

## STEPHANIE A. SANTORICO, PH.D.

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### SUMMARY OF BACKGROUND

I have a track record of impactful research in methods development and design in statistical genetics and genomics as well as in development of programs in statistics and in statistical genetics. My positions have all had substantial research and teaching components. I enjoy working with and mentoring students and believe that I best serve their interests by striving to conduct meaningful research and using this experience to contextualize course material. Hence, I place great importance on both my research and teaching responsibilities and accomplishments. In addition, I have a sustained record of quality service and leadership to my department, university, and the larger scientific community.

### CURRENT GOALS

I am passionate about interdisciplinary high-impact research, and particularly interested in new collaborations focusing on translation of genetic findings into practice. In addition, I am seeking new leadership opportunities in program development, mentorship, and student success.

### RESEARCH INTERESTS

Methods and Designs in Statistical Genetics and Genetic Epidemiology including High-Dimensional Data, Multivariate Statistical Inference, Genetic Risk Prediction and Disease Subtyping, Variance Components Methods, Multivariate Linkage, Family-Based Association Tests, and Meta-Analysis

### EDUCATION

1999	Ph.D. in Statistics	North Carolina State University
1996	Master of Statistics	North Carolina State University
1993	B.S. in Mathematics with Minors In Physics and Computer Science	Northeastern State University

### PROFESSIONAL EXPERIENCE

2018-present	Secondary appointment, Division of Biomedical Informatics and Personalized Medicine, CU Denver
2018-present	Graduate Co-chair, Dep't of Mathematical and Statistical Sciences, CU Denver

2017-present Director of Statistical Programs, Dep't of Math. and Stat. Sciences, CU Denver  
 2017-present Professor, Dep't of Mathematical and Statistical Sciences, CU Denver  
 2012-present Training Faculty, Human Medical Genetics Program, CU Denver  
 2010-present Associated Faculty, Computational Bioscience Program, CU Denver  
 2008-present Secondary appointment, Professor, Dep't of Biostatistics and Informatics, CU Denver  
 2016-2017 Graduate Chair, Dep't of Mathematical and Statistical Sciences, CU Denver  
 2009-2011 Graduate Chair, Dep't of Mathematical and Statistical Sciences, CU Denver  
 2008-2017 Associate Professor, Dep't of Mathematical and Statistical Sciences, CU Denver  
 2006-2008 Associate Professor, Department of Statistics, Oklahoma State University  
 2006-2008 Undergraduate Director, Department of Statistics, Oklahoma State University  
 2004-2008 Affiliate Assistant Professor, Dep't of Biostatistics, University of Washington  
 2004-2006 Assistant Professor, Department of Statistics, Oklahoma State University  
 2003-2005 Consultant, Rosetta Inpharmatics Inc.  
 2001-2003 Senior Statistician, Rosetta Inpharmatics Inc.  
 1999-2004 Assistant Professor, Inst. for Public Health Genetics, University of Washington  
 1999-2004 Assistant Professor, Department of Biostatistics, University of Washington  
 1997-1999 Fellow, Biostatistics Branch, National Institute of Environmental Health Sciences  
 1996-1997 Staff Scientist, NeuralMed, Inc.  
 1996 Statistical Intern, GlaxoWellcome, Inc.  
 1995-1996 Instructor, North Carolina State University

## PEER REVIEWED PUBLICATIONS

*In press* Jin Y, **Santorico SA**, Spritz RA. Pediatric to Adult Shift in Vitiligo Onset Suggests Altered Environmental Triggering. *J Invest Dermatol.* 2020;140(1):241-3.e4. Epub 2019/06/28. doi: 10.1016/j.jid.2019.06.131. PubMed PMID: 31260671

*In press* Roberts GHL, **Santorico SA**, Spritz RA. The genetic architecture of vitiligo. *Pigment Cell & Melanoma Research.* doi: 10.1111/pcmr.12848. PubMed PMID: WOS:000500510900001.

*In press* Wan JY, Cataby C, Liem A, Jeffrey E, Norden-Krichmar TM, Goodman D, **Santorico SA**, Edwards KL, GENNID. Evidence for gene-smoking interactions for hearing loss and deafness in Japanese American families. *Hear Res.* 2019;387:107875. Epub 2019/12/24. doi: 10.1016/j.heares.2019.107875. PubMed PMID: 31896498.

*In press* Willems EL, Wan JY, Norden-Krichmar TM, Edwards KL, **Santorico SA**. Transethnic meta-analysis of metabolic syndrome in a multiethnic study. *Genetic Epidemiology.* doi: 10.1002/gepi.22267. PubMed PMID: WOS:000492081000001.

2019 Kooakachai M, LaBerge G, **Santorico SA**. A new framework to test parent-child and full sibling relationships with population substructure. *Forensic Science*

International. 2019;305. doi: 10.1016/j.forsciint.2019.110012. PubMed PMID: WOS:000500765300019

- 2019 Pouget JG, Han B, Wu Y, Mignot E, Ollila HM, Barker J, et al. Cross-disorder analysis of schizophrenia and 19 immune-mediated diseases identifies shared genetic risk. *Hum Mol Genet.* 2019;28(20):3498-513. doi: 10.1093/hmg/ddz145. PubMed PMID: 31211845.
- 2019 Roberts GHL, Paul S, Yorgov D, **Santorico SA**, Spritz RA. Family Clustering of Autoimmune Vitiligo Results Principally from Polygenic Inheritance of Common Risk Alleles. *American Journal of Human Genetics.* 2019;105(2):364-72. doi: 10.1016/j.ajhg.2019.06.013. PubMed PMID: WOS:000478022200010.
- 2019 Jin Y, ..., **Santorico SA**, Spritz RA. Early-onset autoimmune vitiligo associated with an enhancer variant haplotype that upregulates class II HLA expression. *Nature Communications* 10:391. <https://doi.org/10.1038/s41467-019-08337-4>
- 2018 Kinney GL, **Santorico SA**, et al. Identification of Chronic Obstructive Pulmonary Disease Axes That Predict All-Cause Mortality: The COPDGene Study. *A J of Epidem.* 187 (10): 2109–2116. <https://doi.org/10.1093/aje/kwy087>
- 2018 Ben ST, Jin Y, **Santorico SA**, Spritz RA. Genome-Wide Association of PVT1 with Vitiligo. *Journal of Investigative Dermatology.* 2018;138(8):1884-6. doi: 10.1016/j.jid.2018.02.025. PubMed PMID: WOS:000439136200040
- 2018 Cole JB, ...**Santorico SA**, ..., Spritz RA, Hallgrimsson B. Facial shape manifestations of growth faltering in Tanzanian children. *J. Anat.* 232: 250-262. doi: 10.1111/joa.12748
- 2017 Garneau NL, Nuessle TM, Tucker RM, Yao M, **Santorico SA**, Mattes RD. Taste Sensitivity to Linoleic Acid is Heritable: A Crowdsourced Population Study. *Chemical Senses.* 42 (9): 769–775, doi:10.1093/chemse/bjx058
- 2017 Cole JB, Manyama MF, Larson J, Liberton DK, Ferrara TM, Riccardi SL, Li M, Mio W, Klein O, **Santorico SA**, Hallgrimsson B, Spritz RA. Human Facial Shape and Size Heritability and Genetic Correlations. *Genetics.* 205(2):967-978. doi: 10.1534/genetics.116.193185
- 2017 Jin Y, **Santorico SA**, Spritz RA. Multiple Functional Variants of IFIH1, a Gene Involved in Triggering Innate Immune Responses, Protect against Vitiligo. *J Invest Dermatol.* 137: 522-524. doi:10.1016/j.jid.2016.09.021

