Nov. 13, 2020

GENERAL INFORMATION

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| *Mailing Address:* University of Colorado Denver  P.O. Box 173364  Denver, CO  80217-3364  *Telephone* (303) 315-1722  *E-mail* [audrey.hendricks@ucdenver.edu](mailto:audrey.hendricks@ucdenver.edu)  *Website* <http://math.ucdenver.edu/~ahendricks>  *Github* [*https://github.com/hendriau*](https://github.com/hendriau) | [*Google Scholar*](https://scholar.google.com/citations?user=hWak-5YAAAAJ&hl=en&authuser=2)*:*  All publications  h-index = 19  i10-index = 23  2155 citations (1725 since 2015)  39 peer reviewed journal articles |

CURRENT INTERESTS

I am a statistical geneticist and biostatistician interested in the complex nature of human diseases and traits. My research spans a variety of health and disease projects including work in large scale genetic, methylation, metabolomic, and expression studies as well as more focused functional and model organism research. Recent applied and collaborative projects include understanding the mechanisms and mediators behind successful nutrition interventions in children and adults. My recent methodological work focuses on developing methods and user-friendly software to increase the utility and equity of publicly available genetic data, especially for diverse and under-represented ancestral populations. I am proud to mentor many amazing graduate students and to have an active and dynamic undergraduate research group.

KEY WORDS

Statistics, biostatistics, genetics, ‘omics, obesity, face shape, big data, nutrition

EDUCATION

Visiting Postdoctoral Fellow (Sept. 2012-Aug. 2013); **Broad Institute of MIT and Harvard** & **Massachusetts General Hospital**; *Assistant Professor of Medicine for Harvard Medical School-Diabetes Unit, Jose Florez*

Statistical Genetics Postdoctoral Fellow (Sept. 2011-Aug. 2013); **Wellcome Trust Sanger Institute, Cambridge University**; *Head of Human Genetics & Metabolic Disease Group Leader, Inês Barroso*; *Analytical Genomics of Complex Traits Group Leader, Eleftheria Zeggini*

Ph.D in Biostatistics (2012); **Boston University**, Graduate School of Arts and Sciences

Dissertation: “Exploration of Gene Region Simulation, Correction for Multiple Testing, and Summary Methods”; Thesis Advisor: Kathryn L. Lunetta, PhD

B.A. in Economics (2002); **University of Colorado**, College of Arts and Sciences; Magna Cum Laude

B.A. in Music (2002); **University of Colorado**, College of Music

PROFESSIONAL POSITIONS

**Primary Appointment**

Associate Professor –Department of Mathematical and Statistical Sciences, University of Colorado Denver (Sept. 2020 – Present)

Assistant Professor –Department of Mathematical and Statistical Sciences, University of Colorado Denver (Aug. 2013 – Aug. 2020)

**Other Roles**

Faculty, Human Medical Genetics Program, University of Colorado Anschutz Medical Campus (Oct. 2013 – Present)

Assistant Professor – secondary appointment, Department of Biostatistics and Informatics, University of Colorado School of Public Health (Oct. 2013 – Present)

Assistant Professor – secondary appointment, Colorado Center for Personalized Medicine, University of Colorado Anschutz Medical Campus (Sep. 2018 – Present)

**Previous**

Scientific Advisory Board, Human Code, (April 2017-Feb. 2018)

Consultant, Statistical Genetics, Wellcome Trust Sanger Institute (Aug. 2013-Dec. 2017)

*Head of Human Genetics & Metabolic Disease Group Leader, Inês Barroso*

Statistical Genetics Consultant for NHLBI Framingham Heart Study (March 2010-Aug. 2011)

*Associate Dir. and Scientific Dir. of SHARe Project, Framingham Heart Study, NHLBI, Christopher O’Donnell*

*Director, Framingham Heart Study, NHLBI, Daniel Levy*

AWARDS AND FELLOWSHIPS

2020 College of Liberal Arts and Sciences Excellence in Teaching Award (3 given per year), University of Colorado Denver

2019 College of Liberal Arts and Sciences Excellence in Research Award (3 given per year), University of Colorado Denver

2018 NIH Big Data Innovation Lab in Single Cell Dynamics Attendee (30 early career investigators chosen to attend), Bend, Oregon

2013, ‘14, ‘19 Young Upwardly Mobile Professors Award, University of Colorado - Denver

2012 Stellar Abstract Award, Program in Quantitative Genomics (PQG) Conference, Harvard School of Public Health

2011 Outstanding Advisor Award, FSILG, MIT

2008 Statistics in Epidemiology Travel Award to the American Statistical Associations Joint

Statistical Meeting

2008 Boston University Women Graduates’ Club Scholarship

2007 Kappa Alpha Theta Betty B. & James B. Lambert Foundation Scholarship

2007 Induction into Mu Sigma Rho, National Honor Society for Statistics

2005-2007 NIGMS Training Grant in Biostatistics, Boston University

2002 Magna Cum Laude in Economics, University of Colorado: In recognition of overall academic study and completion of Honors Thesis

1997-2002 Dean’s List, University of Colorado

2000 International Study Abroad Merit Scholarship, Boulder, Colorado

1999 Winnifred Dick Ingals Scholarship, Denver, Colorado

1998 Dean’s Scholarship, University of Colorado

PUBLICATIONS (in descending chronological order; students/mentees#)

