

## Curriculum Vitae

**Daniel E. Weeks**  
**Professor of Human Genetics and Biostatistics**

### Address:

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**Citizenship:** United States of America

### Education:

1983	B.A., summa cum laude, Biology and Mathematics	Colby College, Waterville, ME
1983-84	Graduate studies in Applied Mathematics	Rutgers University, New Brunswick, NJ
1985	M.S., Biomathematics	University of California, Los Angeles
1988	Ph.D., Biomathematics (Kenneth Lange, mentor)	University of California, Los Angeles
1989-90	Postdoctoral training (Jurg Ott, mentor)	Columbia University, New York, NY

### Fellowships:

1982 Research Training Program, The Jackson Laboratory, Bar Harbor, ME (David E. Harrison, mentor)  
1983 Summer Student Fellow, Woods Hole Oceanographic Institution, MA (Hal Caswell, mentor)  
1986-87 Genetic Mechanisms Training Program, UCLA  
1987-88 Systems and Integrative Biology Training Program, UCLA  
1989-90 Postdoctoral Fellow with Jurg Ott, Ph.D., Columbia University

### Academic Appointments:

1989-90 Research Scientist, New York State Psychiatric Institute  
1990-96 Assistant Professor of Human Genetics (tenure-track), University of Pittsburgh  
1992-00 Member, W. M. Keck Center for Advanced Training in Computational Biology  
1994-95 Executive Committee, W. M. Keck Center for Advanced Training in Computational Biology  
1994-98 Head of Statistical Genetics - Methods, Wellcome Trust Centre for Human Genetics, University of Oxford  
1996-02 Associate Professor of Human Genetics (tenured), University of Pittsburgh  
2002-03 Associate Professor of Biostatistics (joint appointment), University of Pittsburgh  
2004 Acting Chair, Department of Human Genetics  
2005 Acting Vice Chair, Department of Human Genetics  
2002- Professor of Human Genetics (tenured), University of Pittsburgh  
2003- Professor of Biostatistics (joint appointment), University of Pittsburgh  
2021-22 Acting Chair, Department of Human Genetics

### Professional Organizations:

American Society of Human Genetics  
International Genetic Epidemiology Society  
American Statistical Association (Life member since 2011)

### Honors and Awards:

1982 Phi Beta Kappa, elected Junior year

- 1983 Graduated second in class from Colby College  
 1984-85 University Fellow, UCLA  
 1986-87 Dr. Ursula Mandel Scholarship, UCLA  
 1986-87 National Research Service Award, Genetic Mechanisms Training Program, UCLA  
 1987-88 National Research Service Award, Systems and Integrative Biology Training Program, UCLA  
 1987-88 Distinguished Scholar Award, UCLA  
 2001 The Mortimer Spiegelman Award, awarded by the American Public Health Association, for outstanding contributions in health statistics.  
 2003 Delta Omega, National Honor Society for Schools of Public Health  
 2007 Pitt Innovator Award, University of Pittsburgh  
 2008 Pitt Innovator Award, University of Pittsburgh  
 2010 Pitt Innovator Award, University of Pittsburgh

### Teaching and Training:

#### Training Programs:

- 2000-06 Program Director, post-doctoral training program in statistical genetics: "Discovering Genes for Mental Health"  
 2002-10 Program Director, international training program in genetic epidemiology: "India-US Research Training Program in Genetics"

*Helped mentor the following post-doctoral trainees who were supported by one of our Training Programs:*

- 2000-02 Dr. Karen T. Cuenco  
 2001-03 Dr. Bobby L. Jones  
 2002-04 Dr. Sarah Buxbaum  
 2003-05 Dr. Brian H. Reck  
 2003-05 Dr. Guy Brock  
 2004-05 Dr. Jin P. Szatkiewicz  
 2004-07 Dr. Anbupalam Thalamuthu  
 2005-06 Dr. Abigail Matthews  
 2003-09 Dr. Indranil Mukhopadhyay

#### Courses:

- Spring 1991 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 25 enrolled)  
 Fall 1991 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics and Evolution (HUGEN 2023, 3 hrs/week, 3 credits, 4 enrolled)  
 Spring 1992 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 25 enrolled)  
 Fall 1992 Assistant Professor, University of Pittsburgh, co-taught  
 Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 7 enrolled)  
 Spring 1993 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 15 enrolled)  
 Fall 1993 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics and Evolution (HUGEN 2023, 3 hrs/week, 3 credits, 5 enrolled)  
 Spring 1994 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 26 enrolled)  
 Fall 1994 Assistant Professor, University of Pittsburgh, co-taught  
 Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 4 enrolled)  
 Spring 1995 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 24 enrolled)  
 Fall 1995 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics and Evolution (HUGEN 2023, 3 hrs/week, 3 credits, 7 enrolled)  
 Spring 1996 Assistant Professor, University of Pittsburgh, co-taught  
 Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 27 enrolled)

Fall 1996 Assistant Professor, University of Pittsburgh, co-taught  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 10 enrolled)

Spring 1997 Associate Professor, University of Pittsburgh, co-taught  
Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 21 enrolled)

Fall 1997 Associate Professor, University of Pittsburgh, organized and co-taught  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 3 enrolled)

Spring 1998 Associate Professor, University of Pittsburgh, co-taught  
Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 15 enrolled)

Fall 1998 Associate Professor, University of Pittsburgh, co-taught  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 7 registered)

Fall 1999 Associate Professor, University of Pittsburgh, co-taught  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 8 registered)

Fall 2000 Associate Professor, University of Pittsburgh, co-taught  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 7 registered)

Spring 2001 Associate Professor, University of Pittsburgh, co-taught  
Human Population Genetics (HUGEN 2022, 3 hrs/week, 3 credits, 18 registered)

Fall 2001 Associate Professor, University of Pittsburgh, co-taught half  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 13 registered)

Fall 2002 Professor, University of Pittsburgh, co-taught half  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 10 registered)

Fall 2003 Professor, University of Pittsburgh, co-taught more than half  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 12 registered)

Fall 2004 Professor, University of Pittsburgh, co-taught half  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 9 registered)

Fall 2005 Professor, University of Pittsburgh, co-taught half  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 9 registered)

Summer 2006 Professor, University of Pittsburgh, co-led a break-out discussion section  
Scientific Ethics (INTBP 2290, 4 hrs/week, 1 credit, May-June 2006)

Fall 2006 Professor, University of Pittsburgh, co-taught half  
Quantitative Genetics (HUGEN 2033, 3 hrs/weeks, 3 credits, 7 registered)

Summer 2007 Professor, University of Pittsburgh, co-led two break-out discussion sections  
Scientific Ethics (INTBP 2290, 4 hrs/week, 1 credit, May-June 2007)

Fall 2007 Professor, University of Pittsburgh, taught the majority of  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 5 registered)

Summer 2008 Professor, University of Pittsburgh, led a break-out discussion section  
Scientific Ethics (INTBP 2290, 4 hrs/week, 1 credit, May-June 2008)

Fall 2008 Professor, University of Pittsburgh, co-taught half  
Quantitative Genetics (HUGEN 2033, 3 hrs/week, 3 credits, 6 registered)

Summer 2009 Professor, University of Pittsburgh, led two break-out discussion sections  
Scientific Ethics (INTBP 2290, 4 hrs/week, 1 credit, June 1, 2009 and June 8, 2009)

Fall 2009 Professor, University of Pittsburgh, co-taught half  
Linkage Analysis in Human Genetics (HUGEN 2048, 3 hrs/week, 3 credits, 6 registered)

Fall 2010 Professor, University of Pittsburgh, co-taught half  
Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 10 registered)

Spring 2012 Professor, University of Pittsburgh, co-taught half  
Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 10 registered)

Fall 2012 Professor, University of Pittsburgh, co-taught half  
Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 14 registered, 1 auditor)

Spring 2014 Professor, University of Pittsburgh, co-taught half  
Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 5 registered, 1 auditor)

Fall 2014 Professor, University of Pittsburgh, co-taught half  
Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 13 registered, 1 auditor)

November 2015	Professor, University of Pittsburgh, taught three lectures on sequencing in Introduction to Gene Mapping (HUGEN 2029, 3 hrs/week, 3 credits, 11 registered).
Spring 2016	Professor, University of Pittsburgh, co-taught half Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 4 registered, 2 auditors)
Fall 2016	Professor, University of Pittsburgh, co-taught half Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 13 registered, 3 auditors)
Spring 2018	Professor, University of Pittsburgh, co-taught half Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 10 registered, 8 auditors)
Fall 2018	Professor, University of Pittsburgh, co-taught half Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 16 registered, 4 auditors)
Fall 2019	Professor, University of Pittsburgh, co-taught half Bioinformatics for Human Genetics (HUGEN 2070, 3 hrs/week, 3 credits, 10 registered, 1 auditor)
Spring 2020	Professor, University of Pittsburgh, co-taught ~80% Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 8 registered, 2 auditors)
Fall 2020	Professor, University of Pittsburgh, co-taught half Genomic Data Processing and Structure (HUGEN 2071, 3 hrs/week, 3 credits, 19 registered, 1 auditor)
Fall 2021	Professor, University of Pittsburgh, co-taught half Genomic Data Processing and Structure (HUGEN 2071, 3 hrs/week, 3 credits, 9 registered, 1 auditor)
Spring 2022	Professor, University of Pittsburgh, co-taught ~70% Statistical Genetics (HUGEN 2080, 3 hrs/week, 3 credits, 14 registered, 1 auditor)
Fall 2022	Professor, University of Pittsburgh, co-taught half Genomic Data Processing and Structure (HUGEN 2071, 3 hrs/week, 3 credits, 14 registered, 1 auditor)
Spring 2023	Professor, University of Pittsburgh, co-led Human Genetics Seminar (HUGEN 2025, 1 hr/week, 1 credit, 68 registered)

**Other teaching:**

1983-84	Teaching Assistant, Rutgers University, New Brunswick, NJ Taught three recitation sections of Precalculus each semester.
1984-85	Mathematics Tutor, University of California, Los Angeles Assisted students in Precalculus, Calculus, Linear Algebra, and Differential Equations.
1985-86	Teaching Associate, Department of Biomathematics, UCLA Assisted Medical students in Biomathematics.
March 1989	Instructor, Columbia University, New York, NY, Course in Linkage Analysis
March 1990	Instructor, Columbia University, New York, NY, Course in Linkage Analysis
Nov. 1990	Instructor, Columbia University, New York, NY, Advanced Course in Linkage Analysis
May 1991	Instructor, Columbia University, New York, NY, Course in Linkage Analysis
May 1991	University of Pittsburgh Medical School Genetics Course, 2 hour lecture on Population Genetics, Segregation and Linkage Analysis.
Oct. 1991	Instructor, Columbia University, New York, NY, Advanced Course in Linkage Analysis
Dec. 1992	University of Pittsburgh Medical School Genetics Course, 3 hour lecture on Population Genetics, Segregation and Linkage Analysis.
Dec. 1992	Advanced Molecular Genetics, Department of Molecular Genetics and Biochemistry, University of Pittsburgh Medical School, 2.5 hour lecture on Linkage Analysis.
Jan. 1993	Instructor, Columbia University, New York, NY, Advanced Course in Linkage Analysis
April 1993	University of Pittsburgh Medical School Genetics Course, 3 hour lecture on Population Genetics, Segregation and Linkage Analysis.

