

CURRICULUM VITAE

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EDUCATION AND TRAINING

Undergraduate

2007 – 2012	California Polytechnic State University San Luis Obispo, CA	B.S., 2012	Applied Mathematics Statistics
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Graduate

2012 – 2017	Graduate School of Public Health University of Pittsburgh Pittsburgh, PA	Ph.D., 2017	Biostatistics Mentor: Eleanor Feingold, Ph.D.
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Post-Graduate

2017 – 2018	Graduate School of Public Health University of Pittsburgh Pittsburgh, PA	Postdoctoral Associate	Human Genetics Mentors: Ryan L. Minster, Ph.D., M.S.I.S. Daniel E. Weeks, Ph.D.
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APPOINTMENTS AND POSITIONS

Academic

2018 – Assistant Professor Department of Biostatistics
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA

2019 – Assistant Professor Department of Human Genetics
Graduate School of Public Health
University of Pittsburgh, Pittsburgh, PA

Non-Academic

n/a

CERTIFICATION AND LICENSURE

Specialty Certification

2012 SAS® Certified Base SAS®
Programmer for SAS® 9

Medical or Other Professional Licensure

n/a

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

2015 – American Society of Human Genetics

2019 – American Statistical Association

HONORS

2012 $\mu\sigma\rho$ National Statistics Honorary
Society

2012 Π ME National Mathematics Honorary
Society

2013	Student Scholar Pharmaceutical SAS® User Group
2013	Student Scholar Western Users of SAS® Software
2013	Student Ambassador Honorable Mention SAS® Global Forum
2015	Biostatistics Department Award for Dean's Day Poster Presentation, Second Place Graduate School of Public Health, University of Pittsburgh
2017	Biostatistics Department Award for Dean's Day Poster Presentation, First Place Graduate School of Public Health, University of Pittsburgh

PROFESSIONAL ACTIVITIES

1. Teaching

a. Courses Taught

Years Taught	Course Number: Title	Hours of Lecture, credits Average Enrollment	Role in course Primary/Coordinator
2017, 2019, 2021	BIOST 2011: Principles of Statistical Reasoning	Spring, 3 h/wk, 3 cr 72 students	Primary Instructor and Course Designer <i>in 2017: Teaching Fellow</i>
2018 –	BIOST 2039: Biostatistical Methods	Fall, 3 h/wk, 3 cr 13 students	Primary Instructor and Course Designer
2018 –	BIOST 2041: Introduction to Statistical Methods	Fall, 3 h/wk, 3 cr 160 students	Primary Instructor and Course Designer
2020 –	BIOST 2099: Capstone	Spring/Summer/Fall, 2 h/wk, 2 cr 4 students	Co-instructor
2021	BIOST 2021: Special Studies (Biostatistics theory fundamentals)	Spring, 3 hr/wk, 3 cr, 1 student	Primary Instructor/Mentor

b. Other Teaching (lectures, tutorials, and continuing education courses)

Date(s)	Type of Teaching	Title
2011	Teaching Assistant Linear Algebra II (MATH 306) California Polytechnic State University	
2012	Teaching Assistant Introduction to Statistical Concepts and Methods (STAT 217) California Polytechnic State University	
2012	Teaching Assistant Principles of Statistical Reasoning (BIOST 2011) University of Pittsburgh	
2013	Teaching Assistant SAS Data Management and Analysis (BIOST 2093) University of Pittsburgh	
2013	Two lectures SAS Data Management and Analysis (BIOST 2093) University of Pittsburgh	ODS and ODS Graphics Macros
2016	Two lectures Human Population Genetics (HUGEN 2022) University of Pittsburgh	Gene Mapping: Genome-Wide Association Studies
2017	Teaching Fellow Principles of Statistical Reasoning (BIOST 2011) University of Pittsburgh	
2020 –	Workshop Creator and Instructor (2 workshops, offered every semester) Heath Sciences Library System University of Pittsburgh	Introduction to R
2020	Workshop Co-Creator and Co-Instructor (2 workshops) Heath Sciences Library System University of Pittsburgh	Introduction to Critical Appraisal
2020 –	Workshop Creator and Instructor (2 workshops, offered every semester) Heath Sciences Library System University of Pittsburgh	Data Management in R

Date(s)	Type of Teaching	Title
2020 –	Workshop Creator and Instructor (2 workshops, offered every semester) Heath Sciences Library System University of Pittsburgh	Data Visualization in R with ggplot2

c. Major Advisor for Graduate Student Essays, Theses, and Dissertations

Name of Student	Degree Awarded, Year	Type of Document and Title	Notes
Ian Campbell	Ph.D. BOST	n/a	Left Program
Molly McKune	M.S. BOST, 2021	Thesis: The Role of Sleep in Mediating the Relationship Between BMI and CVD Risk Factors in Samoan Adults	
Gregory Procario	M.S. BOST, 2021	Thesis: Predicting Body Composition Measurements in Samoan Adults with Multivariate Adaptive Regression Splines and Assessing the Effect of a Missense Variant in <i>CREBRF</i> on Body Composition	
Arvon Clemons II	M.S. BOST SCG		In progress
Mark Vater	M.S. BOST		Thesis co-advisor, In progress
Alexis Cename	M.S. BOST SCG		In progress
Dengxiaoyu Shi	M.S. BOST		In progress
Henry Thorpe	M.S. BOST SCG		In progress
Shan Wu	M.S. BOST		In progress

d. Service on Masters or Doctoral Committees

Dates Served	Name of Student	Degree Awarded	Title of Dissertation/Essay
2019	Priyanka Setty	M.S. Biostatistics	A comparative analysis to predict p53 activity using classification models
2019	Kendra Bobby	M.S. Biostatistics	Spatial association between social vulnerability and accidental poisoning mortality in Pennsylvania and its adjacent states
2019	Kelly Cahill	M.S. Biostatistics	rfTSP: A non-parametric predictive model with order-based feature selection for transcriptomic data
2019 – 2020	Andrew Fazenbaker	M.S. Genetic Counseling	Epilepsy panel testing criteria: a clinical assessment
2019 – 2020	Jessica Tiner	M.P.H Public Health Genetics	Utility of <i>CREBRF</i> genotype with BMI in prediction of type 2 diabetes
2020	Kayleigh Adamson	M.S. Biostatistics	A gaussian-mixture model analysis of polydrug use in opioid overdose deaths
2020	Jennifer Fedor	M.S. Biostatistics	Prediction health-related quality of life in early adulthood from individual difference in adolescent neurocognitive development
2020	Elijah Lovelace	M.S. Biostatistics	Analysis of post-secondary bound graduation rates in Pennsylvania public schools
2020	Menqi Wang	M.S. Biostatistics	Evaluating comparative effectiveness of simultaneous liver and kidney versus liver transplant alone using instrumental variables
2020	Anni Guo	M.S. Biostatistics	Predicting outcome in lost-to-follow-up subjects from a 15-year observational study of autosomal dominant polycystic kidney disease
2020	Nabil Awan	M.S. Biostatistics	Association of early chronic systemic inflammation with depression at 12 months post-traumatic brain injury and a comparison of prediction models