1. Hall L#and **Hendricks AE**. High-throughput analysis suggests differences in journal false discovery rate by subject area and impact factor but not open access status. *BMC Bioinformatics*. **In Press**.
2. Marenne G, **Hendricks AE**, Perdikari A, Bounds R, Payne F, Keogh JM, Lelliott CJ, Henning E, Pathan S, Ashford S, Bochukova EG, Mistry V, Daly A, Hayward C, Interval, UK10K Consortium, Wareham NJ, O'Rahilly S, Langenberg C, Wheeler E, Zeggini E, Farooqi IS, Barroso I. (2020). Exome Sequencing Identifies Genes and Gene Sets Contributing to Severe Childhood Obesity, Linking PHIP Variants to Repressed POMC Transcription. *Cell Metab* **31**(6): 1107-1119 e1112, **2020**.
3. Reisdorph NA, **Hendricks AE**, Tang M, Doenges KA, Reisdorph RM, Tooker BC, Quinn K, Borengasser SJ, Nkrumah-Elie Y, Frank DN, Campbell WW, Krebs NF. Nutrimetabolomics reveals food-specific compounds in urine of adults consuming a DASH-style diet. *Sci Rep* 10(1): 1157, **2020**.
4. Gilley SP, Weaver NE#, Sticca EL#, Jambal P, Palacios A, Kerns ME, Anand P, Kemp JF, Westcott JE, Figueroa L, Garcés AL, Ali SA, Pasha O, Saleem S, Hambidge KM, **Hendricks AE**, Krebs NF, Borengasser SJ. Longitudinal Changes of One Carbon Metabolites and Amino Acid Concentrations during Pregnancy in the Women First Maternal Nutrition Trial. *Current Developments in Nutrition*, **2020**. <https://doi.org/10.1093/cdn/nzz132>
5. Kordas G, Rudra P, **Hendricks A**, Saba L, Kechris K. Insight into genetic regulation of miRNA in mouse brain. *BMC Genomics*, **2019**.
6. Tang M, Frank DN, Tshefu A, Lokangaka A, Goudar SS, Dhaded SM, Somannavar MS, **Hendricks AE**, Ir D, Robertson CE, Kemp JF, Lander RL, Westcott JE, Hambidge KM, Krebs NF. Different Gut Microbial Profiles in Sub-Saharan African and South Asian Women of Childbearing Age Are Primarily Associated with Dietary Intakes. *Frontiers in Microbiology*, **10**(1848), **2019**.
7. Yang Y, van der Klaauw A, Cacciottolo T, Stadler L, Keogh J, Henning E, Banton M, **Hendricks AE**, Bochukova E, Mistry V, Lawler K, Liao L, Xu J, O'Rahilly S, Tong Q, UK10K Consortium, Barroso I, O'Malley B, and Xu Y. Steroid Receptor Coactivator-1 Modulates the Function of Pomc Neurons and Energy Homeostasis. *Nature Communications*, **2019**; 10(1):1718. doi: 10.1038/s41467-019-08737-6. (PMCID: PMC6461669)
8. van der Klaauw AA, Croizier S, Mendes de Oliveira E, Stadler LKJ, Park S, Banton MC, Tandon P, **Hendricks AE,** Keogh JM, Riley SE, Papadia S, Henning E, Bounds R, Bochukova EF, Mistry V, O’Rahilly S, Simerly RB, INTERVAL, UK10KConsortium, Minchin JEN, Barroso I, Jones, EY, Bouret SG, Farooqi IS. Human Semaphorin 3 variants link melanocortin circuit development and energy balance. *Cell*, **2019.** Feb 7;176(4):729-742.e18. (PMCID: PMC6370916)
9. Riveros-McKay F,Mistry V, Bounds R, **Hendricks AE**, Keogh JM, Thomas, H, Henning E, Corbin LJ, Understanding Society Scientific Group, O’Rahilly S, Zeggini E, Wheeler E, Barroso I, Farooqi IS.Genetic architecture of human thinness compared to severe obesity, *PLoS Genetics,* **2019**. *15(1): e1007603*. (PMCID: PMC6345421)
10. **Hendricks AE**, Billups S, Pike HNC**#**, Farooqi IS, Zeggini E, Santorico SA, Barroso I, Dupuis J. ProxECAT: Proxy External Controls Association Test. A new case-control gene region association test using allele frequencies from public controls. *PLoS Genetics*, **2018**. (PMCID: PMC6191077)
11. Tang, M.#, Andersen V, **Hendricks AE**, Krebs NF. Different Growth Patterns Persist at 24 Months of Age in Formula-Fed Infants Randomized to Consume a Meat- or Dairy-Based Complementary Diet from 5 to 12 Months of Age. *The Journal of Pediatrics*, **2018.** (PMCID: PMC6389371)
12. The TELOMAAS group & Tomaszewski, M. BMI is negatively associated with telomere length; a collaborative cross-sectional meta-analysis of 87 observational studies. American Journal of Clinical Nutrition, **2018.** (PMID: 30535086)
13. Tang M**#**, **Hendricks AE**, Krebs NF. A meat-or dairy-based complementary diet leads to distinct growth patterns in formula-fed infants: a randomized controlled trial. *American Journal of Clinical Nutrition*, **2018**. (PMCID: PMC6128676)
14. Turcot V., Lu Y., Highland H. M., Schurmann C., Justice A. E., Fine R. S., Bradfield J.P., Esko T., Giri A., Graff M., Guo X., **Hendricks A.E**.,… Loos, R. J. F. Protein-altering variants associated with body mass index implicate pathways that control energy intake and expenditure in obesity. *Nature Genetics*, *50*(1), 26–41. <https://doi.org/10.1038/s41588-017-0011-x> , **2018**. (PMCID: PMC5945951)
15. Moir L, Bochukova EG, Dumbell R, Banks G, Bains RS, Nolan PM, Scudamore C, Simon M, Watson K, Keogh J, Henning E, **Hendricks AE**, O’Rahilly S, Barroso I, Sullivan AE, Bersten DC, Whitelaw M, Kirsch S, Bentley E, Farooqi IS, Cox RD. Disruption of the homeodomain transcription factor orthopedia homeobox (Otp) is associated with obesity and anxiety. *Molecular Metabolism,* **2017**. (PMC5681237)
16. Tang M**#**, Frank DN, **Hendricks AE**, Ir D, Esamai F, Liechty D, Hambidge KM, and Krebs NF. Iron in Micronutrient Powder Promotes an Unfavorable Gut Microbiota in Kenyan Infants. *Nutrients*, **2017**. (PMC5537890)
17. **Hendricks AE\*,** Bochukova EG\*, Marenne G, Keogh JM, Bounds R, Wheeler E, et al. Rare Variant Analysis of Human and Rodent Obesity Genes in Individuals with Severe Childhood Obesity. *Scientific Reports*, **2017** June, 1–14. (PMC5758507) <https://doi.org/10.1038/s41598-017-03054-8> \* Co-first authors
18. Tachmazidou I, Süveges D, Min JL, Ritchie GRS, Steinberg J, Walter, K., …**Hendricks, AE**, et al. Whole-Genome Sequencing Coupled to Imputation Discovers Genetic Signals for Anthropometric Traits. *AJHG* 865–884. **2017**. April. (PMC5473732) <https://doi.org/10.1016/j.ajhg.2017.04.014>
19. Lin H, Mueller-Nurasyid M, Smith A, Arking DE, Barnard J, Bartz TM, Lunetta KL, Lohman K, Kleber M, Lubitz SA, Feelhoed B, Trompet S, Niemeiher MN, Kacprowski T, Chasman DI, Klarin D, Sinner MF, Waldenberger M, Meitinger T, Harris TB, Launer LJ, Soliman EZ, Chen LY, Smith JD, Van Wagoner DR, Rotter JI, Psaty BM, Sie Z, **Hendricks AE**, et al. Gene-gene interaction analyses for atrial fibrillation. *Scientific Reports*, **2016** Nov 8;6:35371. (PMCID: PMC5099695)
20. Jeroncic A, Memari Y, Ritchie G, **Hendricks AE**, Kolb-Kokocinski A, Matchan A, Vitart V, Hayward C, Kolcic I, Glodzik D, Wright A, Rudan I, Campbell H, Durbin R, Polašek O, Zeggini E, Perica VB. Whole exome sequencing in an isolated population from the Dalmatian island of Vis. *EJHG,* **2016** Oct;24(10):1479-87. (PMCID: PMC4950961).