May 1993	University of Pittsburgh Medical Genetics Board Review Course, 4 hour lecture on Population Genetics and Linkage Analysis.
Dec. 1993	University of Pittsburgh Medical School Genetics Course, 4 hour lecture on Population Genetics, Segregation and Linkage Analysis.
July 1995	Wellcome Trust Summer School Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases.
July 1996	Wellcome Trust Summer School Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
May 1997	Duke University Course: Genetic Analysis Methods for Medical Researchers, lectures on statistical methods of linkage analysis.
July 1997	Wellcome Trust Summer School Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
April 1998	Duke University Course: Genetic Analysis Methods for Medical Researchers, lectures on statistical methods of linkage analysis.
July 1998	Wellcome Trust Summer School Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Nov. 1998	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
March 1999	Duke University Course: Genetic Analysis Methods for Medical Researchers, lectures on statistical methods of linkage analysis.
July 1999	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Nov. 1999	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
April 2000	Duke University Course: Genetic Analysis Methods for Medical Researchers, lectures on statistical methods of linkage analysis.
July 2000	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Jan. 2001	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
May 2001	Duke University Course: Genetic Analysis of Human Complex Diseases, lectures on statistical methods of linkage analysis.
July 2001	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Oct. 2001	Short Course on Mathematical Approaches to the Analysis of Complex Phenotypes, The Jackson Laboratory, lectures on non-parametric linkage analysis.
Dec. 2001	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
April 2002	Abstract Writing Session, Graduate School of Public Health, University of Pittsburgh, PA, discussed how to write abstracts.
May 2002	INSERM Ateliers de formation / Workshop 136 – Methods for the elucidation of genomic variation, La Roche-Posay and Paris, France, lectures on linkage analysis (Co-organizer).
July 2002	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Dec. 2002	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
June 2003	Co-director, Workshop on <i>Genetic Epidemiological Methods for Dissection of Complex Human Traits</i> , Kolkata, India.
July 2003	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Dec. 2003	Advanced Course in Linkage Analysis at Rockefeller University, New York, NY, lectures on statistical methods of linkage analysis.
July 2004	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).

Dec. 2004	Co-director, Second Workshop on <i>Genetic Epidemiological Methods for Dissection of Complex Human Traits</i> , Kolkata, India.
May 2005	Co-organizer, Paris Workshop on Molecular and Statistical Genomic Epidemiology, Paris, France.
July 2005	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
July 2006	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Jan. 2007	Co-director, Third Workshop on <i>Genetic Epidemiological Methods for Dissection of Complex Human Traits</i> , Kolkata, India.
May 2007	Co-organizer, Second Paris Workshop on Molecular and Statistical Genomic Epidemiology, Paris, France.
July 2007	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
July 2008	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Feb. 2009	Co-director, Fourth Workshop on <i>Genetic Epidemiological Methods for Dissection of Complex Human Traits</i> , Kolkata, India.
March 2009	Co-organizer, Third Paris Workshop on Genetic Epidemiology, Paris, France.
July 2009	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
Feb. 2010	Co-director, Fifth Workshop on <i>Genetic Epidemiological Methods for Dissection of Complex Human Traits</i> , Kolkata, India.
June 2010	Led a discussion session on case studies in scientific ethics for the SIBS (Summer Institute for Training in Biostatistics) program, June 22, 2010.
July 2010	Participated in a "Brown bag lunch panel discussion: Interdisciplinary training" for the SIBS (Summer Institute for Training in Biostatistics) program, July 1, 2010.
July 2010	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
May 2011	Co-organizer, Fourth Paris Workshop on Genetic Epidemiology, Paris, France.
June 2011	Guest lecture on "Scientific Ethics" for the SIBS (Summer Institute for Training in Biostatistics) program, June 22, 2011.
June 2011	Led a discussion session on case studies in scientific ethics for the SIBS (Summer Institute for Training in Biostatistics) program, June 22, 2011.
July 2011	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
July 2011	Guest lecture on "Genetic variants and personalized medicine" for the SIBS (Summer Institute for Training in Biostatistics) program, July 15, 2011.
August 2011	Plunge into Public Health: Human Subjects Ethics lecture, August 26, 2011.
August 2011	Co-led Plunge into Public Health: Human Subjects Ethics discussion group, August 26, 2011.
July 2012	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
August 2012	Co-led Plunge into Public Health: Human Subjects Ethics discussion group, August 23, 2012.
January 2013	Kyoto Course and Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, taught about rare variants association analyses. January 15-19, 2013.
May 2013	Co-organizer, Fifth Paris Workshop on Genetic Epidemiology, Paris, France.
June 2013	Co-led a discussion session on case studies in scientific ethics for the SIBS (Summer Institute for Training in Biostatistics) program, June 19, 2013.
July 2013	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
March 2014	The Second Kyoto Course and Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, taught about association analyses. March 10-14, 2014.
July 2014	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).

October 2014	Freshman Seminar: Genomics in the Era of Personalized Medicine, at Carnegie Mellon University. Guest lecture on "Genetic Variants and Personalized Medicine". October 9, 2014.
March 2015	The Third Kyoto Course and Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, taught about rare variants association analyses. March 16-20, 2015.
May 2015	Co-organizer, Sixth International Workshop on Genetic Epidemiology, May 14-16, 2015, London, United Kingdom.
July 2015	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
July 2016	Wellcome Trust Advanced Course on Human Genome Analysis: Genetic Analysis of Multifactorial Diseases (Course leader).
February 2017	Co-led a Human Genetics Journal Club session, February 3, 2017.
July 2017	Wellcome Genome Campus Advanced Course on Genetic Analysis of Mendelian and Complex Disorders (Course leader).
September 2017	Co-organizer, Seventh International Workshop on Genomic Epidemiology, September 20-22, 2017, Barcelona, Spain (missed due to illness).
July 2018	Wellcome Genome Campus Advanced Course on Genetic Analysis of Mendelian and Complex Disorders (Course leader).
July 2019	Wellcome Genome Campus Advanced Course on Genetic Analysis of Mendelian and Complex Disorders (Course leader).
February 2021	Guest lecture on 'Imputation' in HuGen 2072, Genomic Data Pipelines and Tools, on February 17, 2021.
July 2021	Wellcome Genome Campus Advanced Course (virtual) on Genetic Analysis of Mendelian and Complex Disorders (Course leader).
July 2022	Wellcome Genome Campus Advanced Course (virtual) on Genetic Analysis of Mendelian and Complex Disorders (Course leader).

### Service on Masters and Doctoral Committees

1991	Laura Lasher, M.S. "The estimation of genome length from genetic linkage data"
1992	Carmella A. Sarneso, M.S. "Analysis of computer simulated family data using the affected pedigree member method of linkage analysis"
1992	Tara K. Cox, Ph.D. "Automated genetic linkage mapping: development and performance assessment of an expert computer program"
1993	Lisa D. Harby, M.S. "A teratogen information service: profile of the patient caller and development of a pregnancy outcome questionnaire"
1993	D. Andrew Merriwether, Ph.D. "Mitochondrial DNA variation in South American Indians"
1994	Pamela L. St. Jean, Ph.D. "The genetic etiology of abdominal aortic aneurysms"
1994	Deborah L. Brown, M.S. "Strategies for genomic searching using the affected pedigree member method of linkage analysis" (Chair of Committee)
1994	Kelly E. Jackson, M.S. "An exon-2 peripherin/RDS mutation causes macular and peripheral retinal degeneration"
1994	Sang Ahnn, Ph.D. "Sample size determination in clinical trials"
1997	Sean Davis, Ph.D., Human Genetics, "Nonparametric Statistics in Linkage Analysis" (Chair of Committee)
1997	Robert W. Kramer, Ph.D., Computer Science, "An incremental algorithm for finding maximum likelihood in genetic linkage analysis"
1999	Michael Barmada, Ph.D., Human Genetics, "Genetic epidemiology of type 2 (non-insulin dependent) diabetes mellitus"
2000	Kai Yu, Ph.D., Biostatistics, "Statistical methods for analyzing tetrad crossover probabilities"
2000	Brion Maher, Ph.D. "Genetic analyses of attention deficit hyperactivity disorder and its underlying dimensions"
2001-2002	Jacqueline Wicks, The Australian National University, "On modeling and testing for linkage in nuclear families" (External examiner for her PhD examination).

- 2004 Hui-Ju Tsai, Ph.D., Human Genetics, "Comparison of methods incorporating covariates into affected sib pair linkage analysis" (Chair of Committee).
- 2004 Feng Dai, M.S., Biostatistics, "Imprinting in variance components-based linkage analysis" (Chair of Committee).
- 2004 Jin P. Szatkiewicz, Ph.D., Biostatistics, "Mapping genes for quantitative traits using selected samples of sibling pairs".
- 2007 Yan Lin, Ph.D., Biostatistics, "Statistical Issues in Family-Based Genetic Association Studies with Application to Congenital Heart Defects in Down Syndrome".
- 2007 Amrita Ray, Ph.D., Human Genetics, "Affected relative pair linkage statistics that model relationship uncertainty" (Chair of Committee).
- 2007 Feng Dai, Ph.D., Biostatistics, "Variance components models in statistical genetics: extensions and applications" (Chair of Committee).
- 2008 John Shaffer, Ph.D., Human Genetics, "Genetic Epidemiology of Five-Year Change in Bone Mineral Density in Mexican Americans".
- 2008 Ankur Mukherjee, Ph.D., Human Genetics, "Candidate gene association study of baseline and longitudinal bone-quality traits in a healthy older population".
- 2008 Samsiddhi Bhattacharjee, Ph.D., Human Genetics, "Variance component score statistics for QTL mapping".
- 2009 Johanna Jakobsdottir, Ph.D. Biostatistics, "Genetics of age-related maculopathy & score statistics for X-linked quantitative trait loci" (Chair of Committee).
- 2010 Chia-Ling Kuo, Ph.D., Biostatistics, "Topics in statistical methods for human gene mapping".
- 2011 Ryan Minster, Ph.D., Human Genetics, "Pleiotropic relationships among measures of bone mineral density, bone geometry, lean muscle mass and fat mass".
- 2010-2011 Ross Curtis, Ph.D., Computational Biology, Carnegie Mellon University, "Using visualization and automation to accelerate genetics discovery".
- 2011-2012 Yerkebulan Talzhanov, M.S., Human Genetics, "Computational modeling of the pancreas: lifelong simulations of pancreatitis".
- 2012 Tero Hiekkalinna, Ph.D., Statistical Genetics, University of Helsinki, "On the superior power of likelihood-based linkage disequilibrium mapping in large multiplex families compared to population based case-control designs". Served as an external examiner.
- 2012-13 Umut Ozbek, Ph.D., Biostatistics, "Statistical Methods for Recovering GWAS Data".
- 2012-14 Chi-Ting Su, Ph.D., Human Genetics, "Molecular Mechanisms of LTBP4-related Cutis Laxa."
- 2013-14 Shaowu Tang, Ph.D., Biostatistics, "Investigations on Genomic Meta-Analysis: Imputation for Incomplete Data and Properties of Adaptively Weighted Fisher's Method".
- 2013-14 Ying Ding, Ph.D., Computational Biology, "Prognostic biomarker detection, machine learning bias correction, and differential coexpression module detection".
- 2013-14 Lun-Ching Chang, Ph.D., Biostatistics, "Candidate Marker and Module Detection and Genotype Calling Incorporating Family Information".
- 2013-14 Olive D. Buhule, Ph.D., Biostatistics, "Bayesian Hierarchical Joint Modeling of Repeatedly Measured Mixed Biomarkers of Disease Severity and Time-To-Event".
- 2013-16 Nandita Mukhopadhyay, Ph.D., Human Genetics, "Computational methods for calculating meiotic recombination from nuclear pedigrees".
- 2014 Philip Robinson, Ph.D., "The genetics of ankylosing spondylitis and anterior uveitis", The University of Queensland Diamantina Institute. Served as an external thesis examiner.
- 2014-15 Hui-Min Lin, Ph.D., Biostatistics, "Behavior Of Statistics for Genetic Association in Genome-Wide Scan Context".
- 2014-15 Zhen Zhen, Ph.D., Biostatistics, "A pipeline for classifying close family relationships with dense SNP data and putative pedigree information".
- 2014-15 SungHwan Kim, Ph.D., Biostatistics, "Statistical learning methods for multi-omics data integration in dimension reduction, supervised and unsupervised machine learning".
- 2015 Randy Beadling, M.S. in Genetic Counseling, Human Genetics, "Restoring spermatogenesis: Lentiviral gene therapy for male infertility in mice".
- 2015 Jia Jia, Ph.D., Biostatistics, "Association analysis between binary traits and common or rare genetic variants on family-based data" (Chair of Committee).