- 2017 Li M, Cole JB, Manyama M, Larson JR, Liberton DK, Riccardi SL, Ferrara TM, **Santorico SA** et al. Rapid automated landmarking for morphometric analysis of three-dimensional facial scans. *J Anat.* 230: 607–618. doi:10.1111/joa.12576
- 2017 Wang Z, Manichukal A, Goff DC, Mora S, Ordovas JM, Pajewski NM, ... **Santorico SA**, et al. Genetic associations with lipoprotein subfraction measures differ by ethnicity in the multi-ethnic study of atherosclerosis (MESA). *Hum Genet.* Springer Berlin Heidelberg; 136(6):715–26. doi: 10.1007/s00439-017-1782-y
- 2016 Jin Y, ..., **Santorico SA**, Spritz RA. Genome-wide association studies of autoimmune vitiligo identify 23 new risk loci and highlight key pathways and regulatory variants. *Nat Genet.* 2016;48(11):1418-24. doi: 10.1038/ng.3680
- 2016 Shaffer JR, Orlova E, ..., **Santorico SA** et al. Genome-Wide Association Study Reveals Multiple Loci Influencing Normal Human Facial Morphology. *PLOS Genetics* 12(8): e1006149. doi: 10.1371/journal.pgen.1006149. Top 50 most downloaded of 2016 PLOS Genetics articles
- 2016 Cole JB, Manyama MF, Kimwaga E, Mathayo J, Larson J, Liberton DK, Lukowiak K, Ferrara TM, Riccardi SL, Li M, Mio W, Prochazkova M, Klein O, Williams T, Li H, Jones KL, **Santorico SA**, Hallgrímsson B, Spritz RA. Genomewide Association Study of African Children Identifies Association of SCHIP1 and PDE8A with Facial Size and Shape. *PLOS Genetics* 12(8): e1006174. doi: 10.1371/journal.pgen.1006174
- 2016 Brumbaugh D, Arruda J, Robbins K, Ir D, **Santorico SA**, Robertson CE, Frank DN. Mode of Delivery Determines Neonatal Pharyngeal Bacterial Composition and Early Intestinal Colonization. *Journal of Pediatric Gastroenterology & Nutrition.* 63(3):320-328. doi:10.1097/MPG.0000000000001124
- 2016 Lemas DJ, Young BE, Baker PR, Tomczika A, Soderborga TK, Hernandez TL, de la Houssaye BA, Robertson CE, Rudolph MC, Ir D, Patinkin ZW, Krebs NF, **Santorico SA**, Weir T, Barbour LA, Frank DN, Friedman JE. Alterations in human milk leptin and insulin are associated with early changes in the infant intestinal microbiome. *Am J Clin Nutr* 2016;103(5):1291–300. doi: 10.3945/ajcn.115.126375
- 2016 **Santorico SA**, Hendricks AE. Progress in methods for rare variant association. *BMC Genetics*; 17(S2):6. doi:10.1186/s12863-015-0316-7
- 2015 Cavalli G, Hayashi M, Jin Y, Yorgov D, **Santorico SA**, Holcomb C, et al. MHC class II super-enhancer increases surface expression of HLA-DR and HLA-DQ and affects cytokine production in autoimmune vitiligo. *Proceedings of the National Academy of Sciences.* 2015;113(5). DOI:10.1073/pnas.1523482113

- 2015 Hayashi M, Jin Y, Yorgov D, **Santorico SA**, Hagman J, Ferrara TM. Autoimmune vitiligo is associated with gain-of- function by a transcriptional regulator that elevates expression of HLA-A \* 02 : 01 in vivo. Proceedings of the National Academy of Sciences. 2015;113(5). DOI:10.1073/pnas.1525001113
- 2015 Feazel LM, **Santorico SA**, Robertson CE, Bashraheil M, Scott JAG, Frank DN, Hammitt LL. Effects of Vaccination with 10-Valent Pneumococcal Non-Typeable Haemophilus influenza Protein D Conjugate Vaccine (PHiD-CV) on the Nasopharyngeal Microbiome of Kenyan Toddlers. Plos One. 2015;10(6). DOI:10.1371/journal.pone.0128064. PubMed PMID: WOS:000356567400026
- 2015 Nuessle TM, Garneau NL, Sloan MM, **Santorico SA**. Denver Papillae Protocol for Objective Analysis of Fungiform Papillae. Journal of visualized experiments: JoVE. 2015(100):e52860. DOI:10.3791/52860. PubMed PMID: MEDLINE:26131644
- 2014 Bickeböllner H, Bailey JN, Beyene J, Cantor RM, Cordell HJ, Culverhouse RC, Engelman CD, Fardo DW, Ghosh S, König IR, Bermejo JL, 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;8(Suppl 1):S1.
- 2014 Bowler RP, Kim V, Regan E, Williams AAA, **Santorico SA**, Make BJ, Lynch DA, Hokanson JE, Washko GR, Bercz P, Soler X, Marchetti N, Criner GJ, Ramsdell J, Han MK, Demeo D, Anzueto A, Comellas A, Crapo JD, Dransfield M, Wells JM, Hersh CP, MacIntyre N, Martinez F, Nath HP, Niewoehner D, Sciruba F, Sharafkhaneh A, Silverman EK, van Beek EJ, Wilson C, Wendt C, Wise RA, Investigators CO. Prediction of Acute Respiratory Disease in Current and Former Smokers With and Without COPD. Chest. 2014;146(4):941-50. DOI:10.1378/chest.13-2946. PubMed PMID: WOS:000343570400023.
- 2014 Castaldi PJ, Dy J, Ross J, Chang Y, Washko GR, Curran-Everett D, Williams A, Lynch DA, Make BJ, Crapo JD, Bowler RP, Regan EA, Hokanson JE, Kinney GL, Han MK, Soler X, Ramsdell JW, Barr RG, Foreman M, van Beek E, Casaburi R, Criner GJ, Lutz SM, Rennard SI, **Santorico S**, Sciruba FC, DeMeo DL, Hersh CP, Silverman EK, Cho MH. Cluster analysis in the COPD Gene study identifies subtypes of smokers with distinct patterns of airway disease and emphysema. Thorax. 2014;69(5):415-22. DOI:10.1136/thoraxjnl-2013-203601. PubMed PMID: WOS:000334397800006.
- 2014 Garneau NL, Nuessle TM, Sloan MM, **Santorico SA**, Coughlin BC, Hayes JE. Crowdsourcing taste research: genetic and phenotypic predictors of bitter taste perception as a model. Frontiers in integrative neuroscience. 2014;8:33-. DOI:10.3389/fnint.2014.00033. PubMed PMID: MEDLINE:24904324.

- 2014 **Santorico SA**, Edwards KL. Challenges of Linkage Analysis in the Era of Whole-Genome Sequencing. *Genetic Epidemiology*. 2014;38:S92-S6. DOI:10.1002/gepi.21832. PubMed PMID: WOS:000340610500015.
- 2014 Yorgov D, Edwards KL, **Santorico SA**. Use of admixture and association for detection of quantitative trait loci in the Type 2 Diabetes Genetic Exploration by Next-Generation Sequencing in Ethnic Samples (T2D-GENES) study. *BMC proceedings*. 2014;8(Suppl 1):S6.
- 2013 Razzaghi H, Tempczyk-Russell A, Haubold K, **Santorico SA**, Shokati T, Christians U, Churchill ME. Genetic and structure-function studies of missense mutations in human endothelial lipase. *PloS one*. 2013;8(3):e55716.
- 2012 Razzaghi H, **Santorico SA**, Kamboh MI. Population-Based Resequencing of LIPG and ZNF202 Genes in Subjects with Extreme HDL Levels. *Frontiers in genetics*. 2012;3. PubMed PMID: MEDLINE:22723803
- 2012 Wu H, Wu MC, Zhi D, **Santorico SA**, Cui X. Statistics for next generation sequencing - meeting report. *Frontiers in genetics*. 2012;3:128-. PubMed PMID: MEDLINE:22811695.
- 2011 Edwards KL, Wan JY, Hutter CM, Fong PY, **Santorico SA**. Multivariate Linkage Scan for Metabolic Syndrome Traits in Families With Type 2 Diabetes. *Obesity*. 2011;19(6):1235-43. DOI:10.1038/oby.2010.299. PubMed PMID: WOS:000291021600019.
- 2011 Morris TL, Payton ME, **Santorico SA**. A Permutation Test for Compound Symmetry with Application to Gene Expression Data. *Journal of Modern Applied Statistical Methods*. 2011;10(2):6.
- 2011 Wan JY, Edwards KL, **Santorico SA**. Investigating Genetic and Environmental Correlations between Traits of the Metabolic Syndrome in the Multi-Ethnic GENNID Study. *JP Journal of Biostatistics*. 2011;6(2):77 - 96.
- 2010 Kippola TA, **Santorico SA**. Methods for Combining Multiple Genome-Wide Linkage Studies. In: Bang HZXKMMVHL, editor. *Statistical Methods in Molecular Biology* 2010. p. 541-60.
- 2008 Bis JC, Heckbert SR, Smith NL, Reiner AP, Rice K, Lumley T, Hindorff LA, Marcianti KD, Enquobahrie DA, **Monks SA**, Psaty BM. Variation in inflammation-related genes and risk of incident nonfatal myocardial infarction or ischemic stroke. *Atherosclerosis*. 2008;198(1):166-73. DOI:10.1016/j.atherosclerosis.2007.09.031. PubMed PMID: WOS:000255491800020.