Dates Served	Name of Student	Degree Awarded	Title of Dissertation/Essay
2020	Chen'ao Qian	M.S. Biostatistics	Genome-wide association studies in Samoans give insight into obesity by investigating skinfold thickness
2020	Dominic DiSanto	M.S. Biostatistics	Treelet Dimension Reduction of Diagnoses Among Intensive Care Unit Admissions
2020 – 2021	Gregory Procario	M.S. Biostatistics	Predicting Body Composition Measurements in Samoan Adults with Multivariate Adaptive Regression Splines and Assessing the Effect of a Missense Variant in <i>CREBRF</i> on Body Composition
2020 – 2021	Molly McKune	M.S. Biostatistics	The Role of Sleep in Mediating the Relationship Between BMI and CVD Risk Factors in Samoan Adults
2021	Jason Kennedy	M.S. Biostatistics	Towards a Learning Health System: Using Reinforcement Learning to Optimize Treatment Decisions in Sepsis Patients
2021	Ashika Mani	M.S. Biostatistics	Analyzing Deep Learning Techniques in Accelerated Clinical Brain Magnetic Resonance Imaging for Multiple Sclerosis
2021	Amber Olander	M.P.H Public Health Genetics	Assessing Genetic Associations with Depressive Features and Body Mass Index in Samoans
2021	Mark Vater	M.S. Biostatistics <i>In progress</i>	
2021	Arvon Clemons II	M.S. Biostatistics <i>In progress</i>	
2021 –	Phuc Do	M.S. Genetic Counseling <i>In progress</i>	

e. Service on Comprehensive or Qualifying Examination Committees

Dates Served	Student Population	Type of Exam (Qualifying/Comprehensive)
2019	21 M.S. Biostatistics students	Comprehensive
2019	14 Ph.D. Epidemiology students	Preliminary
2020	8 M.S. Biostatistics students	Comprehensive
2020	10 Ph.D. Biostatistics students	Qualifying
2020	13 Ph.D. Epidemiology students	Preliminary
2021	14 M.S. Biostatistics students	Comprehensive
2021	16 Ph.D. Biostatistics students	Qualifying
2021	14 Ph.D. Epidemiology students	Preliminary

f. Supervision of Post-Doctoral Students, Residents, and Fellows

Dates Supervised	Name of Student	Position of Student
2019 –	Mohanraj Krishnan	Postdoctoral Associate P.I.: Ryan L. Minster, Ph.D., M.S.I.S.
2019 –	Emily Russell	Postdoctoral Associate P.I.: Ryan L. Minster, Ph.D., M.S.I.S.

g. Mentoring of Graduate Students in Field Placements

Dates	Name of Student	Degree/Program Description	Field Site
2017 – 2019	Emily Russell	Ph.D. Human Genetics	Department of Human Genetics P.I. Ryan L. Minster, Ph.D., M.S.I.S
2018 – 2020	Jerry Zhang	Ph.D. Biostatistics	Department of Human Genetics P.I.: Daniel E. Weeks, Ph.D.
2019 –	Zeynep Erdogan-Yildirim	Ph.D. Human Genetics	Department of Human Genetics P.I. Ryan L. Minster, Ph.D., M.S.I.S.
2019 – 2020	Haoyi Fu	Ph.D. Biostatistics	Department of Human Genetics P.I.: Daniel E. Weeks, Ph.D.

h. Other Teaching and Training

Dates	Teaching Activity	Program/Description
2016	Workshop <i>Developing a Lesson Plan</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2016	Workshop (1 session) <i>Dealing with Difficult Situations</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2016	Workshop (1 session) <i>Encouraging Student Participation</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2017	Course (13 sessions) <i>Prep for the STEM Classroom (ENGR 3001)</i>	Completed course Center for the Integration of Research, Teaching, and Learning (CIRTL) University of Pittsburgh
2018	Short Course (4 sessions) <i>Engaging Students in the Teaching of Statistics</i>	Completed course Center for the Integration of Research, Teaching, and Learning (CIRTL) CIRTL Network

Dates	Teaching Activity	Program/Description
2018	Workshop (6 sessions) <i>Effective Mentoring</i>	Completed training based on the National Research Mentoring Network (NRMN) Center for the Integration of Research, Teaching, and Learning (CIRTL) University of Pittsburgh
2018	Workshop (1 session) <i>Designing Better Test Questions</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2019	Pittsburgh Regional Faculty Symposium	Attended one-day conference including teaching workshops University of Pittsburgh
2019	Workshop (8 sessions) <i>Evidence-Based Teaching Practices</i>	Created and co-facilitated an 8-part workshop series for Pitt Public Health faculty centered around <i>How Learning Works: 7 Research-Based Principles for Smart Teaching</i>
2019	United States Conference on Teaching Statistics 2019	Attended 3-day conference including numerous teaching workshops Consortium for the Advancement of Undergraduate Statistics Education (CAUSE)
2019	Workshop (1 session) <i>Creating and Updating Flipped Classrooms</i>	Attended workshop American Statistical Association Section on Teaching Statistics in the Health Sciences
2019	Workshop (1 session) <i>Designing Rubrics</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2019	Learning Community (3 sessions) <i>Assessments</i>	Attended sessions and participated in discussion Center for the Integration of Research, Teaching, and Learning (CIRTL) University of Pittsburgh
2019	Learning Community (3 sessions) <i>Large Enrollment Faculty Learning Community</i>	Attended sessions and participated in discussion University Center for Teaching and Learning University of Pittsburgh

Dates	Teaching Activity	Program/Description
2019	Conference on Teaching and Learning in Higher Education 2019	Attended 1-day conference including numerous teaching workshops La Roche University
2019 – 2020	Faculty Seminar (6 sessions) <i>Scholarship of Teaching and Learning</i>	Completed seminar course series University Center for Teaching and Learning University of Pittsburgh
2020	Workshop (1 session) <i>Teaching Statistics with Simulation-Based Inference</i>	Attended workshop American Statistical Association Section and Data Science Education
2020	Workshop (1 session) <i>Out of the Classroom and into the ‘Real’ World: Learning Statistics by Doing Statistics with ‘The Islands’</i>	Attended workshop American Statistical Association Section on Teaching Statistics in the Health Sciences
2020	Workshop (1 session) <i>Canvas for Remote Instruction</i>	Attended workshop University Center for Teaching and Learning University of Pittsburgh
2020	Learning Community (10 sessions) <i>Online Teaching</i>	Attended sessions, participated in discussions, created online course shell and assessment maps of online courses Center for the Integration of Research, Teaching, and Learning (CIRTL) University of Pittsburgh
2021	Faculty Seminar (4 sessions + remote work) <i>Hybrid and Online Teaching</i>	University Center for Teaching and Learning University of Pittsburgh

2. Research and Training

a. Grants and Contracts Received

Principal Investigator

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
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n/a

Multiple Principal Investigator

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
2020 <i>Submitted Not funded</i>	Modeling predictors of cardio-metabolic disease risk	Pitt CTSI	\$19,081	0%

Co-Investigator on Grants

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
2017 – 2020	R00 DE025060 Genetics of Craniofacial Disorders and Related Phenotypes	NIH NIDCR	\$156,743	10%
2017 – 2022	R01 HL133040 Next Generation Association Studies of Adiposity in Samoans Enhanced by a Samoan-Specific Whole Genome Sequence Reference Panel	NIH NHLBI	\$494,807	15%
2020 – 2024 <i>Submitted Not funded</i>	R01 HD009287 The Impact of <i>CREBRF</i> on growth, body composition, and cardio-metabolic disease risk development among Samoan children	NIH NICHD	\$499,548	0%
2021 – 2026 <i>Submitted Not funded</i>	U19 Understanding antibiotic treatment failure and success as a strategy for finding effective therapies (FAIL-SAFE)	NIH	\$2,349,705	0%
2021 – 2025 <i>Submitted</i>	R01 Biological and behavioral determinants of cardiovascular disease risk among Samoans	NIH NHLBI	\$597,448	

