman C**, Schrier RW. Congenital renal agenesis: case-control analysis of birth characteristics. *Am J Kidney Dis* 2002; 39(4): 689-94.

INVITED TALKS

1. Integration of Genomics and Metabolomics for Precision Health. Nutrition Sciences Seminar Series, Madison, Wisconsin, September 20, 2018.
2. Big Data and Alzheimer's Disease. Computation and Informatics in Biology and Medicine Seminar Series, Madison, Wisconsin, November 1, 2016.
3. Genetics of Alzheimer's Disease: A local perspective. ADRC Annual Community Lecture, Madison, Wisconsin, October 25, 2016.
4. The Genetics of Alzheimer's Disease. Population Health Sciences Seminar Series, Madison, Wisconsin, September 26, 2016. <http://videos.med.wisc.edu/videoInfo.php?videoid=69581>
5. Mendelian Randomization: Principles and Applications in Nutritional Sciences. American Society for Nutrition (ASN) Scientific Sessions and Annual Meeting, San Diego, California, April 3, 2016.
6. The Genetic Architecture of Alzheimer's Disease. Center for Predictive Computational Phenotyping, University of Wisconsin, Madison, Wisconsin, August 25, 2015.
7. Genetics and Race in Vitamin D Deficiency. Center for Demography of Health and Aging Training Seminar, University of Wisconsin, Madison, Wisconsin, December 12, 2014.
8. Data in the classroom: Engaging students with disciplinary practice. Institute for Biology Education panel discussion, University of Wisconsin, Madison, Wisconsin, April 14, 2014.
9. Navigating GINA and Genetic Questions from Study Participants. Wisconsin Alzheimer's Institute and Alzheimer's Disease Research Center, University of Wisconsin, Madison, Wisconsin, March 28, 2014.
10. The Genetic Architecture of Alzheimer's Disease. Genetics Colloquium, Laboratory of Genetics, University of Wisconsin, Madison, Wisconsin, September 11, 2013.
11. Influence of Gene Interactions on Cognitive Function and Alzheimer's Disease. Alzheimer's Disease Research Center Seminar Series, Madison, Wisconsin, April 5, 2013.
12. Unraveling the Genetic and Environmental Predictors of Vitamin D. Population Health Sciences Seminar Series, Madison, Wisconsin, November 19, 2012. <http://videos.med.wisc.edu/videos/41764>
13. Genetics and Gene-Environment Interaction. RWJ Scholar Seminar Series, Department of Population Health Sciences, University of Wisconsin School of Medicine and Public Health, October 22, 2012.
14. Ethical Challenges in Human Genetics Research. Ethical Concerns and the Future of Human Genetics panel discussion, Department of Genetics Annual Retreat, Madison, Wisconsin, October 5, 2012.

15. Unraveling the Genetic and Environmental Predictors of Vitamin D. Computation and Informatics in Biology and Medicine Seminar Series, Madison, Wisconsin, April 19, 2011.
16. Vitamin D Deficiency: Causes and Implications. Department of Epidemiology, Colorado School of Public Health, Aurora, Colorado, March 8, 2011.
17. Genetic Factors in Cardiometabolic Risk. 11th Annual Cardiology Colloquium presented by Kettering Cardiovascular Institute, Dayton, Ohio, February 16, 2011.
18. Genetic Risk Factors for Diabetes and Obesity. Nutrition Sciences Seminar Series, Madison, Wisconsin, September 30, 2010.
19. Survey of the Health of Wisconsin (SHOW). Clinical Trials Management Systems and Population Sciences Special Interest Group Meeting organized by the National Cancer Institute, Madison, Wisconsin, July 28, 2010.
20. Potholes and Progress on the Road to Personalized Medicine. Population Health Sciences 50th Anniversary Symposium, Madison, Wisconsin, August 27, 2009.
21. Appropriate Integration of Human Genome Discoveries into Health Care. RWJ Scholar Seminar Series, Department of Population Health Sciences, University of Wisconsin School of Medicine and Public Health, October 27, 2008.

GRANT SUPPORT: CURRENT

Robust Mendelian randomization methods to identify causal risk factors for Alzheimer's disease

Sponsor: UW Office of the Vice Chancellor for Research and Graduate Education Data Science Initiative

Role: Co-Investigator (Kan and Lu, co-PIs)

The purpose of this research is to develop robust causal methods for Mendelian randomization with the aim of uncovering causal risk factors and pathways for Alzheimer's disease.