- 2008 Edwards KL, Hutter CM, Wan JY, Kim H, **Monks SA**. Genome-wide linkage scan for the metabolic syndrome: The GENNID study. *Obesity*. 2008;16(7):1596-601. DOI:10.1038/oby.2008.236. PubMed PMID: WOS:000257325300020.
- 2007 Marciante KD, Bis JC, Rieder MJ, Reiner AP, Lumley T, **Monks SA**, Kooperberg C, Carlson C, Heckbert SR, Psaty BM. Renin-angiotensin system haplotypes and the risk of myocardial infarction and stroke in pharmacologically treated hypertensive patients. *American Journal of Epidemiology*. 2007;166(1):19-27. DOI:10.1093/aje/kwm059. PubMed PMID: WOS:000247530400005.
- 2006 French B, Lumley T, **Monks SA**, Rice KM, Hindorff LA, Reiner AP, Psaty BM. Simple estimates of haplotype relative risks in case-control data. *Genetic Epidemiology*. 2006;30(6):485-94. DOI:10.1002/gepi.20161. PubMed PMID: WOS:000239851900003.
- 2006 Hing AV, LeBlond C, Sze RW, Starr JR, **Monks S**, Parisi MA. A novel oculo-oto-facial dysplasia in a native Alaskan community with autosomal recessive inheritance. *American Journal of Medical Genetics Part A*. 2006;140A(8):804-12. DOI:10.1002/ajmg.a.31160. PubMed PMID: WOS:000236571700002.
- 2006 Sieh W, Edwards KL, Fitzpatrick AL, Srinouanprachanh SL, Farin FM, **Monks SA**, Kronmal RA, Eaton DL. Genetic susceptibility to prostate cancer: prostate-specific antigen and its interaction with the androgen receptor (United States). *Cancer Causes & Control*. 2006;17(2):187-97. DOI:10.1007/s10552-005-0454-8. PubMed PMID: WOS:000234754500008.
- 2005 Kim H, Hutter CM, **Monks SA**, Edwards KL. Comparison of single-nucleotide polymorphisms and microsatellites in detecting quantitative trait loci for alcoholism: The Collaborative Study on the Genetics of Alcoholism. *Bmc Genetics*. 2005;6. DOI:S5 10.1186/1471-2156-6-s1-s5. PubMed PMID: WOS:000236103400005.
- 2005 **Monks SA**. Statistical Issues in Ecogenetic Studies. *Gene-Environment Interactions: Fundamentals of Ecogenetics*. 2005:73-88.
- 2005 Simon JS, Karnoub MC, Devlin DJ, Arreaza MG, Qiu P, **Monks SA**, Severino ME, Deutsch P, Palmisano J, Sachs AB, Bayne ML, Plump AS, Schadt EE. Sequence variation in NPC1L1 and association with improved LDL-cholesterol lowering in response to ezetimibe treatment. *Genomics*. 2005;86(6):648-56. DOI:10.1016/j.ygeno.2005.08.007. PubMed PMID: WOS:000234396200003.
- 2005 Schadt EE, Lamb J, Yang X, Zhu J, Edwards S, GuhaThakurta D, Sieberts SK, **Monks S**, Reitman M, Zhang CS, Lum PY, Leonardson A, Thieringer R, Metzger JM, Yang LM, Castle J, Zhu HY, Kash SF, Drake TA, Sachs A, Lusis AJ. An integrative genomics

approach to infer causal associations between gene expression and disease. *Nature Genetics*. 2005;37(7):710-7. DOI:10.1038/ng1589. PubMed PMID: WOS:000230196400017.

- 2004 **Monks SA**, Leonardson A, Zhu H, Cundiff P, Pietrusiak P, Edwards S, Phillips JW, Sachs A, Schadt EE. Genetic inheritance of gene expression in human cell lines. *American Journal of Human Genetics*. 2004;75(6):1094-105. DOI:10.1086/426461. PubMed PMID: WOS:000224866400013.
- 2003 Austin MA, Edwards KL, **Monks SA**, Koprowicz KM, Brunzell JD, Motulsky AG, Mahaney MC, Hixson JE. Genome-wide scan for quantitative trait loci influencing LDL size and plasma triglyceride in familial hypertriglyceridemia. *Journal of Lipid Research*. 2003;44(11):2161-8. DOI:10.1194/jlr.M300272-JLR200. PubMed PMID: WOS:000187011300016.
- 2003 Schadt EE, **Monks SA**, Drake TA, Lusk AJ, Che N, Colinayo V, Ruff TG, Milligan SB, Lamb JR, Cavet G, Linsley PS, Mao M, Stoughton RB, Friend SH. Genetics of gene expression surveyed in maize, mouse and man. *Nature*. 2003;422(6929):297-302. DOI:10.1038/nature01482. PubMed PMID: WOS:000181637300037.
- 2003 Schadt EE, **Monks SA**, Friend SH. A new paradigm for drug discovery: integrating clinical, genetic, genomic and molecular phenotype data to identify drug targets. *Biochemical Society Transactions*. 2003;31:437-43. DOI:10.1042/bst0310437. PubMed PMID: WOS:000182338800032.
- 2002 Hastings MD, Bates SJ, Blackstone EA, **Monks S**, Mutabingwa TK, Sibley CH. Highly pyrimethamine-resistant alleles of dihydrofolate reductase in isolates of *Plasmodium falciparum* from Tanzania. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 2002;96(6):674-6. DOI:10.1016/s0035-9203(02)90349-4. PubMed PMID: WOS:000181165200024.
- 2002 LaGasse JM, Palmer JP, Brantley MS, Nepom GT, Leech NJ, McCulloch DK, Rowe RE, Hagopian WA, **Monks S**. Successful prospective prediction of type 1 diabetes in schoolchildren through multiple defined autoantibodies - An 8-year follow-up of the Washington State Diabetes Prediction Study. *Diabetes Care*. 2002;25(3):505-11. DOI:10.2337/diacare.25.3.505. PubMed PMID: WOS:000174168500015.
- 2002 Mberu EK, Nzila AM, Nduati E, Ross A, **Monks S**, Kokwaro GO, Watkins WM, Sibley CH. *Plasmodium falciparum*: in vitro activity of sulfadoxine and dapsone in field isolates from Kenya: point mutations in dihydropteroate synthase may not be the only determinants in sulfa resistance. *Experimental Parasitology*. 2002;101(2-3):90-6. DOI:Pii s0014-4894(02)00108-x 10.1016/s0014-4894(02)00108-x. PubMed PMID: WOS:000179436600002.