Years Inclusive	Grant and/or Contract Number and Title	Source	Annual Direct Costs	% Effort
2021 – 2024 <i>Submitted</i>	R01 An adolescent-mediated intervention to improve diabetes prevention and management in Pacific Islander families	NIH NIDDK		
2021 – 2026 <i>Submitted</i>	R01 Leveraging the Evolutionary History to Improve Identification of Trait-Associated Alleles and Risk Stratification Models in Native Hawaiians	NIH NHLBI	\$221,299	
2021 – 2024 <i>Submitted</i>	R01 Genetics of OFCs in the Philippines	NIH NIDCR	\$311,675	

b. Invited Lectureships and Major Seminars Related to Your Research

Date	Title of Presentation	Venue
2016	Creating meaningful factors from dietary questionnaires	Western Users of SAS® Software Educational Forum and Conference San Francisco, CA
2016	Methods for family-based designs in genetic studies of orofacial clefting	Biostatistics Seminar Series Department of Biostatistics University of Pittsburgh
2017	Orofacial clefting: the case for genetic modifiers	Science Tuesday Seminar Series Center for Craniofacial and Dental Genetics Department of Oral Biology University of Pittsburgh
2019	Creating population-specific reference panels for improved genotype imputation	Human Genetics Noon Seminar Series Department of Human Genetics University of Pittsburgh
2019	Simulation-based activities to enhance graduate students' understanding of p-values	Teaching as Research Community Center for the Integration of Research Teaching and Learning University of Pittsburgh

Date	Title of Presentation	Venue
2021	The role of population-specific genotype reference panels in genetic association studies	The 90th Annual Meeting of the American Association of Physical Anthropologists (AAPA)

c. Other Research and Training Activities

Date	Position	Description of Activity
2010	Trainee	Summer Institute for Training in Biostatistics (SIBS) University of Pittsburgh
2011	Undergraduate Student Researcher	Following the Longitudinal Aspects of Student Health (FLASH) Study California Polytechnic State University
2013	Research and Development Intern	Developed algorithms for copy number variation calls on array CGH technology Agilent Technologies Santa Clara, CA
2013 – 2017	Graduate Student Researcher	Analyzed large-scale genetic data examining mechanism behind complex traits including oral health and orofacial clefting Center for Craniofacial and Dental Genetics Department of Oral Biology University of Pittsburgh
2014 – 2015	Research Mentor	Summer Institute for Training in Biostatistics (SIBS) University of Pittsburgh
2019 – 2020	Faculty Trainee	SPRINGBOARD program Office of Academic Career Development Health Sciences University of Pittsburgh
2019 – 2020	Mentee	American Statistical Association Mentorship Program

PUBLICATIONS

1. Refereed Articles

1. Shaffer JR, **Carlson JC**, Stanley BO, Feingold E, Cooper M, Vanyukov MM, Maher BS, Slayton RL, Willing MC, Reis SE, McNeil DW, Crout RJ, Weyant RJ, Levy SM, Vieira AR, Marazita ML. **Effects of enamel matrix genes on dental caries are moderated by fluoride exposures.** *Hum Genet.* 2015 Feb;134(2):159-67. doi: 10.1007/s00439-014-1504-7. Epub 2014 Nov 6. PubMed PMID: 25373699; PubMed Central PMCID: PMC4293346.
2. Leslie EJ*, Taub MA*, Liu H, Steinberg KM, Koboldt DC, Zhang Q, **Carlson JC**, Hetmanski JB, Wang H, Larson DE, Fulton RS, Kousa YA, Fakhouri WD, Naji A, Ruczinski I, Begum F, Parker MM, Busch T, Standley J, Rigdon J, Hecht JT, Scott AF, Wehby GL, Christensen K, Czeizel AE, Deleyiannis FW, Schutte BC, Wilson RK, Cornell RA, Lidral AC, Weinstock GM, Beaty TH, Marazita ML, Murray JC. **Identification of functional variants for cleft lip with or without cleft palate in or near PAX7, FGFR2, and NOG by targeted sequencing of GWAS loci.** *Am J Hum Genet.* 2015 Mar 5;96(3):397-411. doi: 10.1016/j.ajhg.2015.01.004. Epub 2015 Feb 19. PubMed PMID: 25704602; PubMed Central PMCID: PMC4375420.
3. Leslie EJ, Liu H, **Carlson JC**, Shaffer JR, Feingold E, Wehby G, Laurie CA, Jain D, Laurie CC, Doheny KF, McHenry T, Resick J, Sanchez C, Jacobs J, Emanuele B, Vieira AR, Neiswanger K, Standley J, Czeizel AE, Deleyiannis F, Christensen K, Munger RG, Lie RT, Wilcox A, Romitti PA, Field LL, Padilla CD, Cutiongco-de la Paz EM, Lidral AC, Valencia-Ramirez LC, Lopez-Palacio AM, Valencia DR, Arcos-Burgos M, Castilla EE, Mereb JC, Poletta FA, Orioli IM, Carvalho FM, Hecht JT, Blanton SH, Buxó CJ, Butali A, Mossey PA, Adeyemo WL, James O, Braimah RO, Aregbesola BS, Eshete MA, Deribew M, Koruyucu M, Seymen F, Ma L, de Salamanca JE, Weinberg SM, Moreno L, Cornell RA, Murray JC, Marazita ML. **A Genome-wide Association Study of Nonsyndromic Cleft Palate Identifies an Etiologic Missense Variant in GRHL3.** *Am J Hum Genet.* 2016 Apr 7;98(4):744-54. doi: 10.1016/j.ajhg.2016.02.014. Epub 2016 Mar 24. PubMed PMID: 27018472; PubMed Central PMCID: PMC4833215.

4. Leslie EJ*, **Carlson JC***, Shaffer JR*, Feingold E, Wehby G, Laurie CA, Jain D, Laurie CC, Doheny KF, McHenry T, Resick J, Sanchez C, Jacobs J, Emanuele B, Vieira AR, Neiswanger K, Lidral AC, Valencia-Ramirez LC, Lopez-Palacio AM, Valencia DR, Arcos-Burgos M, Czeizel AE, Field LL, Padilla CD, Cutiongco-de la Paz EM, Deleyiannis F, Christensen K, Munger RG, Lie RT, Wilcox A, Romitti PA, Castilla EE, Mereb JC, Poletta FA, Orioli IM, Carvalho FM, Hecht JT, Blanton SH, Buxó CJ, Butali A, Mossey PA, Adeyemo WL, James O, Braimah RO, Aregbesola BS, Eshete MA, Abate F, Koruyucu M, Seymen F, Ma L, de Salamanca JE, Weinberg SM, Moreno L, Murray JC, Marazita ML. **A multi-ethnic genome-wide association study identifies novel loci for non-syndromic cleft lip with or without cleft palate on 2p24.2, 17q23 and 19q13.** *Hum Mol Genet.* 2016 Jul 1;25(13):2862-2872. doi: 10.1093/hmg/ddw104. Epub 2016 Mar 30. PubMed PMID: 27033726; PubMed Central PMCID: PMC5181632.
5. Leslie EJ, **Carlson JC**, Cooper ME, Christensen K, Weinberg SM, Marazita ML. **Exploring Subclinical Phenotypic Features in Twin Pairs Discordant for Cleft Lip and Palate.** *Cleft Palate Craniofac J.* 2017 Jan;54(1):90-93. doi: 10.1597/15-190. Epub 2016 Feb 16. PubMed PMID: 26882109; PubMed Central PMCID: PMC4987268.
6. Leslie EJ, **Carlson JC**, Shaffer JR, Butali A, Buxó CJ, Castilla EE, Christensen K, Deleyiannis FW, Leigh Field L, Hecht JT, Moreno L, Orioli IM, Padilla C, Vieira AR, Wehby GL, Feingold E, Weinberg SM, Murray JC, Beaty TH, Marazita ML. **Genome-wide meta-analyses of nonsyndromic orofacial clefts identify novel associations between FOXE1 and all orofacial clefts, and TP63 and cleft lip with or without cleft palate.** *Hum Genet.* 2017 Mar;136(3):275-286. doi: 10.1007/s00439-016-1754-7. Epub 2017 Jan 4. PubMed PMID: 28054174; PubMed Central PMCID: PMC5317097.
7. Liu H, Leslie EJ, **Carlson JC**, Beaty TH, Marazita ML, Lidral AC, Cornell RA. **Identification of common non-coding variants at 1p22 that are functional for non-syndromic orofacial clefting.** *Nat Commun.* 2017 Mar 13;8:14759. doi: 10.1038/ncomms14759. PubMed PMID: 28287101; PubMed Central PMCID: PMC5355807.
8. Lee MK, Shaffer JR, Leslie EJ, Orlova E, **Carlson JC**, Feingold E, Marazita ML, Weinberg SM. **Genome-wide association study of facial morphology reveals novel associations with FREM1 and PARK2.** *PLoS One.* 2017;12(4):e0176566. doi: 10.1371/journal.pone.0176566. eCollection 2017. PubMed PMID: 28441456; PubMed Central PMCID: PMC5404842.
9. Leslie EJ, **Carlson JC**, Shaffer JR, Buxó CJ, Castilla EE, Christensen K, Deleyiannis FWB, Field LL, Hecht JT, Moreno L, Orioli IM, Padilla C, Vieira AR, Wehby GL, Feingold E, Weinberg SM, Murray JC, Marazita ML. **Association studies of low-frequency coding variants in nonsyndromic cleft lip with or without cleft palate.** *Am J Med Genet A.* 2017 Jun;173(6):1531-1538. doi: 10.1002/ajmg.a.38210. Epub 2017 Apr 19. PubMed PMID: 28425186; PubMed Central PMCID: PMC5444956.