21. Santorico SA, **Hendricks AE**. Progress in Methods for Rare Variant Association. *BMC Genetics*, **2016** Feb 3;17 Suppl 2:6. (PMCID: PMC4895384)
22. The UK10K project: rare variants in health and disease. *Nature*, **2015** Oct 1;526(7571):82-90. (PMCID: PMC4773891)
23. Zhang X, JohnsonAD, **HendricksAE**, HwangSJ, Tanriverdi K, GaneshSK, SmithNL, PeyserPA, FreedmanJE, O’DonnellCJ. Genetic Associations with Expression for Genes Implicated in GWAS Studies for Atherosclerotic Cardiovascular Disease and Blood Phenotypes. *Hum Mol Gen*, **2014** Feb 1;23(3):782-95. (PMCID: PMC3900869)
24. **Hendricks AE**, Dupuis J, Logue MW, Myers RH, Lunetta KL. Correction for multiple testing in a gene region. *EJHG*, **2014** Mar 22(3):414-8. (PMCID: PMC3925272)
25. Pearce LR, Atanassova N, Banton MC, Bottomley B, van der Klaauw AA, Revelli JP, **Hendricks A**, Keogh JM, Henning E, Doree D*,* Jeter-Jones S, Garg S, Bochukova EG, Bounds R, Ashford S, Gayton E, Hindmarsh PC, Shield JP, Crowne E, Barford D, Wareham NJ, UK10K Consortium, O'Rahilly S, Murphy MP, Powell DR, Barroso I, Farooqi IS. KSR2 Mutations Are Associated with Obesity, Insulin Resistance, and Impaired Cellular Fuel Oxidation. *Cell*,**2013** Nov 7; 155(4):765-77. (PMCID: PMC3898740)
26. **Hendricks AE**, Dupuis J, Gupta M, Logue MW, Lunetta KL: A comparison of gene region simulation methods. *PLoS One*, **2012**; 7:e40925. (PMCID: PMC3399793)
27. Hadzi TC, **Hendricks AE**, Latourelle JC, Lunetta KL, Cupples LA, Gillis T, Mysore JS, Gusella JF, MacDonald ME, Myers RH, Vonsattel JP: Assessment of Cortical and Striatal Involvement in 523 Huntington Disease Brains. *Neurology*, **2012** Oct 16;79(16):1708-1715. (PMCID: PMC3468776)
28. Lee JH, Lee JM, Ramos EM, Gillis T, Mysore JS, Kishikawa S, Hadzi T, **Hendricks AE**, Hayden MR, Morrison PJ, Nance M, Ross CA, Margolis RL, Squitieri F, Gellera C, Gomez-Tortosa E, Ayuso C, Suchowersky O, Trent RJ, McCusker E, Novelletto A, Frontali M, Jones R, Ashizawa T, Frank S, Saint-Hilaire MH, Hersch SM, Rosas HD, Lucente D, Harrison MB, Zanko A, Abramson RK, Marder K, Sequeiros J, Landwehrmeyer GB, Shoulson I, Myers RH, MacDonald ME, and Gusella JF: TAA repeat variation in the *GRIK2* gene does not influence age at onset in Huntington’s disease. *Biochemical and Biophysical Research Communications*, **2012** Aug 3;424(3):404-8. (PMCID: PMC3752397)
29. Dumitriu A, Moser C, Hadzi T, Williamson S, Pacheco C, **Hendricks AE**, Latourelle JC, Wilk J, Destefano A, Myers RH: Post-mortem Interval Influences α-Synuclein Expression in Parkinson Disease Brain. *Parkinson’s Disease*, **2012**. 614212, doi:10.1155/2012/614121. (PMCID: PMC3317023)
30. Chen H\*, **Hendricks AE**\***§**, Cheng Y, Cupples LA, Dupuis J, Liu CT: Comparison of statistical approaches to rare variant analysis for quantitative traits. *In BMC Proceedings,* **2011**. 5 Suppl 9:S113. (PMCID: PMC3287837) \* Co-first authors § Corresponding author
31. Latourelle JC, **Hendricks AE**, Pankratz N, Wilk JB, Halter C, Nichols WC, Gusella JF, Destefano AL, Myers RH, Foroud T: Genomewide linkage study of modifiers of *LRRK2*-related Parkinson’s disease. *Movement Disorders*, **2011** Sep; 26(11):2039-44. (PMCID: PMC3346677)
32. **Hendricks AE**, Latourelle JC, Lunetta KL, Cupples LA, Wheeler V, MacDonald ME, Gusella JF, Myers RH: Estimating the probability of *de novo* HD cases from transmissions of expanded penetrant CAG alleles in the Huntington Disease gene from male carriers of high normal alleles (27-35 CAG). *AJMG*,**2009**. 149A(7): 1375-81. (PMCID: PMC2724761)
33. **Hendricks AE**, Zhu Y, Dupuis J: Genome-wide association and linkage analysis of quantitative traits: comparison of likelihood ratio test and conditional score statistic. *BMC Proceedings* **2009**. 3 Suppl 7:S100. (PMCID: PMC2795871)
34. Dragileva E, **Hendricks A**, Teed A, Gillis T, Lopez ET, Friedberg EC, Kucherlapati R, Edelmann W, Lunetta KL, MacDonald ME, Wheeler VC: Intergenerational and striatal CAG repeat instability in Huntington's disease knock-in mice involve different DNA repair genes. *Neurobiol Dis***2009**, 33:37-47. (PMCID: PMC2811282)
35. Swami M, **Hendricks AE**, Gillis T, Massood T, Mysore J, Myers RH, Wheeler VC: Somatic expansion of the Huntington's disease CAG repeat in the brain is associated with an earlier age of disease onset. *Hum Mol Genet***2009**, 18:3039-3047. (PMCID: PMC2714728)
36. Manning AK, Ngwa JS, **Hendricks AE**, Liu CT, Johnson AD, Dupuis J, Cupples LA: Incorporating biological knowledge in the search for gene x gene interaction in genome-wide association studies. *BMC Proceedings* **2009**. 3 Suppl 7:S81 (PMCID: PMC2795984)
37. DeStefano AL, Latourelle J, Lew MF, Suchowersky O, Klein C, Golbe LI, Mark MH, Growdon JH, Wooten GF, Watts R, Guttman M, Racette BA, Perlmutter JS, Marlor L, Shill HA, Singer C, Goldwurm S, Pezzoli G, Saint-Hilaire MH, **Hendricks AE**, Gower A, Williamson S, Nagle MW, Wilk JB, Massood T, Huskey KW, Baker KB, Itin I, Litvan I, Nicholson G, Corbett A, Nance M, Drasby E, Isaacson S, Burn DJ, Chinnery PF, Pramstaller PP, Al-Hinti J, Moller AT, Ostergaard K, Sherman SJ, Roxburgh R, Snow B, Slevin JT, Cambi F, Gusella JF, Myers RH: Replication of association between ELAVL4 and Parkinson disease: the GenePD study. *Hum Genet***2008**, 124:95-99. (PMCID: PMC2716559)
38. Latourelle JC, Sun M, Lew MF, Suchowersky O, Klein C, Golbe LI, Mark MH, Growdon JH, Wooten GF, Watts R, Guttman M, Racette BA, Perlmutter JS, Ahmed A, Shill HA, Singer C, Goldwurm S, Pezzoli G, Zini M, Saint-Hilaire MH, **Hendricks AE**, Williamson S, Nagle MW, Wilk JB, Massood T, Huskey KW, Laramie JM, DeStefano AL, Baker KB, Itin I, Litvan I, Nicholson G, Corbett A, Nance M, Drasby E, Isaacson S, Burn DJ, Chinnery PF, Pramstaller PP, Al-Hinti J, Moller AT, Ostergaard K, Sherman SJ, Roxburgh R, Snow B, Slevin JT, Cambi F, Gusella JF, Myers RH: The Gly2019Ser mutation in LRRK2 is not fully penetrant in familial Parkinson's Disease: the GenePD study. *BMC Medicine* **2008**, 6. (PMCID: PMC2596771)
39. Tobin JE, Latourelle JC, Lew MF, Klein C, Suchowersky O, Shill HA, Golbe LI, Mark MH, Growdon JH, Wooten GF, Racette BA, Perlmutter JS, Watts R, Guttman M, Baker KB, Goldwurm S, Pezzoli G, Singer C, Saint-Hilaire MH, **Hendricks AE**, Williamson S, Nagle MW, Wilk JB, Massood T, Laramie JM, DeStefano AL, Litvan I, Nicholson G, Corbett A, Isaacson S, Burn DJ, Chinnery PF, Pramstaller PP, Sherman S, Al-Hinti J, Drasby E, Nance M, Moller A, Ostergaard K, Roxburgh R, Sherman SJ, Roxburgh R, Snow B, Slevin JT, Cambi F, Gusella JF, Myers RH: Haplotypes and gene expression implicate the MAPT region for Parkinson disease: the GenePD Study. *Neurology* **2008**, 71:28-34. (PMCID: PMC2654275)