- 2000 Martin ER, **Monks SA**, Warren LL, Kaplan NL. A test for linkage and association in general pedigrees: The pedigree disequilibrium test. *American Journal of Human Genetics*. 2000;67(1):146-54. DOI:10.1086/302957. PubMed PMID: WOS:000088926900017.
- 2000 **Monks SA**, Kaplan NL. Removing the sampling restrictions from family-based tests of association for a quantitative-trait locus. *American Journal of Human Genetics*. 2000;66(2):576-92. DOI:10.1086/302745. PubMed PMID: WOS:000088373100025.
- 2000 Nzila AM, Nduati E, Mberu EK, Sibley CH, **Monks SA**, Winstanley PA, Watkins WM. Molecular evidence of greater selective pressure for drug resistance exerted by the long-acting antifolate pyrimethaminel/sulfadoxine compared with the shorter-acting chlorproguanil/dapsone on Kenyan Plasmodium falciparum. *Journal of Infectious Diseases*. 2000;181(6):2023-8. DOI:10.1086/315520. PubMed PMID: WOS:000087923900021.
- 1999 Anderson JL, Hauser ER, Martin ER, Scott WK, Ashley-Koch A, Kim KJ, **Monks SA**, Haynes CS, Speer MC, Pericak-Vance MA. Complete genomic screen for disease susceptibility loci in nuclear families. *Genetic Epidemiology*. 1999;17:S473-S8. PubMed PMID: WOS:000083945800074.
- 1999 **Monks SA**, Martin ER, Umbach DM, Kaplan NL. Two tests of association for a susceptibility locus for families of variable size: An example using two sampling strategies. *Genetic Epidemiology*. 1999;17:S655-S60. PubMed PMID: WOS:000083945800105.
- 1998 **Monks SA**, Kaplan NL, Weir BS. A comparative study of sibship tests of linkage and/or association. *American Journal of Human Genetics*. 1998;63(5):1507-16. DOI:10.1086/302104. PubMed PMID: WOS:000076985200027.

#### PEER REVIEWED BOOK CHAPTER

- 2015 Moore CM, Wagner BD, Kroehl M, **Santorico SA**, Juarez-Colunga E, Lutz S, Barón AE (2015) Vignette 7.3 Women in Biostatistics: A Case of Success in the United States in *Advancing Women in Science – An International Perspective*. Springer

#### PUBLICATIONS IN PROGRESS

- In revision* Mountain BJ, **Santorico SA**, LaBerge G. A Comparative Analysis of Likelihood Ratio Statistical Ranking to Expected Match Ratios and Estimated Kinship Ratios for Familial DNA Search Applications
- In revision* Garneau NL, Schowinsky V, Santorico SA, Mattes RD, Tucker RM. Evidence for Genetic Variation in GPR120 and Fatty Acid Taste Response

*In revision* Yorgov D, Santorico SA. A High-Resolution Simulated Latinos Dataset with Inferred Local Ancestries

*Submitted* Roberts GHL, Santorico SA, Spritz RA. Deep Genotype Imputation Captures Virtually All Heritability of Autoimmune Vitiligo

## FUNDED GRANTS

NIH R25 HL131486      Kittleson (PI)      1/15/2016-12/31/2018  
Colorado Summer Institute in Biostatistics (CoSIBS)  
Role: Co-I, Instructor and Group Mentor

NIH R03 DE025363      Shaikh (PI)      9/1/2015-5/31/2017  
Genomewide Copy Number Variation Analysis and Association with Facial Shape Variation  
Role: Co-I

CU Denver CRISP grant      Santorico (PI)      7/1/2015-8/31/2015  
Genetic variation in a putative fat receptor protein and its effect on oral fat detection  
Role: PI

CU Denver BIPM      Santorico (PI)      6/1/2015-5/31/2016  
Optimized genetic risk prediction for vitiligo and its use to define disease subtypes Role: PI

NIH R01 AR065951      Spritz (PI)      4/1/2014- 3/31/2017  
Identification and Analysis of Causal Variants: Follow-Up on Genome-Wide Association Studies for Arthritis and Musculoskeletal and Skin Diseases  
Role: Co-I

NIH R01 HL113189      Edwards (PI)      2/1/2014 - 03/31/2017  
Identifying Genes Underlying Linkage Peaks for Clusters of CVD Risk Factors in a Multi-Ethnic Family Study  
Role: Sub-contract PI

NIJ 2013-DN-BX-K005      Spritz (PI)      4/1/2014- 3/31/2017  
Genetic Analysis of Facial Shape and Appearance  
Role: Co-I

NIH R01 AR056292      Spritz (PI)      7/1/2013 - 6/30/2017  
Genetic Studies of Vitiligo  
Role: Co-I

Linda Crnic Institute      Spritz (PI)      4/1/2013 – 3/31/14  
Genetic Analysis of Autoimmunity in Down Syndrome

Role: Co-I

ADA 1-13-GSK-13 Friedman (PI) 1/1/2013-12/31/2015  
Role of maternal obesity and type 2 diabetes on development of the infant microbiome and adiposity

Role: Co-I

NIH R01 HL089897 Crapo/Silverman (PIs) 8/1/2012-7/31/2015  
Genetic Epidemiology of COPD

Role: Co-I

NIH X01 HG006829 Spritz (PI) 12/15/2011 – 12/14/2016  
GWAS of Orofacial Shape in Africans

Role: Co-I

CU Denver, Center for Faculty Development 7/1/2009-6/31/2010  
Creation of an online tutorial for R statistical software

Role: PI

CU Denver, CLAS Santorico (PI) 2009  
Research Dissemination Grant

Role: PI

NIH U01DE020054 Spritz (PI) 9/1/2009-8/31/2014  
Genetic Determinants of Orofacial Shape and Relationship to Cleft Lip/Palate

Role: Co-I

OSU, CAS Monks (PI) 7/2007  
Building a Toolbox for Understanding the Genetics of Complex Traits

Role: PI

OSU A&S Dean's Incentive Grant 7/1/2006-7/31/2006  
Finding Racial Differences in the Genetic and Environmental Causes of the Metabolic Syndrome

Role: PI

Subcontract with UW Childrens Hospital 7/1/2005 – 6/30/2006  
Homozygosity Mapping of Oculo-Oto-Facial Dysplasia

Role: Subcontract PI

Subcontract UW, CHRU Psaty (PI) 9/1/2004 – 8/31/2006  
Anti-hypertensive Drug-Gene Interactions and CV Events

Role: Subcontract PI

OSU A&S Summer Research Grant 8/1/2005-8/31/2005

Separating the Wheat from the Chaff: Use of Dimension Reduction Methods in Large Scale Genomic Studies

Role: PI

OSU A&S Dean's Incentive Grant

7/1/2005-7/31/2005

Using Caution in the Analysis of Multi-site Human Genetic Studies

Role: PI

Subcontract UW Edwards (PI)

8/16/2004 – 8/15/2005

Centers for Genomics and Public Health

Role: Subcontract PI

Rosetta Inpharmatics Monks (PI)

8/1/2002-7/31/2004

Genetics of Gene Expression for Identification of Susceptibility Genes

Role: PI

UW-Biostatistics Monks (PI)

7/1/2003-6/30/2004

Elucidating the genetic web: a theoretical framework for model-free tests of genetic interaction

Role: PI

NIH R01 CA097934 Lagunoff (PI)

4/1/2003-3/31/2004

Interactions of KSHV and Endothelial Cells

Role: Co-I

NIH R01 GM032618 Nester (PI)

7/1/2002-2/28/2004

Molecular Basis of Crown Gall Tumorigenesis

Role: Co-I

ACPH/CDC Edwards (PI)

10/1/2001-9/30/2005

UW Center for Genomics and Public Health

Role: Co-I

NIH U01 AG016976 Kukull (PI)

7/1/2000-6/30/2001

Alzheimer's Disease Data Coordinating Center

Role: Co-I

NIH R01 HL050268 Austin (PI)

6/1/2000-5/31/2001

Genetics of the Metabolic Syndrome in Japanese Americans

Role: Co-I

NIH R01 HL049513 Austin (PI)