10. **Carlson JC**, Taub MA, Feingold E, Beaty TH, Murray JC, Marazita ML, Leslie EJ. **Identifying Genetic Sources of Phenotypic Heterogeneity in Orofacial Clefts by Targeted Sequencing.** *Birth Defects Res.* 2017 Jul 17;109(13):1030-1038. doi: 10.1002/bdr2.23605. PubMed PMID: 28762674; PubMed Central PMCID: PMC5549861.
11. **Carlson JC**, Standley J, Petrin A, Shaffer JR, Butali A, Buxó CJ, Castilla E, Christensen K, Deleyiannis FW, Hecht JT, Field LL, Garidkhuu A, Moreno Uribe LM, Nagato N, Orioli IM, Padilla C, Poletta F, Suzuki S, Vieira AR, Wehby GL, Weinberg SM, Beaty TH, Feingold E, Murray JC, Marazita ML, Leslie EJ. **Identification of 16q21 as a modifier of nonsyndromic orofacial cleft phenotypes.** *Genet Epidemiol.* 2017 Dec;41(8):887-897. doi: 10.1002/gepi.22090. Epub 2017 Nov 10. PubMed PMID: 29124805; PubMed Central PMCID: PMC5728176.
12. Shaffer JR, Li J, Lee MK, Roosenboom J, Orlova E, Adhikari K, Gallo C, Poletti G, Schuler-Faccini L, Bortolini MC, Canizales-Quinteros S, Rothhammer F, Bedoya G, González-José R, Pfeffer PE, Wollenschlaeger CA, Hecht JT, Wehby GL, Moreno LM, Ding A, Jin L, Yang Y, **Carlson JC**, Leslie EJ, Feingold E, Marazita ML, Hinds DA, Cox TC, Wang S, Ruiz-Linares A, Weinberg SM. **Multiethnic GWAS Reveals Polygenic Architecture of Earlobe Attachment.** *Am J Hum Genet.* 2017 Dec 7;101(6):913-924. doi: 10.1016/j.ajhg.2017.10.001. Epub 2017 Nov 30. PubMed PMID: 29198719; PubMed Central PMCID: PMC5812923.
13. Duverger O, **Carlson JC**, Karacz CM, Schwartz ME, Cross MA, Marazita ML, Shaffer JR, Morasso MI. **Genetic variants in pachyonychia congenita-associated keratins increase susceptibility to tooth decay.** *PLoS Genet.* 2018 Jan;14(1):e1007168. doi: 10.1371/journal.pgen.1007168. eCollection 2018 Jan. PubMed PMID: 29357356; PubMed Central PMCID: PMC5794186.
14. Claes P, Roosenboom J, White JD, Swigut T, Sero D, Li J, Lee MK, Zaidi A, Mattern BC, Liebowitz C, Pearson L, González T, Leslie EJ, **Carlson JC**, Orlova E, Suetens P, Vandermeulen D, Feingold E, Marazita ML, Shaffer JR, Wysocka J, Shriver MD, Weinberg SM. **Genome-wide mapping of global-to-local genetic effects on human facial shape.** *Nat Genet.* 2018 Mar;50(3):414-423. doi: 10.1038/s41588-018-0057-4. Epub 2018 Feb 19. PubMed PMID: 29459680; PubMed Central PMCID: PMC5937280.
15. Camison L, Bykowski M, Lee WW, **Carlson JC**, Roosenboom J, Goldstein JA, Losee JE, Weinberg SM. **Validation of the Vectra H1 portable three-dimensional photogrammetry system for facial imaging.** *Int J Oral Maxillofac Surg.* 2018 Mar;47(3):403-410. doi: 10.1016/j.ijom.2017.08.008. Epub 2017 Sep 14. PubMed PMID: 28919165; PubMed Central PMCID: PMC5803347.
16. Ballantine JL, **Carlson JC**, Ferreira Zandoná AG, Agler C, Zeldin LP, Rozier RG, Roberts MW, Basta PV, Luo J, Antonio-Obese ME, McNeil DW, Weyant RJ, Crout RJ, Slayton RL, Levy SM, Shaffer JR, Marazita ML, North KE, Divaris K. **Exploring the genomic basis of early childhood caries: a pilot study.** *Int J Paediatr Dent.* 2018 Mar;28(2):217-225. doi: 10.1111/ipd.12344. Epub 2017 Oct 23. PubMed PMID: 29057527; PubMed Central PMCID: PMC5811369.

17. **Carlson JC***, Nidey NL*, Butali A, Buxo CJ, Christensen K, Deleyiannis FW, Hecht JT, Field LL, Moreno-Uribe LM, Orioli IM, Poletta FA, Padilla C, Vieira AR, Weinberg SM, Wehby GL, Feingold E, Murray JC, Marazita ML, Leslie EJ. **Genome-wide interaction studies identify sex-specific risk alleles for nonsyndromic orofacial clefts.** *Genet Epidemiol.* 2018 Oct;42(7):664-672. doi: 10.1002/gepi.22158. Epub 2018 Sep 11. PubMed PMID: 30277614; PubMed Central PMCID: PMC6185762.
18. Shaffer JR, LeClair J, **Carlson JC**, Feingold E, Buxó CJ, Christensen K, Deleyiannis FWB, Field LL, Hecht JT, Moreno L, Orioli IM, Padilla C, Vieira AR, Wehby GL, Murray JC, Weinberg SM, Marazita ML, Leslie EJ. **Association of low-frequency genetic variants in regulatory regions with nonsyndromic orofacial clefts.** *Am J Med Genet A.* 2019 Mar;179(3):467-474. doi: 10.1002/ajmg.a.61002. Epub 2018 Dec 24. PubMed PMID: 30582786; PubMed Central PMCID: PMC6374160.
19. **Carlson JC**, Anand D, Butali A, Buxo CJ, Christensen K, Deleyiannis F, Hecht JT, Moreno LM, Orioli IM, Padilla C, Shaffer JR, Vieira AR, Wehby GL, Weinberg SM, Murray JC, Beaty TH, Saadi I, Lachke SA, Marazita ML, Feingold E, Leslie EJ. **A systematic genetic analysis and visualization of phenotypic heterogeneity among orofacial cleft GWAS signals.** *Genet Epidemiol.* 2019 Sep;43(6):704-716. doi: 10.1002/gepi.22214. Epub 2019 Jun 6. PubMed PMID: 31172578; PubMed Central PMCID: PMC6687557.
20. Orlova E, **Carlson JC**, Lee MK, Feingold E, McNeil DW, Crout RJ, Weyant RJ, Marazita ML, Shaffer JR. **Pilot GWAS of caries in African-Americans shows genetic heterogeneity.** *BMC Oral Health.* 2019 Sep 18;19(1):215. doi: 10.1186/s12903-019-0904-4. PubMed PMID: 31533690; PubMed Central PMCID: PMC6751797.
21. Liu H, Duncan K, Helverson A, Kumari P, Mumm C, Xiao Y, **Carlson JC**, Darbellay F, Visel A, Leslie E, Breheny P, Erives AJ, Cornell RA. **Analysis of zebrafish periderm enhancers facilitates identification of a regulatory variant near human *KRT8/18*.** *Elife.* 2020 Feb 7;9. doi: 10.7554/eLife.51325. PubMed PMID: 32031521; PubMed Central PMCID: PMC7039683.
22. **Carlson JC**, Rosenthal SL, Russell EM, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Tuitele J, Deka R, McGarvey ST, Weeks DE, Minster RL. **A missense variant in *CREBRF* is associated with taller stature in Samoans.** *Am J Hum Biol.* 2020 Nov;32(6):e23414. doi: 10.1002/ajhb.23414. Epub 2020 Mar 19. PMID: 32190945; PMCID: PMC7501196.