CONSORTIUM PUBLICATIONS

The publications listed above and on which my Google Scholar metrics are based are those on which I made a substantial contribution to the particular publication. Below are consortiums for which I played a considerable role. Given this, there are papers (that I do not list above or include in my metrics) on which I am listed as an author through my membership in the consortium.

UK10K Project (<http://www.uk10k.org>): I was one of four post-doctoral fellows funded directly on the UK10K project. I was the lead statistician and analyst on the obesity arm of the project and also contributed to the cohorts group, the statistics group, and the writing group. Since the UK10K project was one of the first large scale high-throughput sequencing studies, a substantial portion of my time was spent on identifying the appropriate quality control and statistical analysis frameworks to use for the whole-exome and whole-genome sequencing data.

Genome Sequencing Program (GSP) (<http://gsp-hg.org>): GSP I am developing and applying methods to use GSP as common control data and working with the Analysis Centers and the Common Controls Working Group.

BOOK CHAPTERS

Morris & Zeggini. Assessing Rare Variation in Complex Traits. Chapter: (Hendricks, AE) *Use of Appropriate Controls in Rare-Variant Studies* (239-252). Springer. 2015.

FUNDING HISTORY (Funded)

**EXTERNAL**

1R35HG011293-01 (Hendricks) 9/01/2020-6/30/2025 0.525 FTE (Y1); 0.34 FTE (Y2-Y5)

**PI**; **“**Methods to enable robust and efficient use of genetic summary data”

NIH/NHGRI $281,663 Y1 direct

R01; (PI: Fishbein) 9/1/2020 – 8/31/2025 0.1 Y1; 0.15 Y2-Y5

**Co-I**;“Inherited genetic variation and penetrance of Hereditary Paraganglioma-Pheochromocytoma Syndrome”

NCI $250k/yr direct cost

U01; (PI: Norman) 7/1/2020 – 6/30/2025 0.05 Y1-Y5

**Co-I**; "insights Into Immune-Related Diseases Born from Population Genomics" NIAID U01 AI090905 $549k/yr direct cost

PAR-15-024 (Krebs, AMC) 7/01/2018-3/30/2023 0.15 FTE (Y1-Y3); 0.24 FTE (Y4-Y5)

**Co-I**;“Predicting health outcomes of Mediterranean diet via metabolomics of foods and biospecimens”

NIH/NIDDK $499,999 Y1 direct

OPP1055867 (Krebs/Hambidge, AMC) 6/1/2018-4/30/2021 0.2 FTE (Y6-Y8)

**Co-I;** “Preconception Maternal Nutrition” – supplement to fund phenotyping and analysis of biomarkers

Bill & Melinda Gates Foundation/ Global Development

National Pork Board (Tang, AMC) 5/2019-4/2022

**Co-I;** “Meat consumption during infancy on growth, gut health, sleep and neurodevelopment: a randomized controlled trial”

$286,000 direct

FUNDING HISTORY (Previous)

**EXTERNAL**

Foundation for Meat and Poultry Research and Education (Tang, AMC) 3/1/2019-8/30/2020

**Co-I;** “Meat as a first solid food on risk of overweight and neurodevelopment in infants”

$192,884 direct

The Jayne Koskinas Ted Giovanis Foundation for Health and Policy (Bacher) 9/1/2018-8/31/2019

**Co-PI**; **“**Uncovering the Life Clock of Red Blood Cells Using Single-Cell Analysis”

$15,000 direct

R03-DE025363 (Shaikh, AMC) 07/01/2015-6/30/2017 0.2 FTE (Y1-Y2) **Co-PI**;“Genomewide Copy Number Variation Analysis and Association with Facial Shape Variation”

NIH/NIDCR $150,000/yr

Funding request included a graduate research assistant under my supervision

Collaborative Research Travel Grant 09/01/2015 – 12/31/2016

**PI**; “Incorporating genome-wide information to find disease associated genes”

Burroughs Wellcome Fund $10,000

*To build collaboration with human geneticists to foster the development of a new statistical method.*

**INTERNAL**

College of Liberal Arts and Sciences Dissemination Grant 2018

**PI**; To support travel to the Joint Statistical Meeting to present Proxy External Controls Association Test.

*$2,000*

Office of Research Services 5/2017 – 8/2017

**PI**; **“**Identifying genetic determinants of immunotherapy success and brain metastasis in melanoma patients”

Funding to support a summer graduate student to complete analysis under my supervision.