7/1/1999-6/30/2001

Genetic Epidemiology of Hypertriglyceridemia

Role: Co-I

## INVITED TALKS

- “Cheek to Cheek: Genetic Discoveries and You” CU Denver Inaugural Distinguished Faculty Lecture, video available at [https://youtu.be/kwBZ1\\_3k\\_tY](https://youtu.be/kwBZ1_3k_tY) (April 2019)
- “Cheek to Cheek: Genetic Discoveries and You” Invited talk at the 2019 Mountain States Regional Genetics Network (MSRGN) Genetics Summit (September 2019)
- “It’s all relative: genetic discoveries and you” Seminar at STEAMposium (September 2019)
- “Progress and opportunities in human genetic studies for complex traits” Invited seminar at Colorado State University, Dep’t of Statistics (November 2019)
- “The power of statistics in genetics: examples from forensics, precision medicine, and trans-ethnic studies,” Tulane University, Department of Mathematics (December 2018)
- “Genetic risk prediction for complex traits and its relationship to sub-phenotypes in vitiligo” Symposium on Advances in Genomics, Epidemiology and Statistics (SAGES) (May 2018)
- “Genetic risk prediction for complex traits: an example using generalized vitiligo” 4th annual Mini-Symposium on the Power of Informatics to Advance Health (April 2017)
- “Understanding the genetics of complex traits post GWAS: an example using generalized vitiligo” University of California – Irvine (January 2017)
- Talk at Celebrating the History of NC State Statistics: 75 Years of Excellence – Conference (October 2016)
- “Putting the Person in Genomics” Public seminar at the Denver Museum of Nature & Science (September 2015)
- “Mathematical Modeling of the Effects of Sperm Donor Limits on Consanguinity and Disease Incidence” Annual Meeting for the American Association of Tissue Banks, Keystone, CO (September 2012)
- “An Exploration into the Microbiome” Department of Biostatistics at the University of Alabama Birmingham (September 2011)
- “Dimension Reduction Methods in the Study Of The Genetics Of Gene Expression” Colorado State University Department of Statistics (February 2010)
- “Dimension Reduction Techniques for Genetic Studies of Gene Expression” CU Denver Department of Integrative Biology (February 2009)
- “Dimension Reduction Techniques for Genetic Studies of Gene Expression” Department of Mathematical and Statistical Sciences, University of Colorado Denver (2008)
- “Dimension Reduction Techniques for Genetic Studies of Gene Expression” Department of Anatomy and Neurobiology, University of Tennessee, Memphis (2008)
- “Dimension Reduction Methods in the Study of the Genetics of Gene Expression” Human Medical Genetics Seminar Series, University of Colorado Denver (March 2011)
- “Hunting for disease genes using multi-ethnic samples” Department of Mathematical and Statistical Sciences, University of Colorado Denver (2008)
- “Genetic Inheritance of Gene Expression in Humans” Department of Statistics, University of Nebraska-Lincoln (2006)
- “Genetic influences on gene expression in humans” University of Michigan, Department of Biostatistics (2005)
- “Expression QTLs” Oklahoma Medical Research Foundation (2005)

“The use of genetics, genomics and statistics to unravel complex traits” Women in Rheumatology Meeting (2004)

“The Genetics of Gene Expression in Mice” at the Keystone Symposia: Human genome sequence variation and the inherited basis of common disease (2004)

“Integrating clinical, genetic, genomic, and molecular phenotype data to dissect a complex trait” Department of Statistics, North Carolina State University (2003)

“Integrating clinical, genetic, genomic, and molecular phenotype data to dissect a complex trait” University of Washington Cardiovascular Health Research Unit (2003)

“Integrating clinical, genetic, genomic, and molecular phenotype data to dissect a complex trait” University of Alabama Section on Statistical Genetics (2003)

“Genetics of gene expression surveyed in maize, mouse and man,” Wellcome Trust Advanced Course in Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (2003)

“The genetics of gene expression: a survey of maize, mouse and man” Centre National de Genotypage, Evry, France (2002)

“Exploring the Genetics of Gene Expression in Humans” Rosetta Inpharmatics (2002)

“Fine mapping of quantitative trait loci using gametic phase disequilibrium within general pedigrees” Gordon Research Conference in Quantitative Genetics and Genomics (2001)

“Removing the Size Restrictions from Family-based Tests of Association for a Quantitative Trait Locus” Department of Biostatistics, University of North Carolina (1999)

“Removing the Size Restrictions from Family-based Tests of Association for a Quantitative Trait Locus” Department of Mathematical Sciences, University of Arkansas (1999)

“Removing the Size Restrictions from Family-based Tests of Association for a Quantitative Trait Locus” Department of Biostatistics, University of Michigan (1999)

“Removing the Size Restrictions from Family-based Tests of Association for a Quantitative Trait Locus” Department of Biostatistics, University of Washington (1999)

“Family-based association testing: a review of days gone by and greater things to come,” Department of Genetics, University of Washington (1999)

#### **CONTRIBUTED PRESENTATIONS (ABSTRACTS PEER REVIEWED, PRIMARY PRESENTER)**

“Genetic risk prediction and subtyping for generalized vitiligo” Poster presentation, Annual Meeting of the American Society of Human Genetics. (October 2016)

“A comparison of genetic risk prediction and subtyping for generalized vitiligo” Poster presentation, Annual Meeting of the International Genetic Epidemiology Society (October 2016)

“Genome-wide association studies of vitiligo implicate 100 loci in disease risk” Poster presentation, Annual Meeting of the American Society of Human Genetics. *Selected as one of 42 posters from 2800 to be highlighted as an ASHG Poster Walk* (October 2015)

“Optimized genetic risk prediction for vitiligo and its use to define disease subtypes” Poster presentation, Annual Meeting of the International Genetic Epidemiology Society (October 2015)

“Dimension Reduction Methods in the Study of the Genetics of Gene Expression” Meeting of the Eastern North American Region of the International Biometric Society (2007)

- “An innovative approach that synthesizes expression profiles, genotypes and phenotypes”  
Meeting of the Eastern North American Region of the International Biometric Society (2004)
- “Unraveling complex traits through the genetics of gene expression” Oral presentation, Annual Meeting of the American Society of Human Genetics (2002)
- “Extensions of transmission/disequilibrium tests for correlated data or how to use your entire dataset for a test of linkage and association” Poster presentation, Annual Meeting of the American Society of Human Genetics (1999)
- “Sibship tests of genetic association and/or linkage in the absence of parental information: Joint Statistical Meeting (1998)
- “A comparative study of sibship tests of linkage and/or association” Poster presentation, Annual Meeting of the American Society of Human Genetics (1998)
- “A sibship test of linkage in the absence of parental information” Poster presentation, Annual Meeting of the American Society of Human Genetics (1997)

## SEMINARS/WORKSHOPS PRESENTED

- “An Introduction to Data Visualization with RStudio” for the Justice Research and Statistics Association (November 2018)
- “Variant Collapsing Approaches” at Genetic Analysis Workshop 19, served as group leader and presenter, Vienna, Austria (Fall 2014)
- “Genetic Testing for Health, Disease & Ancestry or: How Statistics Helped Me Learn to Stop Worrying and Love My Genes,” CU-Denver Mini STEM School (March 2014)
- “Use of Local Ancestry in Tests of Association,” CU-Denver, Human Medical Genetics Program Retreat (November 2013)
- “Role of Linkage in Whole Genome Sequence Data” at Genetics Analysis Workshop 18, served as group leader and presenter, Stevenson, WA (October 2012)
- “Unsupervised Learning Techniques Applied to Clinical and CT Variables in COPD” presented at the COPDGene Investigator’s Meeting held in Boston, MA (November 2011)
- Organizer and moderator for the NIH funded conference: "Statistical Analyses for Next Generation Sequencing" held in Birmingham, AL (September 2011)
- “Unsupervised Learning Techniques Based on Linear Models” presented at the COPDGene Subtype Working Group Summer Workshop held in Denver, CO (August 2011)
- “To combine or not to combine” COPDGene Investigators Meeting (2008)
- “I Have to Take What? (How to Get Thru Your Enrollment Period)” OSU Faculty Fellows (2007)
- “Genetic inheritance of gene expression in humans” The Third Seattle Symposium in Biostatistics - Statistical Genetics and Genomics (2005)
- “Genetics of expression by use of dimension reduction techniques” NSF Research Coordination Network Retreat: Development, Evaluation, & Dissemination of Methods for the Analysis of Gene Expression (2005)
- “What do you need to know to do quantitative research in genetics or genomics?” Department of Statistics, Oklahoma State University (2004)
- “RAS genes, antihypertensive drugs, and the risk of MI or stroke: methods and preliminary results” NHLBI Ancillary Pharmacogenetics Investigators Meeting (2004)