- 2015 Yingda Jiang, Ph.D., Biostatistics, "Gene-based association testing of dichotomous traits using generalized functional linear mixed models for family data" (Chair of Committee).
- 2015 MyoungKeun Lee, Ph.D., Biostatistics, "The effect of error models on analysis pipelines in sequencing data".
- 2016 Ying Shan, Ph.D., Biostatistics, "Statistical methods for genetic risk confidence intervals, Bayesian disease risk prediction, and estimating mutation screening saturation" (Chair of Committee).
- 2016 Steven Troung, M.Phil., "Determinants of radiographic severity in ankylosing spondylitis", The University of Queensland Diamantina Institute. Served as an external thesis examiner.
- 2017 Chien-Wei Lin, Ph.D., Biostatistics, "Power calculation and study design in RNA-seq and methyl-seq".
- 2017 Yi Liu, Ph.D., Biostatistics, "Novel single and gene-based test procedures for large-scale bivariate time-to-event data, with application to a genetic study of AMD progression"
- 2017 Kevin K. McDade, Ph.D., Biomedical Informatics, "Enabling data-guided evaluation of bioinformatics workflow quality".
- 2018 Yunqi Li, M.S., Human Genetics, "Epigenome-wide association study of recovery outcomes of traumatic brain injury patients" (Co-chair of Committee).
- 2018 Richard J. Biedrzycki, M.S., Human Genetics, "Genome-wide association studies, false positives, and how we interpret them" (Chair of Committee).
- 2018 Winston W. H. Eng, M.S., Biostatistics, "Exploring the genetic characteristics underlying a multidimensional latent chemotherapy symptom burden" (Chair of Committee).
- 2018-19 Li Zhu, Ph.D., Biostatistics, "Bayesian variable selection model and differential co-expression network analysis for multi-omics data integration".
- 2015-19 Annie Arockiaraj, M.S., Human Genetics, "Epigenome-wide association studies in aneurysmal subarachnoid hemorrhage patients".
- 2016-19 Emily Russell, Ph.D., Human Genetics, "Discrepant effects of CREBRF on obesity and metabolic phenotypes and signals of selection in Samoans".
- 2019-20 Lacey Heinsberg, Ph.D., Nursing, "Multi-omics of the iron homeostasis pathway in patient outcomes after aneurysmal subarachnoid hemorrhage".
- 2019-20 Qianqian Liang, Ph.D. Human Genetics
- 2020 Dongjing Liu, Ph.D., Human Genetics, "Integrated genome-wide analysis of human facial morphology".
- 2020 Chen' Ao Qian, M.S. Biostatistics, "Genome-wide association studies in Samoans give insight into obesity by investigating skinfold thickness" (Chair of Committee).
- 2020 Tao Sun, Ph.D. Biostatistics, "New Statistical Methods for Complex Survival Data with High-Dimensional Covariates".
- 2020-22 Frances M. Peterson-Burch, Ph.D., School of Nursing, "miRNAs Related to Age-Related Macular Degeneration, Given Genetic Susceptibility".
- 2020-22 Zeynep Erdogan-Yildirim, Ph.D., Human Genetics, "Identification of genetic factors involved in the etiology of polycystic ovary syndrome in Samoan women".
- 2020-2021-22 Shuwei Liu, Ph.D., Human Genetics
- 2021-22 Ellyn Dunbar, Ph.D., Human Genetics, "Psychiatric and Pain Risk Genes that may Worsen Quality of Life in Chronic Pancreatitis Patients".
- 2021 Peng Liu, Ph.D., Biostatistics, "Outcome-Guided Disease Subtyping and Power Calculation for High-Dimensional Omics Studies".
- 2021-22 Laura Stackhouse, M.S., Human Genetics, "*CREBRF* Missense Variant rs373863828 and Relative Grip Strength".
- 2022 Devin Dikec, M.S. Human Genetics – Genome Bioinformatics, "Inclusion of custom markers does not improve genotype imputation accuracy in a population isolate".
- 2022 Elizabeth A. Chiyka, M.S. Human Genetics – Genome Bioinformatics, "Evidence of genotype imputation differences when phasing population isolate participants with a cosmopolitan haplotype reference panel".

- 2022 Kevin Anderson, M.S. Human Genetics – Genome Bioinformatics, "Inclusion of 48 Pacific Islanders within a cosmopolitan reference panel is sufficient for high accuracy genotype imputation of Samoans".
- 2021-22 Kaitlin Kirkpatrick Heimke, M.P.H. Public Health Genetics, "Association Between BDNF DNA Methylation and Depression and Anxiety in Postmenopausal Individuals with Breast Cancer".
- 2022 Jordan A. Driscoll, M.S. Human Genetics – Genome Bioinformatics, "Comparison of Genome-Wide Association Study Approaches: Meta-Analysis vs Mega-Analysis".
- 2022 Kaylea M. Flick, M.P.H. Public Health Genetics, "Conjunctival Melanoma from an Epigenetic Perspective".
- 2022-23 Amanda Koloskee, M.S. Human Genetics, "Effect of Exercise on DNA Methylation Age Acceleration in Breast Cancer Patients Undergoing Aromatase Inhibitor Therapy".
- 2023 Jaime Wehr, M.S. Human Genetics – Genome Bioinformatics, "Genome-wide Association Studies of Type 2 Diabetes in Samoan Adults".
- 2023 Joshua Witten, M.S. Human Genetics – Genome Bioinformatics, "Comparison of genotype imputation on chromosome 5 in a population isolate using haplotypes phased with and without TOPMed genotypes".
- 2023- Yidi Qin, Ph.D. Human Genetics

### Graduate students

- 1994 Deborah L. Brown, M.S., Human Genetics, "Strategies for genomic searching using the affected pedigree member method of linkage analysis".
- 1997 Sean Davis, Ph.D., Human Genetics, "Nonparametric Statistics in Linkage Analysis".
- 2004 Hui-Ju Tsai, Ph.D., Human Genetics, "Comparison of methods incorporating covariates into affected sib pair linkage analysis".
- 2004 Feng Dai, M.S., Biostatistics, "Imprinting in variance components-based linkage analysis".
- 2007 Amrita Ray, Ph.D., Human Genetics, "Affected relative pair linkage statistics that model relationship uncertainty".
- 2007 Feng Dai, Ph.D., Biostatistics, "Variance components models in statistical genetics: extensions and applications".
- 2009 Johanna Jakobsdottir, Ph.D., Biostatistics, "Genetics of age-related maculopathy & score statistics for X-linked quantitative trait loci".
- 2015 Jia Jia, Ph.D., Biostatistics, "Association analysis between binary traits and common or rare genetic variants on family-based data".
- 2015 Yingda Jiang, Ph.D., Biostatistics, "Gene-based association testing of dichotomous traits using generalized functional linear mixed models for family data".
- 2016 Ying Shan, Ph.D., Biostatistics, "Statistical methods for genetic risk confidence intervals, Bayesian disease risk prediction, and estimating mutation screening saturation".
- 2018 Yunqi Li, M.S., Human Genetics, "Epigenome-wide association study of recovery outcomes of traumatic brain injury patients", co-supervised with Dr. John R. Shaffer.
- 2018 Richard J. Biedrzycki, M.S., Human Genetics, "Genome-wide association studies, false positives, and how we interpret them".
- 2018 Winston W. H. Eng, M.S., Biostatistics, "Exploring the genetic characteristics underlying a multidimensional latent chemotherapy symptom burden".
- 2019 Annie Arockiaraj, M.S., Human Genetics, "Epigenome-wide association studies in aneurysmal subarachnoid hemorrhage patients", co-supervised with Dr. John R. Shaffer.
- 2020 Chen' Ao Qian, M.S., Biostatistics, "Genome-wide association studies in Samoans give insight into obesity by investigating skinfold thickness".
- 2020- Shuwei Liu, Ph.D., Human Genetics
- 2021-22 Laura Stackhouse, M.S. Human Genetics, "*CREBRF* Missense Variant rs373863828 and Relative Grip Strength".
- 2021-22 Kaitlin Kirkpatrick Heimke, M.P.H. Public Health Genetics, "Association Between BDNF DNA Methylation and Depression and Anxiety in Postmenopausal Individuals with Breast Cancer", co-mentored with Dr. Lacey W. Heinsberg.

2022-23 Amanda Koloskee, M.S. Human Genetics, "Effect of Exercise on DNA Methylation Age Acceleration in Breast Cancer Patients Undergoing Aromatase Inhibitor Therapy".

### Post-doctoral Fellows

1992-1994 Dr. Tara Cox Matisse  
 1994-1995 Dr. Alan Young  
 1995 Dr. William Shannon  
 1999-2003 Dr. Kyunghee Song  
 1999-2004 Dr. Haydar Sengul  
 2004-2006 Dr. Jeusun Jung  
 2006-2008 Dr. Karolina Åberg  
 2010-2012 Dr. Ryan Minster  
 2017-2018 Dr. Jenna C. Carlson, co-supervised with Dr. Ryan Minster.  
 2019-2022 Dr. Mohanraj Krishnan, co-supervised with Dr. Ryan Minster.  
 2020- Dr. Lacey W. Heinsberg

### Mentoring

Summer 2000 Co-mentored a summer medical student, Kristen DiGirolamo, with Dr. David Finegold. She worked on the genetics of normal height.

1996-2000 Mentored Jeffrey O'Connell, who obtained his D.Phil. from the University of Oxford in July 2000.

2000-2006 Co-mentored Krina Zondervan, an MRC Training Fellow in Bioinformatics at the University of Oxford.

2001 Co-mentored Lai Sze Lee, a Biostatistics Ph.D. student from Carnegie Mellon University who did her applied data analysis project on Dr. Gorin's age-related macular degeneration data.

2002-2007 Feng Dai, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2003-2007 Amrita Ray, a Human Genetics Ph.D. student from the University of Pittsburgh.

2004-2009 Johanna Jakobsdottir, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2007-2008 Sajjad Ahmad Khan, a pre-doctoral visiting student from the University of Peshawar, Pakistan, supported by a scholarship from the Higher Education Commission of Pakistan.

2007-2008 Ferdouse Begum, a Human Genetics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2007-2009 Xinyu Tang, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2009-2010 Chia-Ling Kuo, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2010-2011 Umut Ozbek, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision. Helped co-mentor through 2013.

2011-2015 Jia Jia, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2011-2015 Yingda Jiang, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2012-2014 Olive Buhule, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2012-2016 Ying Shan, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.

2014-2015 Jerome Lin, a Human Genetics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher half-time under my supervision.

2015-2019 Annie Arockiaraj, a Human Genetics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my co-supervision.

2016-2018 Co-supervised Yunqi Li, a Human Genetics M.S. student from the University of Pittsburgh.

2016-2018 Winston Eng, a Biostatistics M.S student from the University of Pittsburgh, worked as an hourly researcher under my supervision.

2016-2019	Secondary mentor for Emily Russell, a Human Genetics Ph.D. student from the University of Pittsburgh.
2017-2018	Supervised Rich Biedrzycki, a Human Genetics M.S. student from the University of Pittsburgh.
Fall 2018	Adam Kruchten, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.
2018-2020	Haoyi Fu, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.
2018-2020	Jerry Zhang, a Biostatistics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.
2018-2020	Dongjing Liu, a Human Genetics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my co-supervision.
2018-2022	Co-mentor of Qi Yan on his K01 research project "Novel Methods for Analysis of Genetic and Epigenetic Studies of Childhood Asthma".
2020	Supervised Chen' Ao Qian, a Biostatistics M.S. student from the University of Pittsburgh.
2020-	Shuwei Liu, a Human Genetics Ph.D. student from the University of Pittsburgh, worked as a Graduate Student Researcher under my supervision.
2021-2022	Mentored Laura Stackhouse, a Human Genetics M.S. student from the University of Pittsburgh on her thesis project.
2021-2022	Co-mentored Kaitlin Kirkpatrick Heimke, an M.P.H. Public Health Genetics student from the University of Pittsburgh on her M.P.H. essay project.
2021-2022	Mentored Joshua Witten, a Human Genetics M.S. in Genome Bioinformatics from the University of Pittsburgh.
2022-2023	Mentored Amanda Koloskee, a Human Genetics M.S. student from the University of Pittsburgh on her thesis project.
2022-	Mentored Dylan Maher, a Human Genetics Ph.D. student from the University of Pittsburgh on two research projects.