*$2973.00*

Office of Research Services 11/2016

**PI**;To support collaborative travel to the Wellcome Trust Sanger Institute

*$1977.73*

EXTERNAL PRESENTATIONS

**Invited**

April 2020 *Evaluating Common Control Methods*, NHGRI’s Genome Sequencing Project Annual Meeting, Virtual

November 2019 *Estimating and modeling substructure within ‘omics data*, Broad Institute of MIT and Harvard, Cambridge, MA

April 2019 *Methods to Improve the use of Common Controls in Sequencing Studies*, University of Florida Department of Biostatistics, Gainsville, FL

March 2019 *ProxECAT: A Case-Control Gene Region Association Test using Allele Frequencies from Public Controls*, Eastern North American Region of the International Biometric Society (ENAR), Philadelphia, PA

March 2019 *Using Common Controls*, NHGRI’s Genome Sequencing Project Annual Meeting, Bethesda, MD

February 2019 *Statistical complications and solutions for using common controls in genetic sequencing studies*, Stat Alliance, Colorado State University

January 2019 *Using Common Controls*, NHGRI’s Genome Sequencing Project Common Controls Working Group, Virtual

March 2018 *Proxy External Controls Association Test (ProxECAT)*, NHLBI Trans-Omics for Precision Medicine (TOPMed) Analysis Committee, Virtual

November 2016 *Methods for association testing with massively different sequencing*

*depths of coverage*, Wellcome Trust Genome Sciences Campus, UK

June 2016 *A new method for gene region association testing with massively different sequencing*

*depths of coverage*, Human Genetics Retreat, Wellcome Trust Sanger Institute, UK

June 2015 *Methods for Studying Rare Variants in Next Generation Sequencing Data*, The

Mathematical Sciences in Obesity, NIDDK Short Course – University of Alabama Birmingham

April 2013 *Identifying and correcting for biases in experiments with external controls: An example from next generation sequencing*, Statistical Genetics Working Group, Boston University

January 2012 *Evaluation of Gene Region Summary Methods*, First Friday Talks, Institute for Behavioral Genetics at the University of Colorado

**Refereed (peer reviewed)**

October 2019 *Exome sequencing identifies multiple genes and gene-sets associated with severe childhood obesity*, American Society of Human Genetics, Houston (poster)

August 2019 *Successful and sustainable undergraduate research in statistics through vertical integration of experience and horizontal integration of disciplines*, Joint Statistical Meeting, Denver (speed talk)

October 2018 *Identifying Hidden Ancestries in Publicly Available Summary Data*, International Genetic and Epidemiology Society, San Diego

October 2018 *Identifying Hidden Ancestries in Publicly Available Summary Data*, American Society of Human Genetics, San Diego (poster)

August 2018 *ProxECAT: Proxy External Controls Association Test: A new case-control gene region*

*association test using allele frequencies from public controls*, Joint Statistical Meeting, Vancouver (speed talk)

October 2016 *A new method for gene region association testing with massively different sequencing*

*depths of coverage*, International Genetic and Epidemiology Society, Toronto

October 2016 *A new method for gene region association testing with massively different sequencing*

*depths of coverage*, American Society of Human Genetics, Vancouver

October 2014 *Next steps for whole exome sequenced cases: imputing non-coding regions and incorporating whole genome sequenced controls*, American Society of Human Genetics, San Diego (poster)

June 2012 *Finding Obesity Genes by Whole Exome Sequencing in a UK Cohort of Severely Obese Children*, American Diabetes Association, Philadelphia

November 2012 *Finding Obesity Genes by Whole Exome Sequencing in a UK Cohort of Severely Obese Children*, Program in Quantitative Genomics, Boston, MA (poster) \*Stellar Abstract Award

October 2012 *Whole Exome Sequencing Cases: Finding and Testing with External Controls*, American Society of Human Genetics, San Francisco, CA (poster)

October 2010 *The Signal vs. Noise Balance: Exploring Gene Summary Methods*, American Society of Human Genetics, Washington D.C. (poster)

October 2010 *Retaining Power: Is it Possible to Simply and Effectively Adjust for Multiple Comparisons in a Candidate Gene Region?* International Genetic and Epidemiology Society, Boston, MA (poster)

October 2009 *A Comparison of Single and Multi-SNP Methods to Summarize Genetic Variation at Candidate Loci*,American Society of Human Genetics, Honolulu, HI (poster)

October 2009 *A Comparison of Methods for Simulating a Gene Region with a Specified LD Structure*, International Genetics and Epidemiology Society Meeting, Kahuku, HI (poster)

October 2008 *Genome-wide association and linkage analysis of quantitative traits: comparison of likelihood ratio test and conditional score statistic*, Genetic Association Workshop, St. Louis, MO (poster)

August 2008 *Estimating Risk for Transmission of Expanded CAG Alleles in the Huntington’s Disease Gene from Male Carriers of Intermediate Alleles*, American Statistical Association Joint Statistical Meeting Denver, CO (poster)

INTERNAL PRESENTATIONS

July 2020 *Statistics in the News in the time of COVID-19*, College of Liberal Arts and Sciences COVID-19 Lecture Series, University of Colorado Denver

April 2019 *Methods to Improve the use of Common Controls in Sequencing Studies*, Department of Integrative Biology, University of Colorado Denver

April 2018 *ProxECAT: Proxy External Controls Association Test. A new case-control gene region association test using allele frequencies from public controls*, The Power of Informatics to Advance Health Mini-Symposium, University of Colorado — Anschutz Medical Campus

March 2018 *Genetic Analysis in the Era of Big Data*, Colorado Center for Personalized Medicine, University of Colorado — Anschutz Medical Campus

October 2017 *Gene region association testing using summary level external controls*, Human Medical Genetics and Genomics 2017 Retreat, University of Colorado — Anschutz Medical Campus

April 2015 *The Necessity of Bioinformatics in Next Generation Sequencing*, The Power of Informatics to Advance Health, University of Colorado — Anschutz Medical Campus

October 2014 *Analysis Using Exome Sequenced Cases and Population Controls*, Human Medical Genetics and Genomics 2014 Retreat, University of Colorado — Anschutz Medical Campus

April 2014 *Exome Sequencing of over 700 Severe Obesity Cases: Study Design, Challenges, & Initial Results*, Department of Integrative Biology Spring Seminar Series, University of Colorado — Denver