“Genetic influences on gene expression in humans” Department of Biostatistics, University of Washington (2004)

“Studying the genetics of gene expression in humans,” Puget Sound Chapter of the ASA (2002)

“The genetics of gene expression: a survey of maize, mouse and man” Department of Biostatistics, University of Washington (2002)

“Hunting the elusive disease gene” Careers in Statistics Seminar, Shorewood High School (2002)

“What can I do with a degree in statistics?” Local meeting of the American Statistical Association (2001)

“Studying the genetics of gene expression” Workshop in Statistical Genetics and Computational Molecular Biology (2001)

“Linkage disequilibrium studies: the what, why, when and how” Interactive Seminar in Public Health Genetics, University of Washington (2000)

## PROFESSIONAL ORGANIZATIONS

American Society of Human Genetics  
 American Statistical Association  
 International Genetic Epidemiology Society (IGES)  
 Member of the IGES Education Committee (Fall 2013-present, Co-chair 2017-)  
 Member of the IGES ELSI (ethical, legal, and social implications) Committee (Fall 2019-)  
 Society for the Advancement of Chicanos and Native Americans in Science

## COURSES TAUGHT

Advanced Statistical Methods for Research	MATH 6388	CU Denver
Advanced Methods in Statistical Learning II	MATH 6840	CU Denver
Applied Statistics	MATH 4830/5830	CU Denver
Bayesian Statistics	MATH 7926	CU Denver
Categorical Data Analysis	MATH 7826	CU Denver
Introductory Statistics	MATH2830	CU Denver
Mathematical Statistics I	MATH 7381	CU Denver
Mathematical Statistics II	MATH 7382	CU Denver
Methods in Statistical Genetics	MATH 7826	CU Denver
MS Project	MATH 5960	CU Denver
Multivariate Methods	MATH 6395	CU Denver
Readings: Applied Prob/Stats	MATH 7926	CU Denver
Research Experience for Teachers	MATH 5016	CU Denver
Statistical Theory	MATH 3382	CU Denver
Workshop in Statistical Consulting	MATH 6330	CU Denver
Categorical Data Analysis	STAT 5073	Oklahoma State University
Methods in Statistical Genetics	STAT 5910/6910	Oklahoma State University
Multivariate Analysis	STAT 5513	Oklahoma State University
Multivariate Methods	STAT 5063	Oklahoma State University



Statistics for Experimenters II	STAT 5023	Oklahoma State University
Lectures in Applied Statistics	BIOST 111	University of Washington
Seminar in Public Health Genetics	PHG 580	University of Washington
Statistical Methods in Genetic Epidemiology	BIOST 516	University of Washington
Statistical Genetics II: Quantitative Traits	BIOST 551	University of Washington
Introduction to Statistics	STAT 311	North Carolina State University

## ADVISEES

*\* INDICATES SUCCESSFUL GRADUATION*

### *Ph.D. Advisor*

Sum 2016-present	Math & Stat Sciences	Emileigh Willems
Sum 2016-2019*	Math & Stat Sciences	Monchai Kooakachai
Fall 2015-2019*	Math & Stat Sciences	Subrata Paul
Fall 2015-2019*	Math & Stat Sciences	Mengjie Yao
Fall 2010-2016*	Math & Stat Sciences	Daniel Yorgov
Spr 2006-2009*	OSU Statistics	Qiang Guo
Fall 2004-2008*	OSU Statistics	Leon Shi

### *Ph.D. Co-Advisor*

Spr 2015-2019*	Human Medical Genetics & Genomics Program	Genevieve Anderson
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### *Ph.D. Advisory Committee Member*

Sum 2018-present	Math & Stat Sciences	Minh Chau Nguyen
Fall 2017- present	Math & Stat Sciences	Lucas Ortiz
Fall 2017- present	Math & Stat Sciences	Megan Sorenson
Sum 2014-2019*	Human Medical Genetics and Genomics Program	Ashley Montoya
Fall 2017- 2019*	Math & Stat Sciences	Lauren Hall
Fall 2016- 2018*	Math & Stat Sciences	Aaron Nielsen
Fall 2014-2018*	Human Medical Genetics and Genomics Program	Jonathan Shortt
Fall 2012-2016*	Human Medical Genetics and Genomics Program	Joanne Cole
Fall 2011-2016*	Math & Stat Sciences	Sesha Dassanayaka
Sum 2012-2014*	Biostatistics & Informatics	Miranda Kroehl
Spr 2010-2013*	Biostatistics & Informatics	Daniel Dvorkin
Fall 2008-2011*	Math & Stat Sciences	Melissa Santos
Fall 2008	Math & Stat Sciences	Deb Batistas
Spr 2005-2007*	OSU Statistics	Amy Wagler
Spr 2006-2007*	OSU Statistics	Tracy Morris
Sum 2003-2008*	UW Biostatistics	Elisabeth Rosenthal
Fall 2003-2006*	UW Epidemiology	Josh Bis
Fall 2003-2006*	UW Epidemiology	Shenaz Hussain
Fall 2000-2003*	UW Epidemiology	Helen Kim

### *M.S. Project Advisor*

Fall 2019-present	Math & Stat Sciences	Emma Collins
Fall 2019-present	Math & Stat Sciences	Michael Ingram
Fall 2019-present	Math & Stat Sciences	Pitshou Duki Nzazi
Fall 2019-present	Math & Stat Sciences	Eric Olberding
Fall 2019-present	Math & Stat Sciences	Danielle Totten
Fall 2019-present	Math & Stat Sciences	Nicholas Weaver
Fall 2019*	Math & Stat Sciences	Michael Phillips
Fall 2019*	Math & Stat Sciences	Arlin Tawzer
Summer 2019*	Math & Stat Sciences	Kate Booth
Spring 2018*	Math & Stat Sciences	Emileigh Willems
Fall 2017*	Math & Stat Sciences	Xingmeng Zhao
Spring 2016*	Math & Stat Sciences	Mengjie Yao
Spring 2016*	Math & Stat Sciences	Long Fu
Fall 2013-2014*	Math & Stat Sciences	Carlo Morales
Fall 2011-2014*	Math & Stat Sciences	Melissa Bilbao
Fall 2009-2012*	Math & Stat Sciences	Rebecca Crepin
Fall 2010-2012*	Math & Stat Sciences	Brittany Schaffer
Spr 2005-2007*	OSU Statistics	Aiwu Zhang
Fall 2002-2006*	UW Biostatistics	Jia Wan
Spr 2001-2002*	UW Public Health Genetics	Erin Pfeiffer

*M.S. Advisory Committee Member*

Spring 2019*	Math & Stat Sciences	Matt Lanz
Spring 2018*	Math & Stat Sciences	Minh Chau Nguyen
Fall 2017*	Math & Stat Sciences	Megan Sorenson
Spring 2017*	Math & Stat Sciences	Jason Fagerness
Spring 2017*	Math & Stat Sciences	Lauren Hall
Fall 2016*	Math & Stat Sciences	Lucas Ortiz
Sum 2015-2016*	Biostatistics and Informatics	Yonghua Zhuang
Spr 2016*	Math & Stat Sciences	Chris Fildish
Spr 2015*	Math & Stat Sciences	Kraig Thomas
Spr 2014*	Math & Stat Sciences	Zhiyuan Guan
Spr 2012*	Math & Stat Sciences	Xinchen Gu
Spr 2012*	Math & Stat Sciences	Aaron Nielson
Spr 2009-2011*	Integrated Sciences	John Quinn
Fall 2009 *	Math & Stat Sciences	Sidney Phoon
Spr 2010-2011*	Math & Stat Sciences	Philip Wallis
Spr 2009-2010*	Math & Stat Sciences	Shoshana Rosskamm
Spr 2009*	Math & Stat Sciences	Sara Schmitt
Fall 2008*	Math & Stat Sciences	Sarah Tocheri
Spr 2006-2007*	OSU Statistics	Hui Zeng
Spr 2006-2007*	OSU Statistics	Sungmi Brown
Spr 2005-2006*	OSU Statistics	Yanina Grant
Spr 2005-2006*	OSU Statistics	Janae Nicholson