#### **Scientific Writing (HUGEN 2011) mentoring**

Fall 2020	Ellyn Dunbar
Fall 2021	Kaitlin Kirkpatrick Heimke
Fall 2021	Laura Stackhouse
Fall 2022	Amanda Koloskee
Fall 2022	Shuwei Liu
Fall 2022	Elynn Youm

#### **Scholarly Oversight Committee Service**

2016-2018	Erick Forno
2019-2020	Erica Stevens
2019-2021	Soyeon Kim
2023-	Soyeon Kim

#### **K99 Postdoctoral Scholar mentoring**

2022-	Mitali Ray
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#### **Presentations:**

Effect of family size on power of linkage analysis, at the Ataxia-Telangiectasia Workshop. February 1987.

The affected-pedigree-member method of linkage analysis, at the 38th Annual Meeting of the American Society of Human Genetics. October 1987.

The Affected-Pedigree-Member Method of Linkage Analysis, at:

Columbia University.	June 1988.	Medical College of Virginia.	December 1987.
Duke University.	March 1989.	Collaborative Research, MA.	March 1988.
CEPH, Paris	June 1989.	Johns Hopkins.	May 1988.
University of Michigan	November 1992.	Boston University.	June 1988.

Heterozygote identification in an Amish pedigree with ataxia-telangiectasia, at the Ataxia-Telangiectasia Workshop, May 1989.

Preliminary ranking procedures for multilocus ordering based on radiation hybrid data, at the Genetic Analysis Workshop, October 1990.

A multilocus extension of the affected-pedigree-member method of linkage analysis, invited speaker at the Interface '91 conference, April 1991.

Using the affected pedigree member method of linkage analysis, invited speaker at the INSERM Atelier 44, Le Vesinet, France, March 1992.

Genomic searching using the affected pedigree member method of linkage analysis, invited speaker at the Biometric Society ENAR spring meeting, March 1993.

Mapping complex traits with the affected pedigree member method, invited speaker at the Joint Statistical Meetings of the American Statistical Association, the Biometric Society, and the Institute of Mathematical Statistics, August 1993.

Strategies for mapping complex traits with the affected pedigree member method, Rockefeller University, January 1995.

Haplotyping algorithms, invited speaker at a meeting entitled "Mathematical foundations and practical solutions in human linkage analysis", Galton Laboratory, University College London, March 1995.

Computer programs for multilocus haplotyping of general pedigrees, invited speaker at Guy's Hospital, London, November 1995.

Nonparametric simulation-based statistics for detecting linkage in general pedigrees, invited speaker at the European Union meeting on Genetic Mapping of Disease Genes, University of Oxford, December 1995.

Nonparametric simulation-based statistics for detecting linkage in general pedigrees, invited speaker at the 5th Rheumatoid Arthritis Genetics Workshop, University of Manchester, United Kingdom, March 1996.

Advances in statistical methods for linkage analysis, invited speaker at the International Symposium on Theoretical and Computational Genome Research, Heidelberg, Germany, March 1996.

From genetic linkage to gene identification, MRC Workshop on Behavioral Genetics, London, November 1996.

Nonparametric statistics for detecting linkage in general pedigrees, invited speaker at the Departement de Genetique et Microbiologies, Geneva, Switzerland, March 1998.

Nonparametric simulation-based statistics for detecting linkage in general pedigrees, invited speaker, The Jackson Laboratory, January 1997.

Parametric vs. non-parametric methods for linkage analysis, invited speaker, National Cancer Institute Gene Discovery Workshop, Fred Hutchinson Cancer Research Center, Seattle, Washington, May 1998.

Nonparametric simulation-based statistics for detecting linkage in general pedigrees, invited speaker, Fred Hutchinson Cancer Research Center, Seattle, Washington, May 1998.

Mapping complex traits with non-parametric linkage analysis, invited speaker, Memorial Sloan-Kettering Cancer Center, New York, November 1998.

Linkage analysis of complex traits, invited speaker, University of Michigan, Ann Arbor, Michigan, November 1998.

"Monte Carlo Markov Chain Linkage Analysis" and "Simulation-based allele-sharing methods for general pedigrees", invited speaker. Boden Conference, Thredbo, Australia, February 1999.

Linkage analysis of complex traits, invited speaker, Department of Biological Sciences, Binghamton University, Binghamton, New York, May 1999.

The Morton Number, invited speaker, Genetic dissection of complex traits: challenges for the next millennium, a symposium in honor of Newton E. Morton, St. Louis, Missouri, September 1999.

A robust integrated system for mapping complex diseases, invited speaker, Statistical Genetics Initiative Workshop, sponsored by the National Institutes of Health. Half Moon Bay, California, October 1999.

The complexity of linkage analysis with neural networks, invited speaker, Department of Biostatistics, University of Pittsburgh, February 2000.

- Linkage analysis in human genetics, invited speaker, Bioinformatics@Pitt, Distinguished Lecture Series in Bioinformatics, University of Pittsburgh, January 2001.
- Genome-wide scan for loci affecting adult height in the Framingham Study, Departmental Seminar, Department of Human Genetics, November 2001.
- Linkage mapping of complex human disease, invited speaker, Spotlight Session on Genetic Linkage and Genomic Evolution, Science2002 conference, University of Pittsburgh, September 2002.
- Comparison of methods incorporating covariates into affected sib pair linkage analysis, invited speaker, Human Genetics Department, Emory University School of Medicine, March 2004.
- Statistical challenges in genetics and genomics, Paris Workshop on Molecular and Statistical Genomic Epidemiology, Paris, France, May 2005.
- Statistical challenges: covariates, heterogeneity, and affected sib pair linkage analysis, invited speaker, Computational Genetics: a perspective - Celebrating the scientific contributions of Kenneth Lange, UCLA, Los Angeles, February 2007.
- Survey of statistical issues – Is linkage dead?, Second Paris Workshop on Molecular and Statistical Genomic Epidemiology, Paris, France, May 2007.
- Linkage statistics that model relationship uncertainty, invited speaker, 'Statistical methods for High-throughput Genetic Data' Workshop at The Banff International Research Station for Mathematical Innovation and Discovery, June 24 – 29, 2007.
- Associated genetic variants and personalized medicine, invited speaker, 'Illuminating the Genetic Architecture of Common Eye Disease' Conference, Avalon, CA, February 3-7, 2009.
- Associated genetic variants and personalized medicine, invited speaker, The Third Paris Workshop on Genomic Epidemiology, Paris, France, March 25-27, 2009.
- Associated genetic variants and personalized medicine, invited speaker, 'Analysis of human genetic data: A celebration of Jurg Ott's work in honor of his 70th birthday', Rockefeller University, New York, NY, June 4, 2009.
- Interpretation of genetic association studies: markers with replicated highly significant odds ratios may be poor classifiers, invited speaker, International Genetic Epidemiology Society: 'The next frontier: advancing from genetic risk to functionality and testing', 59th Annual Meeting of the American Society of Human Genetics, Honolulu, HI, October 22, 2009 (Johanna Jakobsdottir and I both spoke).
- Genetic variants and personalized medicine, invited speaker, Vanderbilt University, Nashville, TN, January 28, 2010.
- Genetic variants and personalized medicine, invited speaker, Yale University, New Haven, CT, April 13, 2010.
- Genetic variants and personalized medicine, Brown University, April 14, 2010.
- Genetic variants and personalized medicine, invited speaker, The Seventh Annual C.C. Li Memorial Lecture, University of Pittsburgh, Pittsburgh, PA, April 23, 2010.
- Genetic variants and personalized medicine, invited speaker, The Fourth Paris Workshop on Genetic Epidemiology, Paris, France, June 1, 2011.
- Genetic variants and personalized medicine, invited speaker, Kyoto Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, January 19, 2013.
- Genetic variants and personalized medicine, invited speaker, National Yang-Ming University, Taipei, Taiwan, January 24, 2013.
- Genetic variants and personalized medicine, invited speaker, National Health Research Institutes, Zhunan, Taiwan, January 25, 2013.
- Personalized genetic risks: Confidence is key, invited speaker, The Second Kyoto Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, Kyoto, Japan, March 13, 2014.
- Gene-based association testing using functional linear models, invited speaker, The Third Kyoto Symposium on Bioinformatics for Next Generation Sequencing with Applications in Human Genetics, Kyoto, Japan, March 19, 2015.
- A thrifty variant in *CREBRF* strongly influences body mass index in Samoans, trainee-selected invited speaker, The Cleveland Clinic, January 23, 2017.
- Spinning Convincing Stories for Association Signals - All That Glitters is Not Gold, Human Genetics Seminar, University of Pittsburgh, November 22, 2019.

Spinning Convincing Stories for Association Signals - All That Glitters is Not Gold, Invited Seminar (virtual), Genetics & Epidemiology Seminar Series 2022, Division of Genetics and Epidemiology, The Institute of Cancer Research, London, United Kingdom, March 10, 2022.

### Teaching and Mentoring Professional Development

- 2017 Attended the Detecting Plagiarism Workshop, part of the Professional Development Workshop series, February 2, 2017.
- 2018 Attended the Encouraging Student Participation Workshop, led by the University of Pittsburgh Center for Teaching and Learning, June 8, 2018.
- 2018 Attended a Faculty Mentor Training Workshop, August 7, 2018.
- 2019 Attended the Evidence-Based Teaching Practices Workshop on "What factors motivate students to learn?", March 13, 2019.
- 2019 Attended the Evidence-Based Teaching Practices Workshop on "What kinds of practice and feedback enhance learning", April 10, 2019.
- 2019 Attended the Evidence-Based Teaching Practices Workshop on "Applying principles of learning to ourselves", May 22, 2019.
- 2020 Attended the Better Grading and Feedback with Gradescope Workshop, Feb 11, 2020.
- 2021 Attended four Institute for Clinical Research Education Mentor Training Workshops, October 15, 2020; October 29, 2020; November 12, 2020; December 10, 2020
- 2022 Attended lecture about Specification Grading at the Spring 2022 Pitt Public Health meeting, June 21, 2022.
- 2023 Attended The Top Five Canvas Integrations for Course Innovation Teaching Workshop, January 3, 2023.
- 2023 Attended an Anti-Racist Pedagogy Workshop, February 22, 2023.

### Advancement of Diversity, Equity, and Inclusion

- 2020 Attended the school-wide Social Justice Action Committee Town Hall meeting, October 8, 2020.
- 2021 Participated in three journal club discussions of the book 'Reproductive Injustice. Racism, Pregnancy, and Premature Birth' by Dána-Ain Davis (2019) New York University Press.
- 2021 Attended workshop on "Preventing Sexual Misconduct: Understanding Your Responsibility", offered by the University of Pittsburgh's Faculty & Staff Development Program, November 4, 2021.
- 2021 Attended a workshop on "Intercultural Competency", offered by the University of Pittsburgh's Faculty & Staff Development Program, December 9, 2021.
- 2022 Attended a workshop on "Individuals with Disabilities: Creating an Accommodating and Inclusive Environment", offered by the University of Pittsburgh's Faculty & Staff Development Program, June 8, 2022.
- 2022 Attended a workshop on "Workplace Bullying: Understanding a Barrier to Equal Opportunity", offered by the University of Pittsburgh's Faculty & Staff Development Program, June 9, 2022.
- 2022 Attended a workshop on "Creating Equal Access: Getting Started with Digital Accessibility", offered by the University of Pittsburgh's Faculty & Staff Development Program, October 26, 2022.
- 2023 Attended a workshop on "Fostering a Diverse and Inclusive Workplace", offered by the University of Pittsburgh's Faculty & Staff Development Program, May 10, 2022.
- 2023 Attended the "Diversity & Inclusion Certificate Program Capstone", offered by the University of Pittsburgh's Faculty & Staff Development Program, June 27, 2023.
- 2023 Completed the Diversity and Inclusion Certificate Program organized by the Office of Equity, Diversity, and Inclusion, June 27, 2023.

### Bibliography

†Graduate student; ‡Post-doctoral trainee.