Genome-wide array in WRAP

Sponsor: Swoop-Med

Project period: 12/26/17 – 06/25/19

Direct costs: \$225,000

Role: Principal Investigator

The goals of this study are to 1) determine the polygenic contribution to AD-related traits in the Wisconsin Registry for Alzheimer's Prevention (WRAP) and 2) determine functional pathways and the molecular mechanism of AD-related traits using the genome-wide data.

Genomic and Metabolomic Data Integration in a Longitudinal Cohort at Risk for Alzheimer's Disease

Sponsor: NIH, R01 AG054047-01

Project period: 08/15/16 – 05/31/21

Direct costs: \$2,446,463

Role: Principal Investigator

The goal of this study, GeneRations Of WRAP (GROW), is to determine the role of genomics, metabolomics, and interactions between the two in A β deposition, cognitive decline, and resilience in individuals at increased risk for Alzheimer's disease (AD) due to a parental history of AD diagnosed by age 75.

African Americans Fighting Alzheimer's in Midlife (AA-FAiM)

Sponsor: NIH, R01 AG054059-01

Project period: 07/01/16 – 06/30/21

Direct costs: \$2,499,975

Role: Co-Investigator (Gleason, PI)

In this study, we will test the overarching hypothesis that preclinical Alzheimer's disease pathology (inferred from neuroimaging and cerebrospinal fluid) and longitudinal cognitive decline will be greater in cognitively healthy, middle-aged African Americans with (1) high cardiovascular disease burden (estimated with ASCVD score), (2) with low psychological well being (measured with the NIH Toolbox Emotion battery), and (3) from disadvantaged neighborhoods (measured with an index of neighborhood disadvantage, the Area Deprivation Index (ADI)).

Macular Pigment in Aging and Disease

Sponsor: NIH, R01 EY025292-01

Project period: 06/01/15 – 05/31/20

Direct costs: \$3,039,628

Role: Co-Investigator (Mares, PI)

The purpose of this prospective follow-up study in the Carotenoids in Age-Related Eye Disease Study (CAREDS) cohort (a subgroup from the Women's Health Initiative) is to evaluate macular pigment levels as a modifiable risk marker for the development of age-related macular degeneration, and more generalized loss of neural retina and vision function with age.

Personalized Vitamin D Supplementation in European and African Americans

Sponsor: Wisconsin Partnership Program Education and Research Committee – Collaborative Health Sciences Program

Project period: 02/01/15 – 01/31/19

Direct costs: \$499,997

Role: Principal Investigator

This study will validate and refine our vitamin D dosing algorithm in post-menopausal women of European and African descent. We will examine the following novel factors that likely contribute to inter-individual variability in response to vitamin D supplementation: serum levels of cholecalciferol (vitamin D₃; absorption), body composition (storage), and genes coding for the vitamin D binding protein (*GC*; transportation) and 25 hydroxylase (*CYP2R1*; synthesis).

Wisconsin Registry for Alzheimer's Prevention: Biomarkers for Preclinical AD

Sponsor: NIH, R01 AG027161-06A1

Project period: 08/01/13 – 05/31/23

Direct costs: \$1,969,000

Role: Co-Investigator (Johnson, PI)

WRAP is an observational longitudinal cohort of people enriched with risk for AD and serves as a registry for linked studies. Goals are to identify the disease pre-symptomatically, and health and lifestyle factors that confer risk or resilience. Outcomes include cognition and AD biomarkers of CSF and PET.

Survey of the Health of Wisconsin (SHOW)

Sponsor: Wisconsin Partnership Program Partnership Education and Research Committee (PERC; MSN102604)

Project period: 07/01/06 – 06/30/19

Direct costs: \$4,200,000

Role: Co-Investigator (Peppard and Malecki, Co-PIs)

The Survey of the Health of Wisconsin (SHOW) is creating a permanent database to track trends in health indicators, support research on the multiple determinants of health and health disparities, facilitate population health data dissemination and educational initiatives, and provide a flexible platform and infrastructure that supports ancillary studies.