November 2013 *Whole Exome Sequencing Case-Control using 1,000 Severe Obesity Cases Identifies Putative New Loci and Replicates Previously Established Loci*, Butcher Symposium, Colorado (poster)

October 2013 *Exome Sequencing of over 700 Severe Obesity Cases: Study Design, Challenges, & Initial Results*, Human Medical Genetics and Genomics Program Seminar Series, University of Colorado — Anschutz Medical Campus

October 2013 *Case-Control Analysis with Whole Exome Sequenced Cases: Challenges and Initial Results*, Statistical Genetics and Genetic Epidemiology Journal Club, CU – Anschutz Medical Campus

June 2013 *SCOOP Case-Control Analysis: Challenges and Initial Results*, UK10K Annual Meeting, Cambridge, UK

May 2013 *Insights from Exome Sequencing 1000 Severe Childhood Obese Cases*, Wellcome Trust Sanger Institute Human Genetics Retreat & Scientific Advisory Board Meeting, Cambridge, UK

July 2012 *Exome Sequencing in Severe Obese Children*, UK10K Annual Meeting, Cambridge, UK

July 2012 *Case-Control Analysis using External Controls*, UK10K Annual Meeting, Cambridge, UK

March 2012 *UK10K Obesity: From exome sequencing to potential hits, Human Genetics Team Talks*, Wellcome Trust Sanger Institute, Cambridge, UK

June 2011 *Exploration of Gene Region Simulation, Correction for Multiple Testing, and Summary Methods*, Dissertation Committee and Audience, Boston University

January 2010 *Gene Region Summary Methods*, Statistical Genetics Working Group, Boston University

PROFESSIONAL AFFILIATIONS

Member, American Statistical Association (ASA)

Member, American Society of Human Genetics (ASHG)

Member, Association for Women in Mathematics (AWM)

Member, International Genetic and Epidemiology Society (IGES)

Member, Global Alliance for Genomics and Health (GA4GH)

Member, Society for Industrial and Applied Mathematics (SIAM)

Member, Western North American Region International Biometric Society (WNAR)

**FORMAL MENTORING/ADVISING**

**Primary Advisor of PhD Thesis Research**

2019 – Present Nicholas Weaver

2017 – 2020 Megan Null, Dissertation Title: *Advancement of understudied Variants withing Statistical Genetics*; First Position: Visiting Assistant Professor College of Idaho

**Primary Advisor of Statistics Certificate/Master’s Project Research**

2019 – 2020 Jessica Murphy\*, MS Statistics, Project Title: *Accessible Analysis of Longitudinal Data with Linear Mixed Effects Models*

2019 – 2020 Lee Panter, MS Statistics, Project Title: *Comparing Models of Subject-Clustered Single-Cell Data*

2019 – 2020 Valentinas Sungaila, MS Statistics, Project Title: *Exploring Gao et al. as a method for finding the effective number of independent tests in metabolomic data*

2018 – 2019 Matthew Lanz, MS Applied Mathematics, Project Title: *Causal Mediation Analysis: A method study and application*

2018 Sam May, Undergraduate Statistics Certificate, Project Title: *The EM Algorithm and its Application to Finite Mixtures*

2017 Daniel Klie, MS Statistics, Project Title: *Evaluating the Impact of the Promoting Success in Early College Mathematics through Graduate Teacher Training Project*

2017 Leonard Strnad, MS Statistics, Project Title: *Overview and TensorFlow Implementation of Diet Networks: Thin Parameters for Fat Genomics*

2017 Cailin McCloskey, MS Statistics, Project Title: *Studying the Genetics of Melanoma: Data Preparation, Quality Control, and Analysis Design*

2016 - 2017 Megan Sorenson, MS Statistics, Project Title: *Genome-wide analysis of copy number variation and common facial variation in a large cohort of Bantu Africans*

2016 - 2017 Lauren Hall, MS Statistics, Project Title: *Is the False Discovery Rate Higher for Open Access Journals? A Comparison of FDR Estimates in Oncology Journals.*

2016 - 2017 Chinyere Okpara, MS Statistics, Project Title: *Analysis of the Colorado Death Penalty Cases: Beyond Aggravating and Mitigating Factors*

2014 - 2015 Alec McQuilkin, MS Applied Mathematics Statistics Concentration, Project Title: *Incorporating Relatedness in Gene Based Case-Only Analysis of Mendelian Traits*

2014 - 2015 Kraig Thomas, MS Applied Mathematics Statistics Concentration, Project Title: *Modeling Regular Season Winning Percentage in the NFL*

2014 Chad Jeffers, Undergraduate Statistics Certificate, Project Title: *Modeling Regular Season Winning Percentage in the NFL*

2014 Zhiyuan Guan, MS Applied Mathematics Statistics Concentration, Project Title: *How to appropriately account for autocorrelation in financial models*

**Statistical Mentor**

2013 – 2020 Dr. Minghua Tang

CMH-Pilot (Tang, AMC) 2/1/2014 – 1/31/2015 CCTSI

**Statistical Mentor**;“High protein consumption from meat vs. dairy as complementary”

1 K01 DK111665-01 (Tang, AMC) 9/01/2016-8/30/2020 NIH/NIDDK

**Statistical Mentor**; **“**Protein Quality Early in Life: Mechanisms of Growth and Later Obesity Development”

**Advisor for Research Assistants**

2019-present Jessica Murphy, PhD Student, Graduate Research Assistant

2019-present Nicholas Weaver, PhD Student, Graduate Research Assistant

2017 Cailin McCloskey, MS Student, Graduate Research Assistant

2016 – 2017, 2019 Megan Sorenson, PhD Student, Graduate Research Assistant

**Vertically Mentored Research Teams**

*Hidden Ancestries*

2018 - Present Jordan Hall, PhD, Graduate Research Assistant and co-Mentor

2018 - 2020 Katie Marker, PhD, co-Mentor

2020 - Present Sam Chen, BS-Math, Undergraduate Research Assistant

2019 - Present Ian Arriaga MacKenzi, BS-Math, Undergraduate Research Assistant

2019 - Present Gregory Matesi, BS-Math, Undergraduate Research Assistant

2018 - 2020 Alexandria Ronco, BS-Math, Undergraduate Research Assistant

2018 - 2020 Megan Sorenson, PhD, co-Mentor

2019 Andrew Zerwick, HS teacher, Research Assistant

2018 - 2019 James Vance, BS-Math, Undergraduate Research Assistant

2018 - 2019 Jinyan Lyu, BS-Math (2019), Undergraduate Research Assistant

2018 - 2019 Ryan Scherenberg, BS-Business (2019), Undergraduate Research Assistant

2018 - 2019 Yinfei Wu, BS-Math BS-Economics (2019), Undergraduate Research Assistant