23. Hawley NL, Pomer A, Rivara AC, Rosenthal SL, Duckham RL, **Carlson JC**, Naseri T, Reupena MS, Selu M, Lupematisilia V, Unasa F, Vesi L, Fatu T, Unasa S, Faasalele-Savusa K, Wetzel A, Soti-Ulberg C, Prescott A, Siufaga G, Penaia C, To S, LaMonica L, Lameko V, Choy CC, Crouter S, Redline S, Deka R, Kershaw EE, Urban Z, Minster RL, Weeks DE, McGarvey ST. **Exploring the paradoxical relationship of a CREBRF missense variant with body mass index and diabetes among Samoans: study protocol for the Soifua Manuia ('Good Health') observational cohort study.** *JMIR Research Protocols*. 2020 Jul 23;9(7):e17329. doi: 10.2196/17329. PMID: 32706746; PMCID: PMC7413272.
24. †Curtis SW, Chang D, Lee MK, Shaffer JR, Indencleef K, Epstein MP, Cutler DJ, Murray JC, Feingold E, Beaty T, Claes P, Weinberg SM, Marazita ML, **Carlson JC**, Leslie EJ. **The PAX1 locus at 20p11 is a potential genetic modifier for bilateral cleft lip.** *HGG Adv*. 2021 Jan 29; doi: 10.1016/j.xhgg.2021.100025 PMID: 33817668; PMCID: PMC8018676
25. **Carlson JC**, Weeks DE, Hawley NL, Sun G, Cheng, H, Naseri T, Reupena MS, Deka R, McGarvey ST*, Minster RL*. **Genome-wide Association Studies in Samoans Give Insight into the Genetic Etiology of Fasting Serum Lipid Levels.** *J Hum Genet*. 2021 Feb;66(2):111-121. doi: 10.1038/s10038-020-0816-9. Epub 2020 Aug 5. PMID: 32759990; PMCID: PMC7785639
26. †Curtis SW, Chang D, Sun M, Epstein MP, Murray JC, Feingold E, Beaty T, Weinberg SM, Marazita ML, Lipinski R, **Carlson JC**, Leslie EJ. **FAT4 Identified as a Potential Modifier of Orofacial Cleft Laterality.** *Genet Epidemiol* Epub ahead of print 2021 Jun 15. doi: 10.1002/gepi.22420.

Consortia Publications

27. Kessler MD, Loesch DP, Perry JA, Heard-Costa NL, Taliun D, Cade BE, Wang H, Daya M, Ziniti J, Datta S, Celedón JC, Soto-Quiros ME, Avila L, Weiss ST, Barnes K, Redline SS, Vasani RS, Johnson AD, Mathias RA, Hernandez R, Wilson JG, Nickerson DA, Abecasis G, Browning SR, Zöllner S, O'Connell JR, Mitchell BD, O'Connor TD. **De novo mutations across 1,465 diverse genomes reveal mutational insights and reductions in the Amish founder population.** *Proc Natl Acad Sci U S A*. 2020 Feb 4;117(5):2560-2569. doi: 10.1073/pnas.1902766117. Epub 2020 Jan 21. PubMed PMID: 31964835; PubMed Central PMCID: PMC7007577.

Submitted Articles and Preprints

28. Hawley NL, Duckham RL, Carlson JC, Naseri T, Reupena MS, Lameko B, Pomer A, Wetzel A, Selu M, Lupematisila B, Unasa F, Vesi L, Fatu T, Faasalele-Savusa K, Viali S, Rivara AC, Russell EM, Deka R, Kershaw EE, Minster RL, Weeks DE, McGarvey ST. **The association of CREBRF variant rs373863828 with body composition in adult Samoans.** *medRxiv* 2021.02.11.21251582; doi: <https://doi.org/10.1101/2021.02.11.21251582>

29. Russell EM, **Carlson JC**, Krishnan M, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Viali S, Tuitele J, Major T, Miljkovic I, Merriman TR, Deka R, Weeks DE, McGarvey ST, Minster RL. **The *CREBRF* missense variant rs373863828 has both direct and indirect effects on type 2 diabetes and fasting glucose in Samoans.** *medRxiv* 2021.02.15.21251768; doi: <https://doi.org/10.1101/2021.02.15.21251768>
30. **Carlson JC**, Shaffer JR, Deleyiannis F, Hecht JT, Wehby GH, Feingold E, Weinberg SM, Marazita ML, Leslie EJ. **Genome-wide interaction study implicates *VGLL2* and alcohol exposure and *PRL* and smoking in orofacial cleft risk.** *Front Cell Dev Biol* [under review].
31. Kelly TN, Sun X, He KY, Brown MR, Gagliano Taliun SA, Hellwege JN, Mi X, Brody JA, Franceschini N, Guo X, Hwang SJ, de Vries PS, Gao Y, Moscati A, Nadkarni GN, Irvin MR, Yanek LR, Elfassy T, Smith JA, Chung RH, Beitelshes AL, Aslibekyan S, Blobner BM, Peralta JM, Assimes TL, Palmas WR, Liu C, Bress AP, Huang Z, Becker LC, Hwa CM, O'Connell JR, **Carlson JC**, Warren HR, Das S, Giri A, Martin LW, Johnson WC, Fox ER, Bottinger EP, Razavi AC, Vaidya D, Chuang LM, Chang YPC, Naseri T, Jain D, Kang HM, Hung AM, Snively BM, Gu D, Montasser ME, Reupena MS, Heavner BD, LeFaive J, Hixson JE, Rice KM, Wang FF, Nielsen JB, Huang J, Khan AT, Zhou W, Nierenberg JL, Laurie CC, Shi M, Stilp AM, Emery L, Wong Q, Hawley NL, Minster RL, Curran JE, Munroe PB, Weeks DE, North KE, Tracy RP, Kenney EE, Shimbo D, Chakravarti A, Stephen S, Rich SS, Reiner AP, Blangero J, NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium, The Samoan Obesity, Lifestyle, and Genetic Adaptations Study (OLaGA) Group, Redline S, Mitchell BD, Rao DC, Ida Chen YDI, Kardia SLR, Kaplan RC, Mathias RA, He J, Psaty BMI, Fornage M, Loos RJJ, Correa A, Boerwinkle E, Rotter JI, Kooperberg C, Edwards TL, Abecasis GR, Zhu X, Levy D, Arnett DK, Morrison AC. **Whole-Genome Sequencing Study of Blood Pressure Traits in the Trans-Omics for Precision Medicine and Centers for Common Disease Genomics Programs.** *Circ Res* [under review].