GRANT SUPPORT: COMPLETED

A Molecular Atlas of Alzheimer's Disease Stages

Sponsor: UW2020 WARF Discovery Initiative

Project period: 04/01/16 – 03/31/18

Direct costs: \$395,395

Role: Co-Investigator (Johnson, PI)

Genotype-gUIDed vitamin D supplEmentation (GUIDE)

Sponsor: NIH, R56 HL124004-01A1

Project period: 09/08/15 – 08/31/17

Direct costs: \$250,000

Role: Principal Investigator

Investigation of Four Potential Cognitive Decline Pathways

Sponsor: Graduate School Fall Research Competition

Project period: 07/01/14 – 06/30/15

Direct costs: \$37,344

Role: Principal Investigator

Genetics of Breast Cancer Risk at Windows of Exposure

Sponsor: NIH, NIEHS RFA-ES-09-009, Environmental Influences during Windows of Susceptibility in Breast Cancer Risk, U01

Project period: 07/01/10 – 04/30/15

Direct costs: \$1,500,000

Role: Co-Investigator (Gould and Trentham-Dietz, Co-PIs)

Identification of Gene-Environment Interactions in Cognitive Decline

Sponsor: NIH, P30 AG017266, Center for Demography of Health and Aging

Project period: 09/01/13 – 06/30/14

Direct costs: \$29,792

Role: Principal Investigator

Familial Study of Healthy, High-risk Controls in Alzheimer's Disease Risk Pedigrees

Sponsor: Charleston Conference on Alzheimer's Disease (CCAD)

Project period: 04/01/13 – 03/31/14

Direct costs: \$50,000

Role: Principal Investigator of sub-award (Kauwe, PI)

Diet and Lifestyle Factors Reducing Risk for Age-Related Eye Disease

Sponsor: NIH, R01 EY016886-03A1

Project period: 12/01/10 – 11/30/13

Direct costs: \$1,059,848

Role: Co-Investigator (Mares, PI)

Breast Cancer GWAS: Function and Environmental Interactions

Sponsor: NIH, NCI CA-08-017, Comparative Systems Genetics of Cancer, R01

Project period: 12/11/08 – 10/31/13

Direct costs: \$1,858,500

Role: Co-Investigator (Gould and Newton, Co-PIs)

Telomere length, telomere maintenance genes and cancer risk

Sponsor: NIH, NCI PA-07-070

Project period: 09/18/08 – 07/31/13

Direct costs: \$2,247,474

Role: Co-Investigator on sub-award (Skinner, PI of sub-award; Boardman, PI)

Genetic Architecture of Alzheimer's-Related Functional and Structural Brain Aging

Sponsor: NIRG-10-173208, Alzheimer's Association New Investigator Research Grant (NIRG)

Project period: 10/01/10 – 09/30/12

Direct costs: \$72,727

Role: Principal Investigator

The role of verbal interaction and perceived social support in preservation of cognitive function among middle-aged and older adults

Sponsor: Graduate School Fall Research Competition

Project period: 07/01/11 – 06/30/12

Direct costs: \$37,628

Role: Principal Investigator

Novel population health approach to address CVD and pulmonary health disparities

Sponsor: NIH, NHLBI OD-09-004, Recovery Act Limited Competition for NIH Grants: Research and research Infrastructure "Grand Opportunities" (RC2)

Project period: 09/30/09 – 03/31/12

Direct costs: \$5,326,080

Role: Co-Investigator (Nieto, PI)

Genetic and environmental predictors of serum levels of 25-hydroxyvitamin D

Sponsor: Wisconsin Partnership Program Medical Education and Research Committee (MERC) New Investigator Program

Project period: 07/01/09 – 12/31/11

Direct costs: \$90,000

Role: Principal Investigator

The role of social activity in preserving cognition

Sponsor: Graduate School Fall Research Competition

Project period: 07/01/10 – 06/30/11

Direct costs: \$34,905

Role: Principal Investigator

Genetic Link Between Alzheimer's Disease and Type 2 Diabetes

Sponsor: NIH, P50 AG033514, Wisconsin Alzheimer's Disease Research Center

Project period: 04/01/10 – 03/31/11

Direct costs: \$30,000

Role: Principal Investigator

MENTORING

Faculty (mentoring committee member)

2018-present Shanedra Warren Andersen, Ph.D., Assistant Professor of Population Health Sciences