### Peer-reviewed manuscripts:

1. Caswell H, DE Weeks (1986) Two-sex models: chaos, extinction, and other dynamic consequences of sex. The American Naturalist **128**:707-735
2. Gatti RA, RC Davis, DE Weeks, NJG Jaspers, RS Sparkes, K Lange (1987) Genetic linkage studies of ataxia-telangiectasia: Phenotypic blood markers. Disease Markers **5**:207-213

3. Weeks DE, K Lange (1987) Preliminary ranking procedures for multilocus ordering. Genomics **1**:236-242
4. Gatti RA, I Berkel, E Boder, G Braedt, P Charmley, P Concannon, F Ersoy, T Foroud, N Jaspers, K Lange, G Lathrop, M Leppert, Y Nakamura, P O'Connell, M Paterson, W Salser, O Sanal, J Silver, R Sparkes, E Susi, D Weeks, S Wei, R White, F Yoder (1988) Localization of an ataxia-telangiectasia gene to chromosome 11q22-23. Nature **336**:577-580
5. Weeks DE, K Lange (1988) The affected-pedigree-member method of linkage analysis. Am J Hum Genet **42**:315-326
6. Goldstein AM, DE Weeks, V Cortessis, RW Haile (1989) Comparison of the affected-pedigree-member and lod score methods. In: Multipoint Mapping and Linkage Based Upon Affected Pedigree Members: Genetic Analysis Workshop 6 (Elston RC et al., Eds). New York: Alan R. Liss, pp. 135-140
7. Lange K, DE Weeks (1989) Efficient computation of lod scores: Genotype elimination, genotype redefinition, and hybrid maximum likelihood algorithms. Ann Human Genet **53**:67-83
8. Weeks DE, K Lange (1989) Trials, tribulations, and triumphs of the EM algorithm in pedigree analysis. IMA J Math Appl Med Biol **6**:209-232
9. Charmley P, T Foroud, S Wei, P Concannon, DE Weeks, K Lange, RA Gatti (1990) A primary linkage map of the human chromosome 11q22-23 region. Genomics **6**:316-323
10. Haile RW, AM Goldstein, DE Weeks, RS Sparkes, A Paganini-Hill (1990) Genetic epidemiology of bilateral breast cancer: A linkage analysis using the affected-pedigree-member method. Genet Epidemiol **7**:47-55
11. Lange K, DE Weeks (1990) Linkage methods for identifying genetic risk factors. World Rev Nutr Diet **63**:236-249
12. Smith M, S Smalley, R Cantor, M Pandolfo, MI Gomez, R Baumann, P Flodman, K Yoshiyama, Y Nakamura, C Julier, K Dumars, J Haines, J Trofatter, MA Spence, D Weeks, M Conneally (1990) Mapping of a gene determining tuberous sclerosis to human chromosome 11q14-11q23. Genomics **6**:105-114
13. Weeks DE, L Brzustowicz, E Squires-Wheeler, B Cornblatt, T Lehner, M Stefanovich, TC Gilliam, J Ott, L Erlenmeyer-Kimling (1990) Report of a workshop on genetic linkage studies in schizophrenia. Schiz Bull **16**:673-686
14. Weeks DE, T Lehner, E Squires-Wheeler, C Kaufmann, J Ott (1990) Measuring the inflation of the lod score due to its maximization over model parameter values in human linkage analysis. Genet Epidemiol **7**:237-243
15. Wilhelmsen KC, DE Weeks, TG Nygaard, CB Moskowitz, RL Rosales, DC dela Paz, EE Sobrevega, S Fahn, TC Gilliam (1991) Genetic mapping of "Lubag" (X-linked dystonia-parkinsonism) in a Filipino kindred to the pericentromeric region of the X chromosome. Ann Neurol **29**:124-131
16. Weeks DE, Paterson MC, Lange K, Andrais B, Davis RC, Yoder F, Gatti RA (1991) Assessment of chronic  $\gamma$  radiosensitivity as an *in vitro* assay for heterozygote identification of ataxia-telangiectasia. Radiat Res **128**:90-99
17. Weeks DE, Lange K (1992) A multilocus extension of the affected-pedigree-member method of linkage analysis. Am J Hum Genet **50**:859-868
18. Weeks DE, Lehner T, Ott J (1992) Preliminary ranking procedures for multilocus ordering based on radiation hybrid data. Cytogenet Cell Genet **59**:125-127



19. Angrist M, Kauffman E, Slaugenhaupt SA, Matise TC<sup>‡</sup>, Puffenberger EG, Washington SS, Lipson A, Cass DT, Reyna T, Weeks DE, Sieber W, Chakravarti A (1993) A gene for Hirschsprung disease (megacolon) in the pericentromeric region of human chromosome 10. Nature Genetics **4**:351-356
20. Goldin LR, Weeks DE (1993) Two-locus models of disease: comparison of likelihood and non-parametric linkage methods. Am J Hum Genet **53**:908-915.
21. Li CC, Weeks DE, Chakravarti A (1993) Similarity of DNA fingerprints due to chance and relatedness. Hum Hered **43**:45-52
22. Matise TC<sup>‡</sup>, Weeks DE (1993) Detecting heterogeneity with the affected-pedigree-member (APM) method. Genet Epidemiol **10**:401-406
23. Nygaard TG, Wilhelmson KC, Risch NJ, Brown DL<sup>†</sup>, Trugman JM, Gilliam TC, Fahn S, Weeks DE (1993) Linkage mapping of dopa-responsive dystonia (DRD) to chromosome 14q. Nature Genetics **5**:386-391
24. Weeks DE, Lathrop GM, Ott J (1993) Multipoint mapping under genetic interference. Hum Hered **43**:86-97
25. Berrettini WH, Ferraro TN, Goldin LR, Weeks DE, Detera-Wadleigh S, Nurnberger JI, Gershon ES (1994) Chromosome 18 DNA markers and manic-depressive illness: evidence for a susceptibility gene. Proc Natl Acad Sci USA **91**:5918-5921
26. Brown DL<sup>†</sup>, Gorin MB, Weeks DE (1994) Efficient strategies for genomic searching using the affected-pedigree-member method of linkage analysis. Am J Hum Genet **54**:544-552
27. Matise TC<sup>‡</sup>, Chakravarti A, Patel PI, Lupski JR, Nelis E, Timmerman V, Van Broeckhoven C, Weeks DE (1994) Detection of tandem duplications and implications for linkage analysis. Am J Hum Genet **54**:1110-1121
28. Schroeder M, Brown DL<sup>†</sup>, Weeks DE (1994) Improved programs for the affected-pedigree-member method of linkage analysis. Genet Epidemiol **11**:69-74
29. Weeks DE, Ott J, Lathrop GM (1994) Detection of genetic interference: simulation studies and mouse data. Genetics **136**:1217-1226
30. Kramer RW, Weeks DE, Chiarulli DM (1995) An incremental algorithm for efficient multipoint linkage analysis. Hum Hered **45**:323-336
31. Matise TC<sup>‡</sup>, Schroeder MD, Chiarulli DM, Weeks DE (1995) Parallel computation of genetic likelihoods using CRI-MAP, PVM, and a network of distributed workstations. Hum Hered **45**:103-116
32. O'Connell JR, Weeks DE (1995) The VITESSE algorithm for rapid exact multilocus linkage analysis via genotype set-recoding and fuzzy inheritance. Nat Genet **11**:402-408
33. Tanaka H, Endo K, Tsuji S, Nygaard TG, Weeks DE, Nomura Y, Segawa M (1995) The gene for hereditary progressive dystonia with marked diurnal fluctuation (HPD) maps to chromosome 14q. Ann Neurol **37**:405-408
34. Weeks DE, Harby LD<sup>†</sup> (1995) The affected-pedigree-member method: power to detect linkage. Hum Hered **45**:13-24
35. Weeks DE, Lathrop GM (1995) Polygenic disease: Methods for mapping complex disease traits. Trends Genet **11**:513-519
36. Weeks DE, Nygaard TG, Neystat M, Harby LD, Wilhelmson KC (1995) A high resolution genetic linkage map of the pericentromeric region of the human X chromosome. Genomics **26**:39-46

37. Weeks DE, Valappil TI, Schroeder M, Brown DL<sup>†</sup> (1995) An X-linked version of the affected-pedigree-member method of linkage analysis. Hum Hered **45**:25-33
38. Weeks DE, Young A<sup>‡</sup>, Li CC (1995) DNA profile match probabilities in a subdivided population: When can subdivision be ignored? Proc Natl Acad Sci USA **92**:12031-12035
39. Davis S<sup>†</sup>, Schroeder M, Goldin LR, Weeks DE (1996) Nonparametric simulation-based statistics for detecting linkage in general pedigrees. Am J Hum Genet **58**:867-880
40. Hall FC, Weeks DE, Camilleri J, Williams LA, Amos N, Darke C, Gibson K, Pile K, Wordsworth BP, Jessop JD (1996) The influence of the HLA-DRB1 locus on susceptibility and severity in rheumatoid arthritis. QJM - Monthly J Assoc Phys **89**:821-829
41. Maestrini E, Monaco AP, McGrath JA, Ishida-Yamamoto A, Camisa C, Hovnanian A, Weeks DE, Lathrop M, Uitto J, Christiano AM (1996) A molecular defect in lorcin, the major component of the cornified cell envelope, underlies Vohwinkel's syndrome. Nature Genet **13**:70-77
42. Davis S<sup>†</sup>, Sobel E, Marinov M, Weeks DE (1997) Analysis of bipolar disorder using affected relatives. Genetic Epidemiol **14**:605-610
43. Davis S<sup>†</sup>, Weeks DE (1997) Comparison of nonparametric statistics for detection of linkage in nuclear families: Single-marker evaluation. Am J Hum Genet **61**:1431-1444
44. Hall FC, Brown MA, Weeks DE, Walsh S, Nicod A, Butcher S, Andrews LJ, Wordsworth BP (1997) A linkage study across the T cell receptor A and T cell receptor B loci in families with rheumatoid arthritis. Arthritis Rheum **40**:1798-1802
45. Julier C, Delépine M, Keavney B, Terwilliger J, Davis S<sup>†</sup>, Weeks DE, Bui T, Jeunemaître X, Velho G, Froguel P, Ratcliffe P, Corvol P, Soubrier F, Lathrop GM (1997) Genetic susceptibility for human familial essential hypertension in a region of homology with blood pressure linkage on rat chromosome 10. Hum Mol Genet **6**:2077-2086
46. Kennedy S, Hadfield R, Barlow D, Weeks DE, Laird E, Golding S (1997) Use of MRI in genetic studies of endometriosis. Am J Med Genet **71**:371-372
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#### Formal Online Comments:

1. Heath SC, Weeks DE (2016) Lack of convincing statistical evidence of the involvement of Nuclear Receptor NR1H3 in Familial Multiple Sclerosis. [https://www.cell.com/neuron/comments/S0896-6273\(16\)30126-X](https://www.cell.com/neuron/comments/S0896-6273(16)30126-X)

**Software:**

†*Graduate student*; ‡*Post-doctoral trainee*.

I have written or helped develop many software packages during my career. Several of these (SLINK, Mega2, VITESSE, PedCheck, SimWalk2) were widely used by the international research community. Biotech companies have, in the past, purchased commercial licenses to use PedCheck and Mega2.

**dGene:** A dBASE database for storing and managing linkage analysis data. Programmed by Daniel Weeks. Lange K, Weeks D, Boehnke M (1988) Programs for pedigree analysis: MENDEL, FISHER, and dGENE. Genet Epidemiol **5**:471-472

**APM:** Implements the non-parametric affected pedigree member method of linkage analysis. Programmed by Daniel Weeks. Weeks DE, Lange K (1988) The affected-pedigree-member method of linkage analysis. Am J Hum Genet **42**:315-326

**recode:** Conversion utility for recoding marker data recorded in base-pair sizes into LINKAGE format data. Programmed by Daniel Weeks.

**pedprep:** Converts MENDEL-format files into PedDraw format, for drawing pedigrees using PedDraw. Programmed by Daniel Weeks.

**map:** Converts multipoint linkage output from the LINKAGE programs into proper multipoint lod score curves. Programmed by Daniel Weeks.