* equal contribution

† co-authored with student

‡ co-authored with Biostatistics student

2. Books and Book Chapters

n/a

3. Published Proceedings

n/a

4. Invited Articles

n/a

5. Review Articles

n/a

6. Published Abstracts

1. **Carlson JC. Doctoring Your Clinical Trial with Adaptive Randomization: SAS Macros to Perform Adaptive Randomization.** *SAS® Global Forum, San Francisco, CA. April 28-May 1, 2013. Pharmaceutical SAS User Group (PharmaSUG), Chicago, IL, May 12-15, 2013. Oral presentation.*
2. Weyant RJ, Polk D, **Carlson JC**, McNeil DW, Crout RJ, Foxman B, Marazita ML. **Family Function Measure Predicts Caries in Northern Appalachia Children.** *Journal of Dental Research, 94A:3184, 2015. Platform presentation.*
3. Marazita ML, Shaffer JR, Feingold E, Stanley B, **Carlson JC**, Lewis D, Wang X, McNeil DW, Weyant R, Neiswanger K, Foxman B, Crout RJ. **Genetic Risk Factors for Dental Caries in Children and Adults.** *Journal of Dental Research, 94A:3186, 2015. Platform presentation.*
4. Shaffer JR, **Carlson JC**, McNeil DW, Weyant R, Crout RJ, Feingold E, Marazita ML. **Dioxin receptor gene AHR is associated with early childhood caries.** *Journal of Dental Research, 94A:1952, 2015. Platform presentation.*
5. Leslie EJ, **Carlson JC**, Shaffer JR, Feingold E, Beaty TH, Murray JC, Weinberg SM, Marazita ML. **Uncovering novel genes contributing to phenotypic heterogeneity in a common birth defect.** *2015 Human Genetics and Genomics Gordon Conference, Newport, RI. July 19-24, 2015. Poster presentation.*
6. **Carlson JC**, Leslie EJ, Shaffer JR, Schwender H, Taub MA, Ruczinski I, Murray JC, Beaty TH, Marazita ML, Feingold E. **Methods for detecting modifier genes responsible for phenotypic heterogeneity.** *65th annual meeting of the American Society of Human Genetics, Baltimore, MD. October 6-10, 2015. Poster presentation.*
7. Leslie EJ, Shaffer JR, **Carlson JC**, Feingold E, Laurie C, Doheny K, Neiswanger K, Moreno L, Lidral AC, Czeizel A, Padilla C, Deleyiannis F, Field LL, Wehby G, Vieira A, Castilla E, Butali A, Hecht JT, Buxo CJ, Christensen K, Ma L, Murray JC, Weinberg SM, Marazita ML. **Multi-ethnic genome-wide association studies of CL/P identify novel risk genes and evidence for genetic modifiers.** *38th annual meeting of the Society of Craniofacial Genetics and Developmental Biology, Baltimore, MD. October 5-6, 2015. Oral platform presentation.*

8. Leslie EJ, **Carlson JC**, Shaffer JR, Feingold E, Laurie C, Doheny K, Moreno L, Czeizel AE, Field LL, Deleyiannis F, Wehby G, Castilla EE, Vieira AR, Butali A, Christensen K, Ma L, Neiswanger K, Lidral A, Beaty T, Murray JC, Weinberg SW, Marazita ML. **Uncovering novel genes contributing to phenotypic heterogeneity in a common birth defect.** *65th annual meeting of the American Society of Human Genetics, Baltimore, MD. October 6-10, 2015. Poster presentation.*
9. Sandoval RS, Leslie EJ, **Carlson JC**, Marazita ML, Weinberg SM. **Lack of evidence for an association between season of conception and nonsyndromic orofacial clefting.** *73rd Annual Meeting, American Cleft Palate-Craniofacial Association. Atlanta, GA. April 5-9, 2016. Poster presentation.*
10. Leslie EJ, Shaffer JR, **Carlson JC**, Liu H, Moreno L, Wehby G, Cornell RA, Murray JC, Weinberg SM, Marazita ML. **Association of missense variant in GRHL3 in a genome-wide association study of isolated cleft palate.** *73rd Annual Meeting, American Cleft Palate-Craniofacial Association. Atlanta, GA. April 5-9, 2016. Platform presentation.*
11. Alotaibi R, Lee MK, **Carlson JC**, Neiswanger K, Cooper ME, McNeil DW, Weyant RJ, Crout RJ, Marazita ML. **Role of Environmental Factors on the Pattern of Dental Caries.** *American Association for Dental Research Annual Meeting, Los Angeles, CA. March 16-19, 2016. Poster Presentation.*
12. **Carlson JC.** **A SAS Macro for Quick Descriptive Statistics.** *Western Users of SAS® Software Educational Forum and Conference, San Francisco, CA. September 7-9, 2016. Platform presentation.*
13. **Carlson JC.** **Creating Meaningful Factors from Dietary Questionnaires.** *Western Users of SAS® Software Educational Forum and Conference, San Francisco, CA. September 7-9, 2016. Invited speaker.*
14. Leslie EJ, **Carlson JC**, Shaffer JR, Butali A, Buxo CJ, Christensen K, Deleyiannis F, Hecht JT, Moreno L, Orioli IM, Vieira AR, Wehby GL, Feingold E, Weinberg SM, Murray JC, Beaty TH, Marazita ML. **Genome-wide analyses reveal subtype-specific genetic effects in orofacial cleft birth defects.** *66th Annual Meeting of the American Society of Human Genetics, Vancouver, Canada. October 18-22, 2016. Poster presentation.*
15. Lee MK, Leslie EJ, **Carlson JC**, Orlova E, Feingold E, Marazita ML, Shaffer JR, Weinberg SM. **Genome-wide association study of multivariate measures of normal human facial morphology.** *66th Annual Meeting of the American Society of Human Genetics, Vancouver, Canada. October 18-22, 2016. Poster presentation.*
16. **Carlson JC**, Leslie EJ, Shaffer JR, Christensen K, Deleyiannis F, Hecht JT, Moreno Uribe LM, Vieira AR, Wehby GL, Feingold E, Weinberg SM, Marazita ML. **Genome-wide interaction study implicates VGLL2 and alcohol exposure in orofacial clefting.** *66th Annual Meeting of the American Society of Human Genetics, Vancouver, Canada. October 18-22, 2016. Poster presentation.*