Fall 2003*	UW Biostatistics	Dongmei Yu
<i>Graduate Certificate in Applied Statistics</i>		
Spr 2014*	Primary advisor	Abdullah Al Masud
Spr 2014*	Primary advisor	DeVon Farago
Spr 2014*	Reader	Parvaneh Darafshi
Fall 2012*	Primary advisor	Joshua Browning
<i>Undergraduate Honors</i>		
Fall 2017*	Primary advisor	Wyatt Miller
<i>Undergraduate Research Opportunity Program (UROP)</i>		
Fall 2016 – 2017*	Primary advisor	Sierra Niemiec
<i>Undergraduate Certificate in Applied Statistics</i>		
Spr2019*	Reader	Jiayi You
Spr2018*	Primary advisor	Na Zhuo
Spr2017*	Primary advisor	Chenyue Fang
Spr2017*	Reader	David Hensler
Spr2009*	Reader	Tu Huynh

## OTHER TEACHING AND EDUCATIONAL OUTREACH

Participant in the Indigenous Knowledge Field Camp, Summer 2019  
Mentor for learning assistant program, Spring 2018  
Lecturer, Colorado Summer Institute in Biostatistics (CoSIBS), Summer 2017, 2018, 2019  
Lecturer and research group leader, Colorado Summer Institute in Biostatistics (CoSIBS), Summer 2016  
Lesson and interactive activity on DNA, Brown International Academy, 4<sup>th</sup> Grade (2016, 2017)  
Guest lectures on “Introduction to Quantitative Genetics,” “Genetic Association Studies,” and “Genome wide association studies” in HMGP7600, Survey of Human Genetics (Springs 2015, 2016, 2017)  
Guest lecture series on “Statistical Genetics”, HMGP7620, Advanced Genomics (Springs 2016, 2017)  
Guest lecture on “Human population sub-structure and genetic association studies” in HMGP7620, Advanced Genomics (March 2015)  
Guest lecture on “Introduction to Rare Variants.” EPID 6642, Genetics in Public Health (May 2013, May 2015)  
Guest lecture for Advanced Placement Statistics course at Golden High School: “Statistical Tools for Locating Disease Genes” (May 2013)  
Presentation titled “Statistics and Biostatistics Info Session” given to the UC Denver Math Club (November 2011)  
Instructor/session leader at the Rocky Mountain Math Circle Meeting. Morning and afternoon sessions covering the topic of “Hunting the Elusive Disease Gene” (July 18–22, 2011)

Instructor/session leader for the Rocky Mountain Math Circle. Work focused on “Mathemagical Card Tricks” (February 2011)

Led a Research Experience for Teachers for a group of 4 teachers. Project title: “Statistical Tools for Studying the Effects of our Resident Microbes on Health and Disease” (Summer 2011)

Served on a panel for the Department of Mathematical & Statistical Sciences TA Seminar Series. Topic was on experiences in teaching (November 2010)

Co-organizer and presenter for Math Circle Meeting. My sessions included “Playing with Probability” and two sessions on “Mathemagical Card Tricks” (July 26-30, 2010)

Attended the Teacher Research Experience Conference where I co-presented a poster on the results of my summer Research Experience for Teachers (RET) and gave a panel presentation concerning “Transfer” resulting from the RET (2010)

Gave two training sessions for CU Succeed teachers that were going to be teaching MATH2830, Elementary Statistics, during the 2010 to 2011 Academic Year

Led a Research Experience for Teachers for a group of 4 teachers. Project title: “Datamining For Genetic Causes Of Human Disease” (Summer 2010)

NHLBI Genomics Proteomics Workshop. Gave two lectures on Genetical Genomics (July 2009)

Member of the American Society of Human Genetics’ NSF-funded Geneticist-Educator Network of Alliances (GENA) project (2009-present)

Seminar/Discussant, Broken Arrow High School Honors Statistics Class, “Careers in Statistics,” (2006)

Instructor, NSF Annual Plant Microarray Short Course on Design and Analysis of Plant Microarray Experimentation: “QTL Analysis of Expression” (2005 and 2006)

Instructor, Seattle Epidemiology, Biostatistics & Clinical Research Methods: “Statistical Methods in Genetic Epidemiology” (2004)

National Human Genome Research Institute Mentor for local high school teachers and students, (2003-present)

Instructor, BioPharmaceutical Technology Center Institute, Course in Computational Approaches to Analyzing Gene Expression Data, “Treating Gene Expression Data as Quantitative Traits” (2003)

Instructor: Genetics in the New Millennium: Myths, Medicine and Public Health: “Tools for gene discovery: molecular biology, genetic epidemiology and population genetics” (2000)

Instructor: Summer Institute in Statistical Genetics at North Carolina State University (1999-2001)

Guest Lecture at University of Washington in EPID518, Computer Applications in Genetic Epidemiology (Springs 2000-2003)

Guest Lecture at University of Washington in EPID517, Genetic Epidemiology (Springs 2000-2003)

Guest Lecture at University of Washington in BOST111, Lectures in Applied Statistics (Springs 2000-2003)

## **SERVICE TO UNIVERSITY**

Member of selection committee for the 2020 CU Denver Distinguished Faculty Lecture

Member on the Human Medical Genetics and Genomics Program Retreat committee, included

development of roundtable discussion materials and serving as moderator on the topic of “Ethnic and Ancestry Considerations in Genetics Research and Practice”

Member of the CU Denver Chancellor Search Committee (2019-2020)

Member of the Departmental Appointment Promotion and Tenure Committee, Biostatistics & Informatics, CU Denver (2018-current)

Reviewer for CLAS and campus Excellence in Research/Creative Activities Awards, 2017

Reviewer for the 2017-2018 Undergraduate Research Opportunity Program (UROP) Grant Applications

Participant, Colorado Mentoring Training (CO-Mentor) Program with Audrey Hendricks (Fall 2016 – Spring 2017) and Erin Austin (Fall 2018-Spring 2019)

Mentor, Dominick Lemas, Post-doctoral research (Fall 2012-Spring 2015)

CU Denver Retention/Enrollment Summit (Spring 2014)

Management team for the NSF Bridge to Doctorate Program (Spring 2013 – 2014)

Member of the CU Denver Minority Affairs Committee, (Fall 2012 – Spring 2014; Secretary 2013/14)

Member of the CU Denver, College of Arts and Sciences, Educational Policies and Curriculum committee (Spring 2012-Spring 2014, Summer 2016-2017; Chair 2013/14)

Member of University Graduate Council, (Fall 2011-Spring 2014)

Member of the Downtown Faculty Assembly (Fall 2010 – Spring 2013, Fall 2017 - )

Recruiting Exhibitor for CU Denver at the annual meeting of the Society for Advancing Hispanics/Chicanos & Native Americans in Science (2009 and 2011)

OSU Faculty Associate providing mentoring for university dormitories (2007-2008)

Member and Chair, OSU College of Arts and Sciences Scholarship Committee (2006-2008)

Member, OSU College of Arts and Sciences Faculty Council (2006-2008)

Member, Dispute Resolution Hearing Committee at Oklahoma State University (Dec 2005-Jan 2006)

Member of the University of Washington, School of Public Health and Community Medicine, Committee on Distance Learning (2003)

Member of an implementation team for the North Carolina State University Strategic Plan, (1999)

#### **SERVICE AT DEPARTMENT/PROGRAM LEVEL**

Member, Tenure and promotion to associate professor (2 cases in Fall 2019)

Member, Search committee for faculty member in operations research (Fall 2017-Spring 2018)

Member, research, teaching, and service committees for promotion to full professor case (Fall 2017, Fall 2019)

Member and chair, sub-committee for evaluation of research for a tenure review (Fall 2017)

Mentor, Erin Austin (Fall 2016 – present)

Mentor, NSF project "Promoting Success in Early College Mathematics through Graduate Teacher Training" (Fall 2015-2017)

Mentor, Audrey Hendricks, Fall 2013-present

Preliminary exam committee for the Human Medical Genetics and Genomics Program (2014, 2015, 2016)