**LinkMend:** Converts LINKAGE-format files into MENDEL-format files. Programmed by Daniel Weeks.

**SLINK, FastSLINK:** Simulates linkage data conditional on specified phenotypes. Primary programmer of SLINK: Daniel Weeks. Weeks DE, Ott J, Lathrop GM (1990) SLINK: a general simulation program for linkage analysis. Am J Hum Genet **47**:A204

**cintmax:** A program for computing multipoint likelihoods under various models of interference. Programmed by Daniel Weeks. Weeks DE, Lathrop GM, Ott J (1993) Multipoint mapping under genetic interference. Hum Hered **43**:86-97

**pedi:** Efficient incremental multipoint lod score computations. Kramer RW, Weeks DE, Chiarulli DM (1995) An incremental algorithm for efficient multipoint linkage analysis. Hum Hered **45**:323-336

**haplo, simcross:** Programs for haplotyping marker data on pedigrees. Programmed by Daniel Weeks. Weeks DE, Sobel E, O'Connell JR, Lange K (1995) Computer programs for multilocus haplotyping of general pedigrees. Am J Hum Genet **56**:1506-1507

**crimap-pvm:** Allows for parallel computation of likelihoods on pedigrees for rapid map construction. Matise TC<sup>‡</sup>, Schroeder MD, Chiarulli DM, Weeks DE (1995) Parallel computation of genetic likelihoods using CRIMAP, PVM, and a network of distributed workstations. Human Hered **45**:103-116

**VITESSE:** A program for rapid likelihood computations on general pedigrees. O'Connell JR, Weeks DE (1995) The VITESSE algorithm for rapid exact multilocus linkage analysis via genotype set-recoding and fuzzy inheritance. Nat Genet **11**:402-408

**SimWalk2:** Carries out haplotype, parametric linkage, non-parametric linkage, identity by descent and mistyping analyses on any size of pedigree using Markov chain Monte Carlo (MCMC) and simulated annealing algorithms. Sobel E, Lange K, O'Connell JR, Weeks DE (1995) Haplotyping algorithms. In: Speed TP, Waterman MS (eds) Genetic mapping and DNA sequencing: IMA Volumes in Mathematics and its Applications. Springer-Verlag, New York

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**PedCheck:** Detects Mendelian inconsistencies in marker data on pedigrees. O'Connell JR, Weeks DE (1998) PedCheck: A program for identifying genotype incompatibilities in linkage analysis. *Am J Hum Genet* **63**:259-66

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126. Wang X, Vieira AR, Shaffer JR, Begum F, Lee M, T.Cuenco K, Zheng Z, Polk DE, Barmada MM, Noel J, Anjomshoa I, Weeks DE, Feingold E, Marazita ML (2011) Follow-up GWAS analysis and in silico candidate gene study for dental caries in permanent teeth. Paper presented at the 12th International Congress of Human Genetics. Montreal, Canada
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137. Brehm JM, Chen W, Boutaoui N, Han Y-Y, Schmitz C, Acosta-Perez E, Alvarez M, Colon-Semidey A, Baccarelli A, Weeks DE, Kolls JK, Canino G, Celedon JC (2013) Methylation of ADCYAP1R1 and asthma In Puerto Rican children. Paper presented at the American Thoracic Society 2013 International Conference. Philadelphia, PA. *Am J Respir Crit Care Med* **187**:A2131.
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141. Minster RL, Hawley NL, Sun G, Cheng H, Viali S, Deka R, Weeks DE, McGarvey ST (2013) Genomewide association studies of lipids in Samoans. Paper presented at the 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA
142. Baron RV, Conley YP, Gorin MB, Weeks DE (2013) dbVÖR: An open source database system for managing phenotype and genotype information for complex trait studies. Paper presented at the 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA
143. Buhule OD<sup>†</sup>, Hawley NL, Medvedovic M, Minster RL, Sun G, Cheng H, Viali S, Deka R, Weeks DE, McGarvey ST (2013) A pilot study testing DNA methylation profiles in Samoan obese and lean young adult males. Paper presented at the 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA
144. Fung C, Trent K, Joyce S, Zhou P, Nukui T, Weeks DE, Diergaarde B, Ye YQ, Wu XF, Yuan JM, Grandis J, Weissfeld JL, Romkes M, Egloff AM (2013) Identification of epidermal growth factor receptor (EGFR) polymorphisms that modify risk for squamous cell carcinoma of the head and neck (HNSCC). Proceedings of the 104th Annual Meeting of the American Association for Cancer Research. *Cancer Research* **73** (8 Suppl), Abstract 1340.
145. Kollar CP, Baron RV, Mukhopadhyay N, Weeks DE (2013) Mega2: enhanced data-handling for facilitating genetic linkage and association analyses. Paper presented at the 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA
146. Shan Y<sup>†</sup>, Smelser DT, Tromp G, Kuivaniemi H, Weeks DE (2013) Genetic risk models: model size and confidence intervals of the risk estimates. Paper presented at the 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA

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149. Minster RL, Buhule OD<sup>†</sup>, Hawley NL, Sun G, Viali S, Deka R, Weeks DE, McGarvey ST (2014) Comparison of GWAS results from imputed SNPs and multiple anchor and partner genotyped SNPs in an isolated population, Samoa. Paper presented at the 64th Annual Meeting of The American Society of Human Genetics. San Diego, CA
150. Weeks DE, Baron RV, Kollar C, Mukhopadhyay N (2014) Mega2: data reformatting for facilitating genetic linkage and association analyses. Paper presented at the 64th Annual Meeting of The American Society of Human Genetics. San Diego, CA
151. Zeng Z<sup>†</sup>, Weeks DE, Chen W, Mukhopadhyay N, Feingold E (2014) Identifying relative pairs within large datasets. Paper presented at the 64th Annual Meeting of The American Society of Human Genetics. San Diego, CA
152. Chiu C, Jung J, Weeks D, Wilson A, Bailey-Wilson J, Amos C, Xiong M, Fan R (2015) A Comparison Study of Fixed and Mixed Effect Models for Gene Level Association Studies of Complex Traits. Paper presented at Presented at the 65th Annual Meeting of The American Society of Human Genetics. Baltimore, MD
153. Ding Y, Yan Q<sup>‡</sup>, Liu Y, Fritsche LG, Abecasis GR, Swaroop A, Chew EY, Weeks DE, Chen W (2015) Bivariate Analysis and Prediction of AMD progression Using Genetic Scores. Paper presented at Presented at the 65th Annual Meeting of The American Society of Human Genetics. Baltimore, MD
154. Fan R, Chiu C, Wang Y, Jung J, Jiang Y<sup>†</sup>, Chen W, Weeks D, Ren H, Amos C, Wilson A, Bailey-Wilson J, Xiong M (2015) Functional Regression Models for Gene-based Association Studies of Complex Traits. Paper presented at Presented at the 65th Annual Meeting of The American Society of Human Genetics. Baltimore, MD
155. McGarvey ST, Lambert-Messerlian G, Minster RL, Buhle O<sup>†</sup>, Lin J<sup>†</sup>, Maredia H, Viali S, Hawley NL, Sun G, Cheng H, Deka R, Weeks DE (2015) Genome-wide association study of Samoan women's reproductive biomarkers. *American Journal of Human Biology* 27:276-277. Paper presented at the 40th Annual Meeting of the Human Biology Association, St. Louis, MO
156. Yan Q<sup>‡</sup>, Fan R, Weeks D, Boutaoui N, Canino G, Celedon J, Chen W (2015) Set-based methods for DNA methylation analysis. Paper presented at Presented at the 65th Annual Meeting of The American Society of Human Genetics. Baltimore, MD
157. Wang Y, Chen W, Weeks DE, Ren H, Li Y, Lobach I, Amos CI, Moore JH, Boehnke M, Xiong M, Fan R (2015) Meta-analysis of Complex Diseases at Gene Level by Functional Regression. Paper presented at Presented at the 65th Annual Meeting of The American Society of Human Genetics. Baltimore, MD
158. Arockiaraj A<sup>†</sup>, Koleck TA, Shaffer JR, Sherwood PR, Crago EA, Poloyac SM, Weeks DE, Conley YP (2016) Epigenome-wide association study of delayed cerebral ischemia in stroke patients. Paper presented at the 66th Annual Meeting of The American Society of Human Genetics. Vancouver, Canada
159. Blackwell T, Abecasis G, Barnes K, Blangero J, Burchard E, Correa A, Cupples LA, Curran JE, Ellinor PT, Gabriel S, Germer S, Hernandez R, Jaquish C, Kang HM, Kathiresan S, Laurie CC, Lin X, Mathias RA, McGarvey ST, Mitchell BD, Nickerson D, O'Connell JE, Papanicolaou G, Ramachandran V, Redline S, Rice K, Silverman E, Weeks DE, Weiss ST, Wilson JG, on behalf of the NHLBI TOPMed Program (2016) Sequence data processing and analysis of 18,000 human genomes in the NHLBI TOPMed



- sequencing program. Paper presented at the 66th Annual Meeting of The American Society of Human Genetics. Vancouver, Canada
160. Fan R, Chiu C, Mills JL, Jung JS, Wang YF, Wilson AF, Bailey-Wilson JE, Weeks DE, Amos CI, Boehnke M, Xiong MM (2016) A comparison study of multivariate fixed models and Gene Association with Multiple Traits (GAMuT) for next-generation sequencing. Paper presented at the 66th Annual Meeting of The American Society of Human Genetics. Vancouver, Canada
  161. Minster RL, Hawley NL, Su C-T, Sun G, Kershaw EE, Cheng H, Buhule OD, Lin J, Reupena MS, Viali S, Tuitele J, Naseri T, Urban Z, Deka R, Weeks DE, McGarvey ST (2016) A thrifty variant in CREBRF strongly influences body mass index in Samoans. Paper presented at the 66th Annual Meeting of The American Society of Human Genetics. Vancouver, Canada
  162. Su CT, Minster RL, Hawley NL, Kershaw EE, Deka R, Weeks DE, McGarvey ST, Urban Z (2016) Thrifty functional characteristics of the major variant in CREBRF associated with body mass index in Samoans. Paper presented at the 66th Annual Meeting of The American Society of Human Genetics. Vancouver, Canada
  163. Rosenthal SL<sup>‡</sup>, Minster RL, Hawley NL, Sun G, Buhule OD, Cheng H, Naseri T, Reupena MS, Deka R, Weeks DE, McGarvey ST (2017) A CREBRF missense mutation substantially affects height in Samoans. Paper presented at the 67th Annual Meeting of the American Society of Human Genetics. Orlando, FL
  164. Russell EM<sup>†</sup>, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Miljkovic I, Deka R, Weeks DE, McGarvey ST, Minster RL (2017) Effects of the interaction between a CREBRF missense variant and body mass index on type 2 diabetes risk in Samoans. Paper presented at the 67th Annual Meeting of the American Society of Human Genetics. Orlando, FL
  165. Shur A, McGarvey ST, Hawley NL, Minster R, Weeks DE, Naseri T. (2017). Associations of thrifty CREBRF variant with body fat distribution in Samoans. Paper presented at the 42<sup>nd</sup> Annual Human Biology Association meeting, New Orleans, LA.
  166. Weeks DE, Baron RV, Stickle JR (2017) The Mega2R suite of R packages: Tools for accessing and processing common genetic data formats in R. Paper presented at the 67th Annual Meeting of The American Society of Human Genetics. Orlando, Florida
  167. Carlson JC<sup>‡</sup>, 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 (2018) Creating population-specific reference panels for improved genotype imputation. Paper presented at the 68th meeting of the American Society of Human Genetics. San Diego, California
  168. Forno E, Wang T, Qi C, Yan Q, Xu C, Boutaoui N, Han Y, Weeks D, Jiang Y, Rosser F, Vonk J, Brouwer S, Acosta-Perez E, Colon-Semidey A, Alvarez M, Canino G, Koppelman GH, Chen W, Celdon JC (2019) Nasal Methylation Panel Accurately Classifies Children by Atopy or Atopic Asthma. [American Journal of Respiratory and Critical Care Medicine](#) **199**:A1060. Paper presented at the International Conference of the American Thoracic Society, Dallas, Texas
  169. Krishnan M<sup>‡</sup>, Phipps-Green A, Altaf S, Major TJ, Cadzow M, Stamp L, Dalbeth N, Russell EM, Minster RL, Hawley NL, Naseri T, Reupena MS, Deka R, Weeks DE, McGarvey ST, Merriman TR, Murphy R (2018) FTO in the Polynesians: Association of FTO-rs9939609 with body mass index in a fixed-effect meta-analysis in people of Polynesian ancestry living in Aotearoa/New Zealand and other Pacific nations. Paper presented at the 68th meeting of the American Society of Human Genetics. San Diego, California
  170. Minster RL, Russell EM<sup>†</sup>, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, Weeks DE, McGarvey ST, TOPMed Diabetes Working Group (2018) Rare variation in and near CREBRF and association with fasting glucose in non-Polynesian participants in the TOPMed Program. Paper presented at the 68th meeting of the American Society of Human Genetics. San Diego, California