2016-present Amy Fowler, MD, Ph.D., Assistant Professor of Radiology

Post-doctoral (primary mentor)

2018-present Yuetiva Robles (Deming), Ph.D. (Washington University School of Medicine)

2009-2011 Kristin Meyers, M.P.H., Ph.D. (University of Michigan)

Current Position: Global Patient Safety Senior Research Scientist,
Pharmacoepidemiology at Eli Lilly, Indianapolis, Indiana

Doctoral (chair of committee)

2017-present Danny Panyard
Program: Epidemiology

2016-present Kathryn Hatchell
Program: Population Health
Title: Towards precision medicine management of vitamin D inadequacy: Development of ancestry-specific polygenic risk scores and exploration of genetic-environmental interactions affecting vitamin D concentrations
Current Position: Project Manager - Genomics and Informatics, Geisinger National – Precision Health

2015-2018 Burcu Darst, Ph.D.
Program: Epidemiology
Title: The Integration of Metabolomic and Genomic Data in Alzheimer's Disease
Current Position: Post-doctoral Scholar, University of Southern California Center for Genetic Epidemiology

2012-2016 Megan Zuelsdorff, M.S., Ph.D.
Program: Population Health
Title: Sociobehavioral and Psychobiological Mechanisms in Cognitive Aging

Current Position: Assistant Scientist, Department of Medicine, University of Wisconsin-Madison

Doctoral (committee member)

- 2018-present Emily Binversie, M.S., D.V.M.
Program: Comparative Biomedical Sciences
- 2017-present Tom Lawler
Program: Nutritional Sciences
Title: The Stability of Macular Pigment Optical Density with Age: Sources of Variability Between Individuals and Implications for Glaucomatous Neurodegeneration
- 2017-present Lauren Baker, M.S., D.V.M.
Program: Comparative Biomedical Sciences
- 2016-2017 Oyewale Shiyabola
Program: Epidemiology
Title: Optimizing health among ductal carcinoma in situ survivors
- 2012-2014 Gota Morota, Ph.D.
Program: Dairy Science: Animal Breeding and Genetics
Title: Whole-genome prediction of complex traits using kernel methods
Current Position: Assistant Professor of Theoretical Quantitative Genetics, Department of Animal Science, University of Nebraska-Lincoln
- 2012-2013 Margarete Wichmann, Ph.D.
Program: Population Health
Title: Inflammation and cognitive impairment in Beaver Dam, WI
Current Position: Project Director, UW Survey Center
- 2011-2013 Doug Bjelland, Ph.D.
Program: Dairy Science: Animal Breeding and Genetics
Title: Novel methods for calculating and comparing inbreeding derived from dense SNP marker panels in domestic cattle
Current Position: Post-doctoral fellow, Institute for Behavioral Genetics, University of Colorado Boulder
- 2010-2012 Shaneda Warren Andersen, M.S., Ph.D.
Program: Population Health
Title: Hormonal Factors and Breast Cancer Loci
Current Position: Assistant Professor, Population Health Sciences, University of Wisconsin
- 2009-2011 Wenjun Zhong, Ph.D.
Program: Population Health
Title: Vascular Measurements and Cognitive Function
Current Position: Statistician, University of Pennsylvania

2008-2011 Amy Jo Haavisto Kind, M.D., Ph.D.
Program: Population Health
Title: Quality, Accuracy and Potential Impact of the Hospital Discharge Summary for Patients Discharged to Sub-acute Care Facilities
Current Position: Associate Professor, Geriatrics Division, Department of Medicine, University of Wisconsin School of Medicine and Public Health

2008-2011 Kendra A. Young, Ph.D.
Program: Epidemiology at the Colorado School of Public Health
Title: The Role of Vitamin D in Adiposity and Non-Alcoholic Fatty Liver Disease
Current Position: Assistant Research Professor, University of Colorado Anschutz Medical Campus

Master's (chair of committee)

2017 Alexandra Bryant
Program: Public Health
Title: Community Engagement to Diversify Clinical Research: Meet the People Where They Are
Current Position: Medical student, University of Wisconsin School of Medicine and Public Health

2014-2015 Jill Kolesar, PharmD
Program: Epidemiology
Title: A Potential Genetic Signature to Predict Non Small Cell Lung Cancer Susceptibility in Smokers
Current Position: Professor of Pharmacy, University of Kentucky