Chair, Curriculum Committee for the Human Medical Genetics and Genomics Program, Fall 2014-Fall 2015)

Chair, CU-Denver, Human Medical Genetics Program Retreat (2014, 2015)

Chair of the Search Committee for an Assistant Professor of Applied Statistics (AY2008/2009, AY 2012/2013, AY 2013/2014 and AY 2015/2016)

Member sub-committee for evaluation of service for a tenure review (Fall 2010, Fall 2012, Fall 2013)

Member, Undergraduate Committee (2012-2013)

Chair for a post tenure review committee (Summer 2012)

Member of the research sub-committee for comprehensive review (Fall 2011, Spring 2012, Fall 2013, Fall 2015, Fall 2016, Fall 2017; Chair for two of these committees)

Member of Merit Review Committee (Spring 2010, Spring 2011, Spring 2016; Chair in 2016)

Chair, Search Committee for Post-doctoral Research in Statistics (Spring 2009)

Member Departmental Executive Committee (Fall 2009–2011, Fall 2013-2014, Fall 2016-2017, Fall 2018-present)

Graduate Committee (2008-2012, 2013-2014, 2015-2016; Chair for 2009-2011, 2016-present)

Member, Committee for Assessment and Development Policy on Research, OSU Department of Statistics (2008)

Organizer, “Introduction to using the HPCC at OSU” by Dana Brunson, Ph.D., Sr. Systems Engineer, High Performance Computing Center, Oklahoma State University (Feb 2008)

Mentor, Lan Zhu, OSU Department of Statistics, (2007-2008)

Chair, OSU Departmental Head Search Committee (2007-2008)

Member of the Personnel Committee, Department of Statistics, Oklahoma State University (2006-2008)

Organizer of the “Student Research Symposium in Statistics” at Oklahoma State University (2005)

Co-developer of PhD level assessment plans and reports for the Office of University Assessment and Testing, Department of Statistics, Oklahoma State University (2005)

Member of the Graduate Committee, Department of Statistics, Oklahoma State University, (2004-2008)

Evaluation of student teaching assistants, Department of Statistics, Oklahoma State University, (2004-2008)

Grader, PhD qualifying exams, Department of Statistics, Oklahoma State University, (2004-2008)

Member of the Admissions and Curriculum Committee, UW, M.S. Program in Genetic Epidemiology (2002-2004)

Member of the Consulting Committee, Department of Biostatistics, University of Washington, (2002-2004)

Member of the Education Policy and Teaching Evaluation Committee, Department of Biostatistics, University of Washington (2000-2004)

Member of the Public Health Genetics Committee responsible for the creation of a Ph.D. in Public Health Genetics (2000-2001)

Member of the Faculty Committee for the development and creation of a certificate program and PhD pathway in Statistical Genetics, Department of Biostatistics University of Washington (1999)

Member of the Faculty Search Committee, Department of Biostatistics, University of Washington (1999-2001)

Member of the Academic Program Committee, Admissions Committee and Curriculum Committee for Public Health Genetics (1999-2001)

## **SERVICE TO PROFESSION**

Member of the Ethical, Legal and Social Issues (ELSI) Committee for the International Genetic Epidemiology Society

Invited grant reviewer on the National Institutes of Health Panel on Population Sciences and Epidemiology fellowships (Feb 2019)

Annual meeting of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) activities: reviewer for abstracts and travel scholarships, Chair for the Lunch and Conversations with Scientists (Statistics room), Mentor judge

Member, CIDR (Center for Inherited Disease Research) Access Committee (CAC) Study Section, Summer 2019-

Co-chair of the Education Committee for the International Genetic Epidemiology Society (Fall 2017-present)

Elected representative, Caucus of Academic Representatives, American Statistical Association, August 2017 -

Consultant, Weight Watchers International, January 2016

Member of the Education Committee for the International Genetic Epidemiology Society (Fall 2013-present)

Science fair judge, Denver Public Schools (Fall 2015-Spring 2016)

Group Editor for the Genetic Analysis Workshop 18 and 19 proceedings

Regular member of the NIH, Genomics, Computational Biology and Technology Study Section, (June 2012–2018; Temporary member during 2005, 2006, 2009, 2011)

Grant review for the NSF Transforming Undergraduate Education in STEM program

Reviewer for the Best Paper Award, The Science Unbound Foundation, for a UAB-based investigator in the area of statistical genetics (2011, 2016)

Abstract reviewer, Annual Meeting for the Society for Advancing Hispanics/Chicanos & Native Americans in Science (October 2012)

Member, NIH F16 Study Section for Fellowships (March 2012 and July 2014)

Member, NIMH grant review panel for “Integrating Multi-Dimensional Data to Explore Mechanisms Underlying Mental Disorders” (November 2011)

Review Editor of Frontiers in Statistical Genetics and Methodology, February 2011-present

Attended ENAR Fostering Diversity in Biostatistics Workshop and gave talk on “Careers in Statistics and Biostatistics” (March 2010)

Grant review: Medical Research Council (MRC) of the United Kingdom, Career Development Award in Biostatistics (December 2010)

Reviewer for American Journal of Epidemiology (March 2010)

Reviewer of manuscripts for Plant Cell (April 2009) and Obesity (April 2009)  
 Grant reviewer for the Swiss National Science Foundation (January 2009)  
 Member, NIMH grant review panel for “Limited Competition for Data Deposition and Analyses of Genome Wide Association Studies of Mental Disorders (Collaborative R01)” (July 2008)  
 Member, NHGRI grant review panel for “Epidemiological Investigation of Putative Causal Genetic Variants” (Mar 2008)  
 Statistical Expert for The Plant Cell (provide reviews of statistical analyses (2008-2010)  
 Associate Editor for the journal Molecular Biology and Evolution (2005-2008)  
 Organizer and Moderator, Invited session at the Annual Meeting of the American Society for Human Genetics: “Genetics of Gene Expression: New Strategies for Studying Complex Traits” (2003)  
 Session Moderator, Linkage disequilibrium and haplotypes. Annual Meeting of the American Society of Human Genetics (2003)  
 Co-organizer and co-chair of Second Workshop in Statistical Genetics and Computational Molecular Biology (2003)  
 Representative, Western North American Region of the International Biometric Society (2003-present)  
 Statistical Genetics Consultant for Insightful Inc. (2001-2004)  
 Statistical Genetics Consultant for the Pacific Northwest Research Institute (2001-2004)  
 Grant reviewer, Center for Ecogenetics and Environmental Health (2001)  
 Referee for the American Journal of Human Genetics, Behavior Genetics, Biological Psychiatry, Biometrics, Clinical Genetics, Computational Statistics and Data Analysis, CRC Press, Genetic Epidemiology, Genetical Research, Genetics, Human Heredity, International Journal of Obesity, Journal of Statistics Education, Journal of Infectious Diseases, Obesity, PLOS Genetics, Nature, SAGE Publications, Science, Statistical Applications in Genetics and Molecular Biology, The Plant Cell, Trends in Genetics, Pediatric Obesity ongoing

## HONORS

2019	Accepted member into CU Leadership for Innovative Team Science (LITeS)
2019	CU Denver, Award in Faculty Mentoring
2019	CU Denver, Chancellor's Distinguished Lecture
2019	Fellow of the International Genetic Epidemiology Society
2018	CU Denver, Graduate School, Dean’s Doctoral Student Mentoring Award
2016	CU Denver, College of Liberal Arts and Sciences, Excellence Award in Research and Creative Activities
1999	Sigma Xi, The Scientific Research Society
1996	Gertrude M. Cox Outstanding Academic Achievement Award Fellow/Outstanding Masters Candidate, NCSU Department of Statistics
1996	Mu Sigma Rho, Statistical Honor Society
1995-1997	Recipient of a National Science Foundation Graduate Fellowship
1994-1995	Recipient of a Patricia Roberts Harris Graduate Fellowship
1993	Invited delegate to the NSF Summer Mathematics Institute at the University of California at Berkeley



1992, 1993 Northeastern State University Mathematics Student of the Year  
1991 Kappa Mu Epsilon, Mathematical Honor Society