171. McGarvey ST, Minster RL, Weeks DE, Naseri T (2018) Longitudinal adiposity change and CREBRF p.Arg457Gln genotype among Samoans. American Journal of Human Biology **30**(2):P:80. Paper presented at the 43rd annual meeting of the Human Biology Association, Austin, Texas
172. Russell EM<sup>†</sup>, Carlson JC<sup>‡</sup>, Hawley NL, Sun G, Naseri HCT, Reupena MS, Deka R, Weeks DE, McGarvey ST, Minster RL, TOPMed Diabetes Working Group (2018) Genome-wide association study of type 2 diabetes phenotypes in Sāmoans. Paper presented at the 68th meeting of the American Society of Human Genetics. San Diego, California
173. Carlson JC, Russell EM<sup>†</sup>, Zhang JZ<sup>†</sup>, Hawley NL, Moors J, Cheng H, Dalbeth N, de Zoysa J, Hindmarsh JH, Murphy R, Naseri T, Reupena MS, Stamp L, Tuitele J, Deka R, McGarvey ST, Merriman TR, Weeks DE, Minster RL, TOPMed Lipids Working Group (2019) A large effect, Polynesian-specific, stop-gained variant in BTNL9 is associated with atherogenic lipid profiles. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
174. Erdogan-Yildirim Z<sup>†</sup>, 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 (2019) Identification of susceptibility loci for reproductive traits in Samoan women. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
175. Forno E, Wang T, Qi C, Yan Q, Xu C, Boutaoui N, Han Y, Weeks D, Jiang Y, Rosser F, Vonk J, Brouwer S, Acosta-Perez E, Colon-Semidey A, Alvarez M, Canino G, Koppelman GH, Chen W, Celedon JC (2019) Nasal Methylation Panel Accurately Classifies Children by Atopy or Atopic Asthma. American Journal of Respiratory and Critical Care Medicine **199**:A1060
176. Harris DN, Kessler MD, Shetty AC, Weeks DE, Minster RL, Browning S, Cochrane EE, Deka R, Hawley NL, Reupena MS, Naseri T, TOPMed Population Genetics Working Group, McGarvey ST, O'Connor TD. (2019). Recent Samoan Population History Suggests Dynamic Population Size Changes and Migrations. Paper presented at the 2019 Society for Molecular Biology & Evolution. Manchester, UK.
177. Heinsberg L<sup>†</sup>, Weeks D, Poloyac S, Conley Y (2019) Dna Methylation Trajectories in the Amyloid Precursor Protein Gene and Patient Outcomes after Subarachnoid Hemorrhage. Journal of Neurotrauma **36**:A59-A59
178. Krishnan M<sup>‡</sup>, 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 (2019) A novel variant in CETP is associated with higher HDL-cholesterol in people of Polynesian ancestry. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
179. McGarvey ST, Hawley NL, Duckham RL, Pomer A, Wetzel AI, Minster R, Weeks DE, Naseri T, Reupena MS (2019) CREBRF p.Arg457Gln genotype, type 2 diabetes and body composition among adult Samoans. American Journal of Human Biology **31**(2):P:52. Paper presented at the 44th annual meeting of the Human Biology Association, Cleveland, Ohio
180. Russell EM<sup>†</sup>, Harris DN, Carlson JC, Zhang JZ, Hawley NL, Cheng H, Naseri T, Reupena MS, Chen IY, Rao DC, Hsiung AC, Chuang L-M, Sheu W, Darbar D, Deka R, O'Connor TD, McGarvey ST, Weeks DE, Minster RL, TOPMed Population Genetics Working Group (2019) Evidence of natural selection in Samoans is associated with BMI and the immune system. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
181. Tiner J<sup>†</sup>, Hawley NL, Weeks DE, Minster RL, Sun G, Cheng H, Deka R, Naseri T, Reupena SM, Pomer A, McGarvey ST (2019) The utility of combining CREBRF genotype with BMI to screen Samoans for type 2 diabetes. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas

182. Yan Q, Weeks DE, Xin H, Huang H, Swaroop A, Chew EY, Chen W, Ding Y (2019) Deep-learning-based prediction of late age-related macular degeneration progression. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
183. Zhang JZ<sup>†</sup>, Carlson JC, Hawley NL, Sun G, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE (2019) A multivariate Bayesian genetic association analysis of a CREBRF variant and adiposity-related phenotypes. Paper presented at the 69th Annual Meeting of The American Society of Human Genetics. Houston, Texas
184. Carlson JC, Zhang JZ<sup>†</sup>, Hawley NL, Blobner BM, Cheng H, Naseri T, Reupena M, Viali S, Tuitele J, Deka R, McGarvey ST, Minster RL, Weeks DE, TOPMed Blood Pressure Working Group (2020) Samoan genome-wide association studies identify novel associations with blood pressure phenotypes. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
185. Erdogan-Yildirim Z<sup>†</sup>, Carlson JC, Zhang JZ<sup>†</sup>, 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 (2020) Genome-wide association study of high vs low risk of polycystic ovarian syndrome in Samoan women. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
186. Fu H<sup>†</sup>, Hawley NL, Carlson JC, Russell EM, Cheng H, Naseri T, Reupena MS, Deka R, Choy CC, McGarvey ST, Minster RL, Weeks DE (2020) The missense variant, rs373863828, in CREBRF plays a role in longitudinal changes in BMI across adulthood. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
187. Heinsberg LW<sup>‡</sup>, Weeks DE, Alexander SA, Crago EA, Minster RL, Poloyac SM, Conley YP (2020) Associations Between DNA Methylation Trajectories for Genes Regulating Iron Homeostasis and Patient Outcomes Up to One Year After Subarachnoid Hemorrhage. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
188. Heinsberg LW<sup>‡</sup>, Weeks DE, Shaffer JR, Conley YP (2020) Characterization of DNA methylation age in cerebrospinal fluid following subarachnoid hemorrhage. Podium presentation at the International Society of Nurses in Genetics, November 2020, Virtual.
189. Krishnan M<sup>‡</sup>, Taub MA, Carlson JC, Cheng H, Naseri T, Reupena M, Deka R, Hawley NL, McGarvey ST, Weeks DE, Mathias RA, Minster RL, TOPMed Hematology & Hemostasis and Structural Variation Working Groups (2020) Genome-wide association study of telomere length in individuals of Samoan ancestry. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
190. Minster RL, Carlson J, Zhang JZ<sup>†</sup>, Hawley NL, Rosenthal SL, Cheng H, Naseri T, Reupena MS, Viali S, Tuitele J, Deka R, McGarvey ST, Weeks DE (2020) Genome-wide association study of height in Samoan individuals. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
191. Ray M, Heinsberg LW<sup>‡</sup>, Conley YP, Weeks DE, Schmella MJ (2020) Utilization of Epigenome-wide DNA Methylation for Longitudinal Comparison of Leukocyte Proportions Across Preeclamptic and Normotensive Pregnancy. Podium presentation at the International Society of Nurses in Genetics, November 2020, Virtual.
192. Russell E<sup>‡</sup>, Rivara AC, Fu H<sup>†</sup>, Cheng H, Naseri T, Reupena M, Kershaw EE, Deka R, Weeks DE, McGarvey ST, Minster RL, Hawley NL (2020) Association of a missense variant in CREBRF with type 2 diabetes and fasting glucose in a longitudinal Samoan cohort. Paper presented at the 70th Annual Meeting of The American Society of Human Genetics (virtual)
193. Schmella MJ, Fu HY<sup>†</sup>, Conley YP, Weeks DE (2020) DNA Methylomic Profiling of Preeclampsia Across the Three Trimesters of Pregnancy. *Reproductive Sciences* 27:265A-266A

194. Carlson JC, Hawley NL, Cheng H, Naseri T, Reupena MS, Deka R, McGarvey ST, Minster RL, Weeks DE (2021) The role of population-specific genotype reference panels in genetic association studies. *American Journal of Physical Anthropology* **174**:15-15
195. Heinsberg LW<sup>‡</sup>, Arslanian KJ, Mullett SJ, Kershaw EE, Fidow UT, Naseri T, Conley YP, Weeks DE, Wendell SG, Hawley NL (2021) Exploration of the *CREBRF* obesity-risk variant in Samoan infants using untargeted metabolomic analysis and pathway discovery. Podium presentation at the International Society of Nurses in Genetics, November 2021, Virtual.
196. Liu S<sup>†</sup>, Fu H<sup>†</sup>, Hawley NL, Carlson JC, Pomer A, Russell EM, Cheng H, Naseri T, Reupena MS, Deka R, Choy CC, Kershaw EE, McGarvey ST, Minster RL, Weeks DE (2021) Genetic variation in/near *LIPC*, *MGAT1*, and *APOA1* is associated with longitudinal change in serum lipid levels in Samoan adults. Paper presented at the 71st meeting of the American Society of Human Genetics (virtual)
197. Ray M, Heinsberg LW<sup>‡</sup>, Wallace MK, Conley YP, Weeks DE, Schmella MJ (2021) Longitudinal DNA methylation of Chromosome 19 microRNA Cluster Across Preeclamptic and Normotensive Pregnancy. Podium presentation at the International Society of Nurses in Genetics, November 2021, Virtual.
198. Rivara AC, Russell EM<sup>‡</sup>, Viali S, Reupena MS, Naseri TK, Pomer A, Minster RL, Weeks DE, McGarvey ST, Hawley N (2021) 1108-P: Care Cascade Engagement and Characteristics of Diabetes Awareness in Adult Samoans in 2010 and 2018. *Diabetes* **70**:1108-P
199. Treble-Barna A, Heinsberg L<sup>‡</sup>, Puccio A, Shaffer J, Okonkwo D, Beers S, Weeks D, Conley Y (2021) Acute *Brain-Derived Neurotrophic Factor* DNA Methylation Trajectories in CSF and Associations with Outcomes Following Severe Trauma. *Journal of Neurotrauma* **38**:A22-A22. Poster presented at the National Neurotrauma Society meeting, July 2021, Virtual.
200. Wallace M, Heinsberg LW<sup>‡</sup>, Ray M, Conley YP, Weeks DE, Schmella MJ (2021) Identifying Alterations in the Inflammatory Milieu of Preeclamptic Pregnancies. Podium presentation at the International Society of Nurses in Genetics, November 2021, Virtual.
201. Ray M, Heinsberg LW<sup>‡</sup>, Chen NX, Conley YP, Weeks DE, Schmella MJ (2022) MicroRNA-associated DNA Methylation in a Longitudinal, Exploratory Study of Preeclamptic and Normotensive Pregnancy. *Am J Obstet Gynecol* **226**:S202-S203. Poster presented at the Society for Maternal-Fetal Medicine, February 2022, Virtual.
202. Wallace MK, Heinsberg LW<sup>‡</sup>, Ray M, Conley YP, Weeks DE, Schmella MJ (2022) Suggestive Differences of DNA Methylation at *ICAMI* between Preeclamptic and Normotensive Pregnancies. *Reproductive Sciences* **29** (Suppl 1):254A-255A. Poster presented at the Society for Reproductive Investigation, March 2022, Denver, Colorado
203. Liu S<sup>†</sup>, Liu D, Bender CM, Erickson KI, Sereika SM, Conley YP, Shaffer JR, Weeks DE (2022) Variation in DNA methylation is associated with cognitive function in post-surgery breast cancer patients prior to adjuvant therapy. Paper presented at the Annual Meeting of The American Society of Human Genetics. Los Angeles, California
204. Carlson J, Krishnan M<sup>‡</sup>, Liu S<sup>†</sup>, Rosenthal S, Hawley N, Cheng H, Naseri T, Reupena M, Viali S, Deka R, McGarvey S, Minster R, Weeks D (2022) Portability of a multiethnic polygenic risk score for low-density lipoprotein cholesterol in a Samoan population. Paper presented at the Annual Meeting of The American Society of Human Genetics. Los Angeles, California
205. Wehr J, Carlson JC, Russell EM, Krishnan M<sup>‡</sup>, Liu S<sup>†</sup>, Cheng H, Naseri T, Reupena MS, Vialia S, Tuitele J, Kershaw E, Deka R, Hawley NL, McGarvey ST, Weeks DE, Minster RL (2022) Genome-wide association studies of metabolic traits in Samoans. Paper presented at the Annual Meeting of The American Society of Human Genetics. Los Angeles, California

**Patents**

- Gorin MB, Jakobsdottir J, Conley YP, Weeks DE, Mah-Fraser TS, Ferrell RE. Susceptibility genes for age-related maculopathy (ARM) on chromosome 10q26. US Patent Number: US 7,695,909 B2; awarded April 13, 2010.
- Gorin MB, Jakobsdottir J, Conley YP, Weeks DE, Mah-Fraser TS, Ferrell RE. Susceptibility genes for age-related maculopathy (ARM) on chromosome 10q26. US Patent Number: US 8,053,190; awarded November 8, 2011.