2014-2015 Angela Forgues, M.S.
Program: Population Health
Title: Immune System Genetics, Stress, and Cognitive Function: Gene-Environment Interaction in the Wisconsin Registry for Alzheimer's Prevention (WRAP) Study
Current Position: student in the University of Wisconsin-Madison Sociology Ph.D. program

2013-2014 Karen Lazar, M.S.
Program: Population Health
Title: Association of Cholesterol and Cholesterol Metabolism Genes with Cognitive Function in the Wisconsin Registry for Alzheimer's Prevention
Current Position: Research Specialist, Wisconsin Alzheimer's Disease Research Center

2009-2010 Megan Zuelsdorff, M.S.
Program: Population Health
Title: The role of social interaction and perceived support in preservation of cognitive function
Current Position: Assistant Scientist, Department of Medicine, University of Wisconsin-Madison

- 2009-2010 Liga Bivina, M.S., C.G.C.
 Program: Genetic Counseling
 Topic: Association between vitamin D binding protein (*DBP*) SNPs, rs4588 and rs7041, and hypertension in Hispanics and African Americans of the IRAS Family Study
 Current Position: Certified Genetic Counselor, Department of Pediatrics, Section of Genetics, UC Davis Medical Center
- 2007-2008 Kimberly (Brown) Schmitz, M.S.
 Program: Population Health
 Title: Association of vitamin D and vitamin D-processing genes with blood pressure in Hispanic and African Americans: an ancillary study to the Insulin Resistance Atherosclerosis (IRAS) Family Study
 Current Position: Unit Coordinator, Clinical and Translational Unit, University of Georgia

Master's (committee member)

- 2015-2016 Emily, Binversie, M.S., D.V.M.
 Program: Doctor of Veterinary Medicine
 Current Position: Comparative Biomedical Sciences doctoral student
- 2013 Erin Bergman, M.S.
 Program: Population Health
 Title: Predictors of Discordance Between Perceived and Objective Neighborhood Data
 Current Position: medical student at University of Wisconsin-Madison
- 2012-2013 Donny Xiong, M.P.H.
 Program: Public Health
 Title: Genetic Research with Hmong-ancestry Populations: Lessons from the Literature and a Pilot Study
- 2011-2012 Milena Bernardinello, M.S.
 Program: Population Health
 Title: Innovative Data Collection Method for the Assessment of the Social and Built Environment in Wisconsin: The WASABE Project and Walkability
- 2010-2011 Anne Atkins, M.P.H.
 Program: Public Health
 Title: T-cell Receptor Excision Circles of Newborns Are Associated with Newborns' Gestational Age: Data from Wisconsin Newborn Screening for SCID
 Current Position: Associate Researcher, Wisconsin State Laboratory of Hygiene
- 2008-2009 Samantha Bromfield, M.S., Ph.D.
 Program: Population Health
 Title: Predictors of HIV Infection in Pregnant Women in Kampala, Uganda
 Current Position: Post-doctoral Fellow, Emory University
- 2007-2008 Shaneda Warren Andersen, M.S., Ph.D.
 Program: Population Health

Title: Breast cancer survival in relation to genetic polymorphisms in *CYP11A1*, *CYP11A2*, *CYP11B1*, *IL6R* AND *TNF*

Current Position: Assistant Professor, Population Health Sciences, University of Wisconsin

Graduate Independent Reading Supervisor

- Summer 2016 Danny Panyard
Topic: Genetic epidemiology
- Fall 2015 Kathryn Hatchell
Topic: Trans-ethnic Meta-analysis of Vitamin D Genome-wide Association Studies
- Spring 2015 Kathryn Hatchell
Topic: Use of Genetic Markers to Determine the role of Vitamin D in Cognitive Function and Decline
- Fall 2014 Burcu Darst and Jill Kolesar
Topic: Advanced topics in genetic epidemiology and statistical genetics
- Summer 2014 Jill Kolesar
Topic: Genetic epidemiology
- Spring 2013 Donny Xiong
Topic: Genetic epidemiology: Principal components analysis to determine genetic ancestry
- Spring 2009 Justin Lo
Topic: Statistical genetics: Use of three machine learning approaches to explore gene-gene and gene-environment interactions
- Summer 2008 Samantha Bromfield, M.S.
Topic: Chronic disease epidemiology
- Fall 2007 Claudia Pereira, Ph.D.
Topic: Economic factors in genetic innovation