2018 Tiffany Dinh, BS-Biology (2019), Undergraduate Research Assistant

2018 Kendra Koach, BS-Math (2018), Undergraduate Research Assistant

*\*Awards*

* Jessica Murphy, Outstanding Masters Student College of Liberal Arts and Sciences, Fall 2020
* Sam Chen, 3rd place People’s Choice Award for Technology, Engineering, and Math at CU Denver’s Research and Creative Activities Symposium (RaCAS) 2020
* Ian Arriaga MacKenzi, Gregory Matesi, and Alexandria Ronco. Undergraduate Research Opportunity Program, University of Colorado Denver, Award to travel to the International Genetic and Epidemiology meeting to present work (2019)
* Jordan Hall, University of Colorado Graduate School Dean’s Distinguished Student Service Award (2019)

*Longitudinal Mouse Studies*

2019 – Present Nicholas Weaver, PhD, co-Mentor

2019 – Present Jessica Murphy, MS-Statistics, Research Assistant

2019 Pitshou Nzazi Duki, BS-Math, Undergraduate Research Assistant

**Other Undergraduate Research**

2019 - Present Catherine Fitch, Mentor for mini-UROP research project

\* Awards

* 2nd place Social Sciences at CU Denver’s Research and Creative Activities Symposium (RaCAS) 2020

**Lab Rotation/Internship**

2019/2020 Winter Katie Marker, University of Colorado Anschutz Medical Campus, Human Medical Genetics and Genomics Program, PhD Student, Lab Rotation

2018/2019 Winter Evan Sticca, University of Colorado Anschutz Medical Campus, Human Medical Genetics and Genomics Program, PhD Student, Lab Rotation

2018 Spring Hamish Pike, University of Colorado Anschutz Medical Campus, Human Medical Genetics and Genomics Program, PhD Student, Lab Rotation

2016 Winter Ben Kitchen, Denver School of Science and Technology, High School Junior, Intern

**Teaching Assistant Mentor**

Fall 2018 Amit Sengupta, Applied Mathematics PhD Student

AY 2017-2018 Livvia Bechtold, Applied Mathematics PhD Student

AY 2016-2017 Michael Pilosov, Applied Mathematics PhD Student

AY 2015-2016 Aaron Nielson, Applied Mathematics PhD Student

**Committees: PhD Thesis** (\*Committee chair)

*Current:*

Hamish Pike\* (PhD in Human Medical Genetics and Genomics, expected 2021)

Kendra Ferrier\* (PhD in Human Medical Genetics and Genomics, expected 2023)

Evan Sticca (PhD in Human Medical Genetics and Genomics, expected 2023)

*Previous:*

Emileigh Willems\* (2020, PhD in Applied Mathematics concentration in Statistics)

Subrata Paul (2019, PhD in Applied Mathematics concentration in Statistics)

Genevieve Andersen\* (2019, PhD in Human Medical Genetics and Genomics)

Monchai Kooakachai (2019, PhD in Applied Mathematics concentration in Statistics)

Aaron Nielson (2018, PhD in Applied Mathematics)

Sesha Dassanayaka\* (2016, PhD in Applied Mathematics concentration in Statistics)

Daniel Yorgov (2016, PhD in Applied Mathematics concentration in Statistics)

**Committees: Honors Project, Statistics Certificate, Masters Project**

Aixin Zhang (2020, MS in Statistics)

Nicholas Weaver (2019, MS in Statistics)

Michael Ingram (2019, MS in Statistics)

Arlin Tawzer (2019, MS in Statistics)

Gordon Kordas (2019, MS in Biostatistics)

Kate Booth (2019, MS in Applied Mathematics)

Selah Chanthan (2019, MS in Statistics)

Emileigh Willems (2018, MS in Statistics)

Xingmeng Zhao (2017, MS in Applied Mathematics)

Jason Fagerness (2017, MS in Applied Mathematics)

Lucas Ortiz (2016, MS in Applied Mathematics Concentration in Statistics)

Long Fu (2016, MS in Applied Mathematics)

Mengjie Yao (2016, MS in Applied Mathematics)

Nathaniel Brown (2015, MS in Applied Mathematics)

Takao Miller (2015, MS in Applied Mathematics)

Hannah Dauber (2015, MS in Applied Mathematics)

Lauren Hall (2014, Undergraduate Honors Project)

Melissa Bilbao (2014, MS in Applied Mathematics)

DeVon Farago (2014, Graduate Statistics Certificate)

Andie Nye (2014, MS in Applied Mathematics)

**Mentoring Prior to Fall 2013**

Fall 2012-Summer 2013 Co-mentor Cambridge University MPhil Student, Nathan Nakatsuka, with Inês Barroso at the Wellcome Trust Sanger Institute

Fall 2004-Summer 2009, Advisor, Kappa Alpha Theta – Zeta Mu Chapter, MIT, Cambridge, MA

Fall 2012-Summer 2013

Summer 2009-March 2011 Advisory Board Chairman, Kappa Alpha Theta – Zeta Mu Chapter, MIT, Cambridge, MA

Fall 2003-Spring 2004 Advisor, Kappa Alpha Theta – Eta Iota Chapter, MIT, San Diego, CA

**TEACHING**

**Learning Assistants**

Fall 2019 Lu Vy. “Introduction to Statistical and Machine Learning”, University of Colorado Denver (MATH 4027/5027)

Spring 2019 Samone Hubbart. “Applied Statistics”, University of Colorado Denver, (MATH 4830/5830)

Spring 2018 Mari Kuker and Shannon Robinson. “Introduction to Statistics”, University of Colorado Denver, (MATH 2830)

**Courses Taught**

Applied Statistics MATH 4830/5830 CU Denver

Applied Regression Analysis MATH 4387/5387 CU Denver

Experimental Design (Developed new course in 2014) MATH 4294/5394 CU Denver

Introduction to Mathematical Statistics MATH 4820/5320 CU Denver

Introduction to Statistical and Machine Learning MATH 4027/5027 CU Denver

(Developed new course in 2019)

Introduction to Statistics MATH 2830 CU Denver

Statistical and Machine Learning / MATH 6388 CU Denver

Advanced Statistical Methods for Research

Topics in Applied Mathematics – Experimental Design MATH 5027 CU Denver

(Developed new course in 2016)

Introduction to Statistical Computing BIOS 723 Boston University SPH

**Readings Courses (1 credit)**

Summer 2020 Machine Learning, 2 enrolled graduate students

Summer 2019 Non-parametric Longitudinal Analysis, 1 enrolled graduate student

Spring 2019 Mixed Linear Effects Models with application to immune deficient mice studies, 1 enrolled graduate student

Fall 2017 Deep Learning: A new application to genetics, 11 enrolled graduate students

Fall 2016 A new method to incorporate publicly available data, 7 enrolled graduate students