17. Alotaibi RN, Howe BJ, Chernus JM, Mukhopadhyay N, Sanchez CA, Cooper ME, Deleyiannis FW, Neiswanger K, Leslie EJ, **Carlson JC**, Resick JM, Vieira AR, Shaffer JR, Moreno-Uribe LM, Marazita M. **Genome-Wide Association Study of Dental Caries in Orofacial Cleft Families.** *94th Annual Meeting of the International Association for Dental Research, San Francisco, CA. March 22-25, 2017. Poster presentation.*
18. Feingold E, Chernus J, Bowser J, Rooseboom J, Rajagopalan S, Neiswanger K, Leslie EJ, **Carlson JC**, Sanchez C, Soejima T, Czeizel A, Hecht JT, Castilla EE, Salamanca J, Orioli IM, Poletta FA, Weinberg SM, Marazita ML. **GWAS of fingerprint patterns.** *67th Annual Meeting of the American Society of Human Genetics, Orlando, FL. October 17-21, 2017. Poster presentation.*
19. Lee MK, Roosenboom J, **Carlson JC**, Leslie EJ, Feingold E, Marazita ML, Shaffer JR, Weinberg SM. **Genome-wide association study of cranial vault shape reveals novel loci at 15q26.3 and 17q11.2.** *67th Annual Meeting of the American Society of Human Genetics, Orlando, FL. October 17-21, 2017. Poster presentation.*
20. Leslie EJ, **Carlson JC**, Standley J, Petrin A, Shaffer JR, Butali A, Buxo CJ, Castilla E, Christensen K, Deleyiannis FWD, Hecht JT, Field LL, Garidkhuu A, Moreno Uribe LM, Nagato N, Orioli IM, Padilla C, Poletta F, Suzuki S, Viera AR, Wehby GL, Weinberg SM, Beaty TH, Feingold E, Murray JC, Marazita ML. **Identification of 16q21 as a modifier locus for orofacial cleft phenotypes.** *67th Annual Meeting of the American Society of Human Genetics, Orlando, FL. October 17-21, 2017. Poster presentation. Reviewer's Choice Abstract Award.*
21. **Carlson JC**, Nidey N, Shaffer HR, Butali A, Buxo CJ, Christensen K, Deleyiannis F, Hecht JT, Field LL, Moreno L, Orioli IM, Castilla EE, Poletta FA, Padilla C, Viera AR, Weinberg SM, Wehby GL, Feingold E, Murray JC, Marazita ML, Leslie EJ. **Exploring the impact of sex-specific genetic effects on orofacial clefting.** *67th Annual Meeting of the American Society of Human Genetics, Orlando, FL. October 17-21, 2017. Poster presentation.*
22. LeClair J, Leslie E, **Carlson JC**, Feingold E, Buxo C, Castilla E, Christensen K, Deleyiannis F, Field LL, Hecht J, Moreno L, Orioli I, Padilla C, Viera A, Wehby G, Murray J, Marazita M, Shaffer J, Weinberg S. **Association of Low-Frequency Variants in Regulatory Regions with Non-Syndromic Orofacial Clefts.** *75th Annual Meeting of the American Cleft Palate-Craniofacial Association, Pittsburgh, PA. April 10-14, 2018. Oral presentation.*
23. **Carlson JC**, Anand D, Buxo C, Christensen K, Deleyiannis F, Hecht J, Moreno L, Orioli I, Shaffer J, Viera A, Wehby G, Weinberg S, Marazita M, Leslie E. **A systematic analysis of orofacial clefts reveals subtype-specific genetic effects.** *75th Annual Meeting of the American Cleft Palate-Craniofacial Association, Pittsburgh, PA. April 10-14, 2018. Oral presentation.*
24. **Carlson JC**, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE, NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium. **Creating population-specific reference panels for improved genotype imputation.** *68th Annual Meeting of the American Society of Human Genetics, San Diego, CA. October 16-20, 2018. Platform presentation.*

25. † Russell EM, **Carlson JC**, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, Weeks DE, McGarvey ST, Minster RL, TOPMed Diabetes Working Group. **Genome-wide association studies of type 2 diabetes phenotypes in Samoans.** *68th Annual Meeting of the American Society of Human Genetics, San Diego, CA. October 16-20, 2018. Poster presentation.*
26. Shaffer JR, LeClair J, **Carlson JC**, Feingold E, Buxo CJ, Castilla EE, Christensen K, Deleyiannia FWB, Field LL, Hecht JT, Moreno L, Orioli IM, Padilla C, Vieira AR, Wehby GL, Murray JC, Weinberg SM, Marazita ML, Leslie EJ. **Association of Low-Frequency Variants in Regulatory Regions with Non-Syndromic Orofacial Clefts.** *68th Annual Meeting of the American Society of Human Genetics, San Diego, CA. October 16-20, 2018. Poster presentation.*
27. ‡ **Carlson JC**, Russell EM, Zhang JZ, Hawley NL, Moors J, Cheng H, Dalbeth N, de Zoysa J, Harre Hindmarsh J, Murphy R, Naseri T, Reupena MS, Stamp L, Tuitele J, Deka R, McGarvey ST, Merriman TR, Weeks DE, Minster RL, and the TOPMed Lipids Working Group. **A large effect, Polynesian-specific, stop-gained variant in *BTNL9* is associated with atherogenic lipid profiles.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation.*
28. ‡ Krishnan M, Leask M, Major TJ, **Carlson JC**, Zhang JZ, Russell EM, Minster RL, Weeks DE, Hawley NL, Naseri T, Reupena MS, Deka R, Cheng H, McGarvey ST, Dalbeth N, Zoysa J, Murphy R, Stamp L, Hindmarsh JH, Merriman TR, Moors J, TOPMed Lipids Working Group. **A novel variant in *CETP* is associated with higher HDL-cholesterol in people of Polynesian ancestry.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation.*
29. † Erdogan-Yildirim Z, **Carlson JC**, Pomer A, Hawley NL, Cheng H, Naseri T, Reupena SM, Deka R, Lambert-Messerlian G, McGarvey ST, Weeks DE, Minster RL, TOPMed Reproductive Health Working Group. **Identification of susceptibility loci for reproductive traits in Samoan women.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation.*
30. ‡ Russell EM, Harris DN, **Carlson JC**, Zhang JZ, Hawley NL, Cheng H, Naseri T, Reupena SM, Chen IY, Rao DC, Hsiung AC, Chuang LM, Sheu W, Darbar D, Deka R, O'Connor TD, McGarvey ST, Weeks DE, Minster RL, TOPMed Population Genetics Working Group. **Evidence of natural selection in Samoans is associated with BMI and the immune system.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation.*
31. ‡ Zhang JZ, **Carlson JC**, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE. **A multivariate Bayesian genetic association analysis of a *CREBRF* variant and adiposity-related phenotypes.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation.*

32. ‡ Minster RL, **Carlson JC**, Zhang JZ, Hawley NL, Rosenthal SR, Cheng H, Naseri T, Reupena MS, Viali S, Tuitele J, Deka R, McGarvey ST, Weeks DE. **Genome-wide association study of height in Samoan individuals.** *70th Annual Meeting of the American Society of Human Genetics, Virtual Meeting, October 27-30, 2020. Poster presentation.*
33. ‡ **Carlson JC**, Zhang JZ, Hawley NL, Blobner BM, Cheng H, Naseri T, Reupena MS, Viali S, Tuitele J, Deka R, McGarvey ST, Minster RL, Weeks DE, TOPMed Blood Pressure Working Group. **Samoan GWASs identify novel associations with blood pressure phenotypes.** *70th Annual Meeting of the American Society of Human Genetics, Virtual Meeting, October 27-30, 2020. Poster presentation.*
34. ‡ Krishnan M, **Carlson JC**, Zhang JZ, Cheng H, Naseri T, Reupena MS, Deka R, Mathias RA, Taub MA, Hawley NL, McGarvey ST, Weeks DE, Minster RL, TOPMed Hematology and Hemostasis Working Group, TOPMed Structural Variation Working Group. **GWAS of telomere length in individuals of Samoan ancestry.** *70th Annual Meeting of the American Society of Human Genetics, Virtual Meeting, October 27-30, 2020. Poster presentation*
35. † Erdogan-Yildirim Z, **Carlson JC**, Pomer A, Hawley NL, Cheng H, Naseri T, Reupena MS, Deka R, Lambert-Messerlian G, McGarvey ST, Weeks DE, Minster RL, TOPMed Reproductive Health Working Group. **GWAS of Polycystic Ovarian Syndrome (PCOS) in Samoan women.** *70th Annual Meeting of the American Society of Human Genetics, Virtual Meeting, October 27-30, 2020. Poster presentation*
36. ‡ Fu H, Hawley NL, **Carlson JC**, Russell EM, Cheng H, Naseri T, Reupena MS, Deka R, Choy CC, McGarvey ST, Minster RL, Weeks DE. **The missense variant, rs373863828, in CREBRF plays a role in longitudinal changes in BMI across adulthood.** *70th Annual Meeting of the American Society of Human Genetics, Virtual Meeting, October 27-30, 2020. Poster presentation.*
37. **Carlson JC**, Hawley NL, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE. **The role of population-specific genotype reference panels in genetic association studies.** *90th Annual Meeting of the American Association of Physical Anthropologists (AAPA), Physically Distanced but Intellectually Connected, April 7-28, 2021. Invited Oral Presentation.*

* equal contribution

† co-authored with student

‡ co-authored with Biostatistics student

7. Presentations

1. **Carlson JC. Doctoring Your Clinical Trial with Adaptive Randomization: SAS Macros to Perform Adaptive Randomization.** *SAS® Global Forum, San Francisco, CA. April 28-May 1, 2013. Pharmaceutical SAS User Group (PharmaSUG), Chicago, IL, May 12-15, 2013. Platform presentation.*