Hilldale Undergraduate/Faculty Research Fellowship Award Mentor

- 2012-2014 Taylor Kirby
Topic: Solar radiation and 25-hydroxyvitamin D concentration
Current Position: Software Quality Assurance, Epic, Verona, WI

Undergraduate Independent Study Supervisor

- 2018-present Katherine Brenneke
- 2016-present Sarah Heyer
Topic: Alzheimer's disease family study
- 2015-2017 Sydney Harris
Topic: Vitamin D and biomarkers for Alzheimer's disease
- Fall 2014 Maisie Tolzmann
Topic: Vitamin D and cognitive function
- 2012-2014 Hilary Steltenpohl
Topic: Dietary vitamin D exposure and 25-hydroxyvitamin D concentration
Current Position: Clinical Study Coordinator, Marshfield Clinic Research Foundation
- Fall 2012 Courtney Holdt
Topic: Literature review and introduction to manuscript of genes shared between type 2 diabetes and Alzheimer's disease
- 2010-2012 Somsak Vue

- 2008-2010 Topics: Genetic Epidemiology and Pharmacogenomics
 Lesli Kiedrowski, M.S., M.P.H.
 Topics: Development of a Public Health Genetics module for a High School curriculum and Inter-rater Reliability of the Wisconsin Assessment of the Social and Built Environment (WASABE) Instrument
 Current Position: Genetic Counselor, UT Southwestern Medical Center
- 2008-2009 Lindsay Bohnert, M.A.
 Topic: Reflectance spectrophotometry measurement of skin color as a predictor of 25-hydroxyvitamin D
- 2008-2009 Emily Phelps
 Topic: Development of a vitamin D exposure questionnaire
 Current Position: Research Program Manager, University of Wisconsin

Summer Science Institute Research Mentor

- 2009 Lesli Kiedrowski (undergraduate student mentor), Santiago Barajas (high school student), Que Xiong (high school student)
 Topic: Inter-rater Reliability of the Wisconsin Assessment of the Social and Built Environment (WASABE) Instrument

Doctoral Academic Advisor

- 2017-present Danny Panyard
 2017-present Ruocheng Dong
 2015-present Eva Vasiljevic
 2015- present Kathryn Hatchell
 2013-2018 Burcu Darst
 2010-2016 Megan Zuelsdorff, M.S.
 2009-2010 Christine Muganda

Master's Academic Advisor

- 2012-2015 Angela Forgues
 2012-2014 Karen Lazar, M.S.
 2012-2013 Alex Binder, M.S.
 2008-2009 Megan Zuelsdorff, M.S.
 2007-2009 Samantha Bromfield, M.S.

TEACHING

Course Development

- 2009 Public Health Genomics – POP HLTH 888 – 1 credit
 2008 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 3 credits
 2008 Genetic Epidemiology – POP HLTH 849 – 3 credits

Course Director

- Spring 2019 Public Health Genomics – POP HLTH 888 – 1 credit – 22 undergraduate and graduate students
 Spring 2018 Public Health Genomics – POP HLTH 888 – 1 credit – 17 undergraduate, graduate, medical, and pharmacy students, and faculty
 Fall 2017 Genetic Epidemiology – POP HLTH 849 – 3 credits – 12 graduate students