Summer 2015 Cluster Analysis, 2 enrolled graduate students

Fall 2014 Kernels, 2 enrolled graduate students

**Independent Studies**

Summer 2020 Gregory Matesi and Mesbah Najafi, Masters, *Introduction to Machine and Statistical Learning*

Spring 2020 River Bond, PhD, *Introduction to Machine and Statistical Learning*

Fall 2019 Lee Panter, Masters, *Single Cell Analysis with Generalized Estimating Equations and Linear Mixed Effects Models*

Summer 2019 Jessica Murphy, Masters, *Linear Mixed Effects Models with an Application to Mouse Studies*

Spring 2019 Gregory Matesi, undergraduate, *Mixture Models with an Application to Identifying Hidden Ancestries*

Fall 2018 Alexandria Ronco, undergraduate, *Hidden Ancestries*

Fall 2018 Jinyan Lyu, undergraduate, *Bootstrapping and Extensions*

Summer 2018 Samuel May, *Master's Project Course: The EM Algorithm and its Application to Finite Mixtures*

Spring 2018 Sebastian Del barco, undergraduate, *Distributions! A new look U.S. Median House Prices after the 2008 Housing Crisis*

Fall 2017 Leonard Strnad, MS, *Master's Project Course: Deep Learning, Genomic Data and TensorFlow*

Fall 2017 Cailin McCloskey, MS, *Master's Project Course: Studying the Genetics of Melanoma: Data Preparation, Quality Control, and Analysis Design*

Fall 2017 Sebastian Del barco, undergraduate, *Generalized Linear Models with an Application to Time to Brain Metastasis and Response to Immunotherapy in Melanoma Patients*

Spring 2017 Chinyere Okpara, MS, *Master's Project Course: Analysis of the Colorado Death Penalty Cases:Beyond Aggravating and Mitigating Factors*

Summer 2017 Daniel Klie, MS, *Master's Project Course: Promoting Success in Early College Mathematics through Graduate Teacher Training Project*

**Lectures**

Summer 2016-2019 Instructor (week of morning instruction), “Fitting Models to Data”, Colorado Summer Institute for Biostatistics (Co-SIBs), Colorado School of Public Health

Spring 2015-2018 Faculty Lecturer, “Sequence Based Studies”, University of Colorado, Anschutz Medical Campus, HMGP7600: Graduate Survey of Human Genetics

Fall 2016 Faculty Lecturer, “Methods for studying rare variants in next generation sequencing data”, University of Colorado, Anschutz Medical Campus, BSBT 6111: Introduction to Biomedical Data Science

Fall 2014-2015 Instructor (a week of instruction), “Exome Sequencing: annotation, quality control, and analysis”, Wellcome Genome Campus, Advanced Course on Exome Sequencing

Spring 2012 & Fall 2013 Lecturer, “Complex Diseases & Exome Sequencing: An introduction to study design and analysis”, Wellcome Genome Campus, Advanced Course on Exome Sequencing

Spring 2011 Lecturer, “Sequence Data: The statistical analysis of rare variants”, Boston University School of Public Health, (Applied Statistical Genetics; Biostatistics 859)

Fall 2009 Lecturer, “Methods of Evidence-Based Medicine and Decision Analysis”, Boston University Medical School

Spring & Summer 2009 Lecturer, “Statistical Genetics”, Upward Bound—a program for high school students who are aiming to be first generation college students

**Teaching Assistant**

Biostatistics in Epidemiology BIOS 852 Boston University SPH

Genetics and Genomics Genetics 701 Boston University SGMS

Introduction to Biostatistics E-102 Harvard Extension School

Introduction to Statistics E-50 Harvard Extension School

UNIVERSITY SERVICE AND LEADERSHIP

**Administrative Responsibilities**

2016 – Present Organizer for the Statistical Genetics Working Group bi-weekly meetings

2018 – Present Organizer for Mathematical and Statistical Sciences Departmental Open House

**College Committees**

2020 CLAS Excellence in Research Review Committee

2018 CLAS Strategic Planning Initiative Student Success Subcommittee

**Mathematical and Statistical Sciences Departmental Committees**

2019-present Graduate Admissions Committee

2018-2019 Search Committee for Assistant Professor of Optimization

2017-2019 Executive Committee

2013-2014, 2015-2018 Undergraduate Committee

2013-2017 Statistics Committee to revise statistics curriculum

2013-2016 Search Committee for Assistant Professor of Statistics

2014-2015 Graduate Committee

2014-2015 Merit Committee

**Other Departmental Committees**

2018 – Present Human Medical Genetics and Genomics Seminar Committee

SERVICE TO THE PROFESSION

**Associate Editor**

**Study Sections**

Member of a NIH Study Section for Fellowships, (Fall 2014 & 2015, Summer 2016, 2017, & 2018)

**Committees and Leadership Positions**

International Genetic and Epidemiology Society (IGES) Young Investigator Committee (Fall 2015 – Fall 2018)

Boston Chapter of the American Statistical Association, Vice President (2010)

Boston Chapter of the American Statistical Association, Planning Committee (2009-2011)

**Chaired Sessions**

Genome Sequencing Program and Trans-Omics for Precision Medicine (GSP-TOPMed) Analysis Workshop

* 2020, *Variant Functional Annotation* Resources

Joint Statistical Meeting

* 2019 (impromptuchair), *SPEED: Statistical Methods for GWAs, Genetics, Genomics, and Other Omics Studies, Part 1*

International Genetic and Epidemiology Society Meeting

* 2015, *Cross-Consortia and Mega-Cohorts: Ongoing and future directions*
* 2019, *Polygenic Trait Genetics II*

**Mentorship**

American Society of Human Genetics (ASHG) Mentor-Mentee Lunch (2014, 2016, 2017, 2018)

International Genetics and Epidemiology Society (IGES) Mentor-Mentee Lunch (2018, 2019)

**Other**

Organized judging for trainee poster competition for International Genetic and Epidemiology Society Young Investigator Committee (Fall 2016 & 2018)

SCIENCE COMMUNICATION AND OUTREACH

August 2019 Panel on Research in Data Science, Data Science Symposium, CU Denver

May 2016 Math Teacher’s Circle

April 2016 Lecture at The Carillon, an assisted living community, entitled *Stats in the News*

April 2016 Panel for Women in STEM, CU Denver

March 2016 *Statistics in the News*, Mini-STEM, University of Colorado Denver

PEER REVIEW - JOURNALS

American Journal of Clinical Nutrition, American Journal of Human Genetics, Bioinformatics, BMC Bioinformatics, BMC Biology, Circulation, Clinical Genetics, The European Journal of Human Genetics, eLIFE, GAW Proceedings, Genetic Epidemiology, Human Genetics, Journal of the American Heart Association, Nature Genetics, PLoS Genetics, and others