2. **Carlson JC**, Leslie EJ, Shaffer JR, Schwender H, Taub MA, Ruczinski I, Murray JC, Beaty TH, Marazita ML, Feingold E. **Methods for detecting modifier genes responsible for phenotypic heterogeneity.** *65th annual meeting of the American Society of Human Genetics, Baltimore, MD. October 6-10, 2015. Poster presentation.*
3. **Carlson JC.** **A SAS Macro for Quick Descriptive Statistics.** *Western Users of SAS® Software Educational Forum and Conference, San Francisco, CA. September 7-9, 2016. Platform presentation.*
4. **Carlson JC.** **Creating Meaningful Factors from Dietary Questionnaires.** *Western Users of SAS® Software Educational Forum and Conference, San Francisco, CA. September 7-9, 2016. Invited speaker.*
5. **Carlson JC**, Leslie EJ, Shaffer JR, Christensen K, Deleyiannis F, Hecht JT, Moreno Uribe LM, Vieira AR, Wehby GL, Feingold E, Weinberg SM, Marazita ML. **Genome-wide interaction study implicates VGLL2 and alcohol exposure in orofacial clefting.** *66th Annual Meeting of the American Society of Human Genetics, Vancouver, Canada. October 18-22, 2016. Poster presentation.*
6. **Carlson JC**, Nidey N, Shaffer HR, Butali A, Buxo CJ, Christensen K, Deleyiannis F, Hecht JT, Field LL, Moreno L, Orioli IM, Castilla EE, Poletta FA, Padilla C, Viera AR, Weinberg SM, Wehby GL, Feingold E, Murray JC, Marazita ML, Leslie EJ. **Exploring the impact of sex-specific genetic effects on orofacial clefting.** *67th Annual Meeting of the American Society of Human Genetics, Orlando, FL. October 17-21, 2017. Poster presentation.*
7. **Carlson JC**, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE, NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium. **Creating population-specific reference panels for improved genotype imputation.** *68th Annual Meeting of the American Society of Human Genetics, San Diego, CA. October 16-20, 2018. Platform presentation.*
8. **Carlson JC**, Russell EM, Zhang JZ, Hawley NL, Moors J, Cheng H, Dalbeth N, de Zoysa J, Harre Hindmarsh J, Murphy R, Naseri T, Reupena MS, Stamp L, Tuitele J, Deka R, McGarvey ST, Merriman TR, Weeks DE, Minster RL, and the TOPMed Lipids Working Group. **A large effect, Polynesian-specific, stop-gained variant in BTNL9 is associated with atherogenic lipid profiles.** *69th Annual Meeting of the American Society of Human Genetics, Houston, TX. October 15-19, 2019. Poster presentation*
9. **Carlson JC.** **Simulation-based activities to enhance graduate students' understanding of introductory statistics concepts.** *Conference on Teaching and Learning in Higher Education, Pittsburgh, PA. November 15, 2019. Poster presentation.*
10. **Carlson JC.** **Using a competency-based grading system in an introductory biostatistics course to improve student mastery.** *2020 Association of Schools and Programs of Public Health (ASPPH) Annual Meeting. March 18-20, 2020. Poster Presentation. Canceled due to COVID-19*

11. **Carlson JC, Youk A. Using competency-based grading systems to improve student mastery.** *Pittsburgh Regional Faculty Symposium, Pittsburgh, PA. March 27, 2020. Workshop presentation. Canceled due to COVID-19*
12. **Carlson JC, Youk A. Lunchtime Chat - Specification Grading.** *Graduate School of Public Health, University of Pittsburgh, June 29, 2020.*
13. **Carlson JC, Martinson J. Lunchtime Chat – Canvas.** *Graduate School of Public Health, University of Pittsburgh, July 18, 2020.*
14. **Carlson JC. Population-specific genotype reference panels boost genetic association studies.** *Biostatistics Research Day, Department of Biostatistics, University of Pittsburgh, March 4, 2021.*
15. **Carlson JC, Hawley NL, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE. The role of population-specific genotype reference panels in genetic association studies.** *90th Annual Meeting of the American Association of Physical Anthropologists (AAPA), Physically Distanced but Intellectually Connected, April 7-28, 2021. Invited Presentation.*

8. Non-Print Media (Software, electronic)

n/a

9. Other Publications

n/a

SERVICE

1. Service to School and University

Years	Committee	Position
2017 – 2018	Health Professionals Prep (HPP) Program University of Pittsburgh	Volunteer
2018 – 2019	M.S. Innovations Committee Department of Biostatistics University of Pittsburgh	Member (appointed)
2018 –	M.S. Program Committee Department of Biostatistics University of Pittsburgh	Member (appointed)
2018 –	M.S. Comprehensive Exam Committee Department of Biostatistics University of Pittsburgh	Member (appointed)

Years	Committee	Position
2018 –	M.P.H. Committee Graduate School of Public Health University of Pittsburgh	Member (appointed)
2018 –	Curriculum Committee Department of Biostatistics University of Pittsburgh	Member (appointed)
2018 –	Ph.D. Epidemiology Preliminary Exam – Biostatistics Exam Subcommittee University of Pittsburgh	Member (appointed)
2019 –	Dean’s Day Competition Graduate School of Public Health University of Pittsburgh	Faculty Judge
2020	Convocation – Biostatistics Departmental Celebration Planning Committee University of Pittsburgh	Chair (appointed)
2020 –	Ph.D. Biostatistics Qualifying Exam – Applied Exam Subcommittee Department of Biostatistics University of Pittsburgh	Member (appointed)
2020 –	Teaching Task Force Department of Biostatistics University of Pittsburgh	Member (appointed)
2021 –	BSPH and graduate educational programs planning group Department of Biostatistics University of Pittsburgh	Member (appointed)
2021 –	Diversity planning group Department of Biostatistics University of Pittsburgh	Member (appointed)

2. Service to Field of Scholarship

a. Editorial Boards, Editorships

Date	Position	Organization
n/a		

b. Manuscript and Other Document/Publication Review

Dates	Journal Title
2017	BMC Oral Health
2018	Clinical Biochemistry

Dates	Journal Title
2019	PLoS One
2019	Human Molecular Genetics
2020 – 2021	Life
2020	Nutrients
2021	Genetic Epidemiology
2021	Annals of Medicine

c. Study Sections, Review Panels, and Advisory Boards

Date	Position	Organization and Nature of Activity
2016	Section Chair	Western Users of SAS Software Educational Forum and Conference San Francisco, CA
2018 –	Member	Anthropometry and Adiposity Working Group NHLBI Trans-Omics for Precision Medicine (TOPMed) Program
2018 –	Member	Analysis Working Group NHLBI Trans-Omics for Precision Medicine (TOPMed) Program
2020 –	Member	Lipids Working Group NHLBI Trans-Omics for Precision Medicine (TOPMed) Program
2020 –	Member	Blood Pressure Working Group NHLBI Trans-Omics for Precision Medicine (TOPMed) Program
2019 –	Volunteer reviewer	American Society of Human Genetics Annual DNA Day Essay Contest Judge

d. Leadership in Scholarly and Professional Organizations and Honorary Societies

Date	Position	Organization
n/a		

3. Service for Practice and Policy-Making, including Consultantships

a. Governmental Organizations

Date	Position	Type of Service and/or Agency
n/a		

b. Non-Governmental and Community-Based Organizations

Date	Position	Type of Service and/or Organization
2015 – 2017	Board Member	Community Research Advisory Board Center for Health Equity University of Pittsburgh

4. Non-Professional Service

Year(s)	Position and Organization	Type of Service
2018	Handler Therapy Dogs International	Volunteer
2018 – 2021	Food Pantry Director Bellefield Food Closet	Volunteer