- Spring 2017 Public Health Genomics – POP HLTH 888 – 1 credit – 8 undergraduate, graduate, and medical students, and faculty
- Fall 2016 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 3 credits – 5 graduate students
- Spring 2016 Public Health Genomics – POP HLTH 650 Section 023 – 1 credit – 15 undergraduate, graduate, and pharmacy students
- Fall 2015 Genetic Epidemiology – POP HLTH 904 Section 102 – 3 credits – 11 graduate students and academic staff
- Summer 2015 Public Health Genomics – POP HLTH 650 Section 023 – 1 credit – 11 graduate and medical students
- Fall 2014 Graduate Research Seminar – POP HLTH 820 – 1 credit – 11 graduate students (Co-director)
- Summer 2014 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 3 credits – 5 graduate students
- Fall 2013 Genetic Epidemiology – POP HLTH 904 Section 102 – 3 credits – 13 graduate students
- Fall 2012 Genetic Epidemiology – POP HLTH 904 Section 102 – 3 credits – 18 graduate students, visiting scholars, academic staff, and faculty
- Summer 2012 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 2 credits – 5 graduate students and academic staff
- Summer 2011 Public Health Genomics – POP HLTH 650 Section 023 – 1 credit – 13 undergraduate and graduate students
- Fall 2010 Genetic Epidemiology – POP HLTH 904 Section 002 – 2 credits – 17 graduate students
- Summer 2010 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 2 credits – 17 graduate students, academic staff, and visiting scientists
- Fall 2009 Genetic Epidemiology – POP HLTH 904 Section 002 – 2 credits – 8 graduate students and post-docs
- Summer 2009 Public Health Genomics – POP HLTH 650 Section 023 – 1 credit – 9 graduate students
- Fall 2008 Graduate Research Seminar – POP HLTH 820 – 1 credit – 8 graduate students (Co-director)
- Fall 2008 Genetic Epidemiology – POP HLTH 904 Section 002 – 2 credits – 13 graduate students
- Summer 2008 Analytic Methods in Genetic Epidemiology – POP HLTH 904 Section 003 – 2 credits – 10 graduate students, post-docs, and faculty
- Spring 2008 Genetic Epidemiology – POP HLTH 904 Section 002 – 2 credits – 15 graduate students and post-docs
- Spring 2007 Graduate Research Seminar – POP HLTH 820 – 1 credit – 18 graduate students (Co-director)

Course Discussion Group Leader

- 2017 Patients, Professionalism and Public Health – MD Program – 30 Medical students
- 2007-2015 Principles of Population Medicine and Epidemiology – POP HLTH 717 – 2-10 sessions – 30 Medical students
- Fall 2003 Introduction to Epidemiology – PRMD 6630 – 6 sessions

Course Lecturer

- 2018 Contemporary Professional Issues in Genetic Counseling – MD GENET 708-737 – Public Health Genomics
- 2017-present Biology of Aging – Pathology 751 – Genome-wide Association Studies of Aging

- 2013-present Academic Methodologies and Resources for Genetic Counselors – MD GENET 739 – Genome-wide Association Studies
- 2013 Colloquium in Environmental Toxicology – MET 606 – Genetic and Environmental Correlates of Vitamin D
- 2012 Statistical Methods for Molecular Biology – STAT 877 – Genetic Epidemiology
- 2008-2011 Seminar in Genetics – MD GENET 993 – Genetic Epidemiology and Public Health Genomics
- 2008-2010 Population Health Sciences: Concepts and Methods – POP HLTH 375 –Genetics in Population Health
- 2008 Human Emphasis Group Graduate Student Seminar – NUTR SCI 881 – Basic Genetics and Genetic Association Studies
- 2008 Seminar in Animal Breeding: Statistical and Quantitative Genetics – AN SCI 951 – Genetic Epidemiology
- 2006-present Introduction to Epidemiology – POP HLTH 797 – Genetic Epidemiology
- 2005 Statistical Methods in Genetic Association – BIOS 6655 – Software
- 2003-2006 Advanced Epidemiology – PRMD 6632 – Genetic Study Designs Implementation of Family Based Tests for Association
- 2002, 04, 06 Methods in Genetic Epidemiology – PRMD 6639 – Basic Concepts in Genetics; Uses of Public Databases in Genetic Studies

Journal Club Organization

- 2009-2015 Organizer of the Human Genetics Journal Club – undergraduate and graduate students, post-docs, academic staff, and faculty – met monthly

K-12 Curriculum Development

- 2009 Ethical, Legal, and Social Issues (ELSI) of Genomics Research – 17 day curriculum – selected as an exemplary curriculum to highlight on the American Society of Human Genetics (ASHG) website

K-12 Teaching

- 2009-2011 Guest lecturer and discussion leader in Genetics and Society course at Malcolm Shabazz City High School, Madison, WI – 8 weeks – 12 students in grades 9-12

INVITED WORKSHOPS

1. Benefits of Higher Education – American Society of Human Genetics (ASHG) – June 12-13, 2009.
2. Navigating Genomics: Practice and Academe in the Great Lakes and Beyond – April 28-29, 2008.

SERVICE ACTIVITIES

State, National and International

- 2019-2021 Member, Scientific Program Committee, International Genetic Epidemiology Society (IGES)
- 2018-present Member, NIA Genetic and Biomarker Disclosure Working Group
- 2015-2016 Member, Local Organizing Committee, 5th International Conference on quantitative Genetics

- 2014 Judge, National DNA Day Essay Contest, American Society of Human Genetics (ASHG)
- 2012 Group Leader, Collapsing Methods, Genetic Analysis Workshop (GAW18)
- 2010-2018 Invited Mentor, Career Paths in Genetics, American Society of Human Genetics Annual Meeting
- 2010 Group Leader, Genes with Multiple Rare Variants, Genetic Analysis Workshop (GAW17)
- 2008-2018 Member, Wisconsin Genetics Advisory Committee, Wisconsin Department of Health Services
- 2008 Judge, National DNA Day Essay Contest, American Society of Human Genetics (ASHG)
- 2007-2009 Scientist, Geneticist Educator Network of Alliances (GENA), American Society of Human Genetics (ASHG) and Genetics Society of America (GSA)

University of Wisconsin – Madison

- 2019-present Member, Executive Committee, Wisconsin Partnership Program Partnership Education and Research Committee, School of Medicine and Public Health
- 2018-2019 Chair, Social Genomics Cluster Hire Faculty Search Committee, UW-Madison
- 2018-2019 Co-Chair, Biostatistics and Medical Informatics Chair Search Committee, School of Medicine and Public Health
- 2018-present Member, Curriculum Committee, Department of Population Health Sciences
- 2018-present Chair, Work Environment Committee, Department of Population Health Sciences
- 2018-present Member, Awards Committee, Department of Population Health Sciences
- 2018-present Chair, Population Health Steering Committee, Department of Population Health Sciences
- 2018-present Chair, Epidemiology Steering Committee, Department of Population Health Sciences
- 2018-present Chair, Student Review Committee, Department of Population Health Sciences
- 2017-2018 Member, Chair of Cell and Regenerative Biology Search Committee, School of Medicine and Public Health
- 2017-present Member, Council of Faculty Development Liaisons, School of Medicine and Public Health
- 2017-present Member, Biomedical Data Science PhD Program Steering Committee, Department of Biostatistics and Medical Informatics
- 2017-present Member, Wisconsin Alzheimer’s Disease Research Center Executive Committee
- 2017-2018 Member, Human Genetics Faculty Search Committee, Department of Medical Genetics
- 2017-2019 Judge, Alzheimer’s Disease & Related Disorders Research Day Poster Session
- 2017-2018 Member, Medical Scientist Training Program (MD/PhD) Admissions Committee, School of Medicine and Public Health
- 2016-2017 Member, Director of Human Genomics and Precision Medicine Search Committee, School of Medicine and Public Health
- 2016-2017 Member, Human Genomics and Precision Medicine Initiative Advisory Committee, School of Medicine and Public Health
- 2016-2020 Member, Wisconsin Partnership Program Partnership Education and Research Committee, School of Medicine and Public Health
- 2015-2020 Member, Strategic Plan Implementation Committee, School of Medicine and Public Health
- 2014-present Member, Scientific Executive Committee, Wisconsin Alzheimer’s Institute, University of Wisconsin, Madison, Wisconsin

- 2014-2017 Elected Committee Member, Academic Planning Council, School of Medicine and Public Health
- 2014-2018 Member, Epidemiology Steering Committee, Department of Population Health Sciences
- 2012-2014 Grader, Epidemiology Qualifier Exam, Population Health and Epidemiology Graduate Programs, Department of Population Health Sciences
- 2009-2011 Member, Chair of Pathology Search Committee, School of Medicine and Public Health
- 2009-2010 Junior Faculty Representative, Associate Dean for Public Health Search Committee, School of Medicine and Public Health
- 2009 Session Organizer and Moderator, Detours, Potholes and Progress on the Road to Personalized Medicine, 50th Anniversary Symposium, Department of Population Health Sciences
- 2008-2009 Co-Chair, 50th Anniversary Symposium: Population Health Sciences in Wisconsin and Beyond, Department of Population Health Sciences
- 2007-present Member, Admissions Committee, Population Health and Epidemiology Graduate Programs, Department of Population Health Sciences
- 2007-2012 Member, Space Committee, Department of Population Health Sciences