**Other research-related activities**

- Attended a one-week course entitled "Supercomputing Techniques: Connection Machine" at the Pittsburgh Supercomputing Center, June 1991.
- Invited attendee, 2nd International inflammatory bowel disease genetics workshop, Denver, Colorado, October 1998.
- Invited attendee, conference on "Genetics and Molecular Biology of Glaucoma", sponsored by the Glaucoma Research Foundation. San Juan, Puerto Rico, December 1998.
- Invited attendee, Statistical Genetics Initiative Workshop, sponsored by the National Institutes of Health. Half Moon Bay, California, October 1999.
- Attended a Clinical Research Workshop on the Fundamentals of Human Subject Research, University of Pittsburgh, June 2000.
- Invited attendee, "Gene discovery in complex disorders – How to proceed?", sponsored by the National Institute of Mental Health. Laguna Beach, California, March 2004.
- Invited attendee, "Gene-environment interactions and epigenesis in mental disorders", sponsored by the National Institute of Mental Health, Rockville, Maryland, November 15, 2004.
- Invited attendee, NIGMS Workshop on Systems Genetics and Complex Phenotypes, sponsored by the National Institute of General Medical Sciences, Bethesda, MD, September 7-8, 2006.
- Invited attendee, First Meeting of the International AMD Genetics Consortium for Meta-Analysis, sponsored by the National Eye Institute, Bethesda, MD, June 15, 2010
- Invited attendee, "Next Generation Analytic Tools for Large Scale Genetic Epidemiology Studies of Complex Diseases", sponsored by the National Cancer Institute, Bethesda, MD, September 15-16, 2010
- Invited attendee, Consortium of Food Allergy Research (CoFAR) Investigator/Steering Committee Meeting, Bethesda, MD, January 10, 2011

**Service**Departmental (at the University of Pittsburgh)

- |         |  |
|---------|--|
| 1992    | Chair of the computer committee, Summer 1992   |
| 1992-93 | Co-supervisor of Tricia Graham, the departmental computer specialist                             |
| 1997-98 | Member of the Search Committee for a new chair of the Department of Human Genetics               |
| 2000-01 | Chair, Search Committee for a new faculty member   |
| 2002-03 | Member, Curriculum Committee   |
| 2002-15 | Chair, M.S. and Ph.D. Admissions Committee   |
| 2003-05 | Head, Faculty Search Committee, Department of Human Genetics                                     |
| 2004    | Member, Faculty Search Committee, Department of Biostatistics                                    |
| 2004    | Acting Chair, Department of Human Genetics   |
| 2005    | Acting Vice Chair, Department of Human Genetics  |
| 2006-08 | Member, Search Committee for a new chair of the Department of Human Genetics                     |
| 2007    | Chair, Department of Human Genetics Strategic Planning Committee                                 |
| 2008    | Organizer, Fall 2008 Department of Human Genetics Seminar Series                                 |
| 2010-21 | Member, Department of Human Genetics Curriculum Committee  |
| 2011    | Organizer, Spring 2011 Department of Human Genetics Seminar Series                               |
| 2012    | Chair, Department of Human Genetics Strategic Planning Committee                                 |
| 2014    | Member, Strategic Planning Committee for the University of Pittsburgh Genetic Counseling Program |
| 2015-18 | Member, M.S. and Ph.D. Admissions Committee  |
| 2017    | Chair, Department of Human Genetics Faculty Search Committee                                     |
| 2017    | Member, Faculty Search Committee, Department of Biostatistics                                    |
| 2018-21 | Chair, Strategic Planning Committee  |
| 2018-21 | Chair, Computing Committee   |
| 2018-21 | Member, Communications Committee (Chair, Development Subcommittee)                               |
| 2019-20 | Chair, Department of Human Genetics Faculty Search Committees for three faculty positions.       |
| 2021    | Co-leader of the Departmental Gaps and Assets review process, April 2021.                        |

- 2021-22 Acting Chair, Department of Human Genetics
- 2021- Chair, M.S. and Ph.D. Admissions Committee
- 2021 Judge, Department of Biostatistics Research Day Poster Session, March 4, 2021.
- 2022 Judge for the Biostatistics Research Day, Department of Biostatistics, March 3, 2022.
- 2023 Judge, Department of Biostatistics Research Day Poster Session, March 3, 2023.
- 2023- Member, Department of Human Genetics Curriculum Committee

#### School-wide (at the University of Pittsburgh)

- 1992 Member of the GSPH Convocation Committee, Spring 1992
- 1997 Member of the Ad hoc Committee on Long-Range Planning
- 1997-98 Member of the Faculty Senate Executive Committee
- 1997-98 Member of the Long-Range Planning Committee
- 2001 Member of the Informal Working Group on the GSPH Standardized CV
- 2003 Dean's Day Juror, evaluating posters and spoken presentations of students
- 2001-04 Member of the Health Science Faculty Advisory Committee
- 2001-06 Member of the Faculty Appointment, Promotion, and Tenure Committee (FAPTC)
- 2004 Member of the Graduate School of Public Health Council
- 2005 Moderator, Ethics over Lunch, Survival Skills & Ethics Program, University of Pittsburgh, April 9, 2005.
- 2005 Moderator, Ethics over Lunch, Survival Skills & Ethics Program, University of Pittsburgh, September 17, 2005.
- 2007 Moderator, Ethics over Lunch, Survival Skills & Ethics Program, University of Pittsburgh, October 20, 2007.
- 2010 Trained to qualify to serve on the University of Pittsburgh Institutional Review Board (IRB).
- 2011 Dean's Day Juror, evaluating students' posters.
- 2012 Reviewed two grants for the Clinical and Translational Science Institute (CTSI), February 2012.
- 2012 Dean's Day Juror, evaluating students' posters, April 13, 2012.
- 2012-18 Member of the Faculty Appointment, Promotion, and Tenure Committee (FAPTC)
- 2013 Dean's Day Juror, evaluating students' posters, April 1, 2013.
- 2014 Dean's Day Juror, evaluating students' posters, April 8, 2014.
- 2014 Presentation about the Faculty Appointment, Promotion, and Tenure Committee at the New Faculty Orientation, October 30, 2014.
- 2014 Presentation about the Faculty Appointment, Promotion, and Tenure Committee at the Pitt Public Health Promotion Packets Workshop, December 17, 2014.
- 2014-15 Chair, Faculty Appointment, Promotion, and Tenure Committee (FAPTC)
- 2015 Dean's Day Juror, evaluating students' posters, April 1, 2015.
- 2016 Dean's Day Juror, evaluating students' posters, April 4, 2016.
- 2017 Dean's Day Juror, evaluating students' posters, April 6, 2017.
- 2017 Member, Department of Epidemiology Faculty Search Committee.
- 2019 Dean's Day Juror, evaluating students' posters, April 4, 2019.
- 2020-22 Faculty Mentoring Steering Committee
- 2021 Service on an *ad hoc* Faculty Appointment, Promotion, and Tenure Committee (FAPTC) committee, January 8, 2021.
- 2021 Dean's Day Juror, evaluating students' posters, April 6, 2021.
- 2022 Dean's Day Juror, evaluating students' posters, April 5, 2022.
- 2022- Member, School of Public Health Faculty Mentoring Executive Committee.
- 2023 Dean's Day Juror, evaluating students' posters, April 3, 2023.

#### University-wide (at the University of Pittsburgh)

- 2016 Served on an *ad hoc* School of Dental Medicine Promotion Committee.
- 2016 Science 2016 moderator of the Spotlight Session on Personalized and Precision Medicine, October 20, 2016.
- 2019 Reviewed a KL2 application for the Multidisciplinary Clinical Research Scholars Program (CRSP) of the University of Pittsburgh, March 2019.
- 2019 Participated in a mock study section, reviewing an R01 application for the Mellon Institute at the Children's Hospital of Pittsburgh, May 2019.
- 2020 Reviewed two KL2 applications for the Multidisciplinary Clinical Research Scholars Program (CRSP) of the University of Pittsburgh, May 2020.

- 2021 Reviewed a grant proposal for the Department of Psychiatry Research Review Committee, December 2021.
- 2022 Served on an *ad hoc* promotion committee for the Department of Oral and Craniofacial Sciences, University of Pittsburgh School of Dental Medicine, August 1, 2022.
- 2023- School of Public Health representative, Provost's Advisory Council on Tenure and Promotion (PACTP), Pittsburgh Campus Subcommittee.

### National/International

#### Manuscript Review

Refereed articles for many journals, including Science, Nature, the American Journal of Human Genetics, Nature Genetics, PLOS Genetics, Human Molecular Genetics, Genomics, Genetic Epidemiology, Diabetes, Human Heredity, Bioinformatics, IMA Journal of Mathematics Applied in Medicine and Biology, Theoretical and Applied Genetics, Theoretical Population Biology, Human Genetics, Proceedings of the National Academy of Sciences U.S.A, Neurogenetics, CABIOS, Journal of the American Medical Association, Journal of Mathematical Biology, and several Genetic Analysis Workshops.

Verified Peer Review Record: <https://www.webofscience.com/wos/author/record/769878>

2001-11 Member, Faculty of 1000 (online literature awareness tool).

#### Editorial Boards and Editorships

- 1996-98 Associate Editor, American Journal of Human Genetics
- 1999 Editor, proceedings of the Genetic Analysis Workshop 11.
- 1999-00 Editorial Board, Human Molecular Genetics
- 2004-07 Associate Editor, Biometrics
- 2001-11 Editorial Board, Genetic Epidemiology
- 2004-13 Associate Editor, Statistical Applications in Genetics and Molecular Biology

#### Study Sections and Advisory Boards

- Served on a site visit team for a Genome Center Grant and a RO1 application.
- 1993 Served on an *ad hoc* Study Section for the National Cancer Institute.
- 1994 Served on the Genome Research Review Committee to review a P41 application.
- 1998 Served on an *ad hoc* Study Section for the National Cancer Institute reviewing a program project.
- 1998 Served on an *ad hoc* Study Section for the National Institute of Mental Health.
- 1995-99 Member of the Review Committee for the NHLBI Mammalian Genotyping Service (James Weber, PI).
- 1998 Advisory meeting regarding future genetic studies in the Framingham Study, Boston University School of Medicine.
- 1998-00 Scientific Advisory Board, Center for Genomic Sciences, University of Pittsburgh
- 1999 Served on an *ad hoc* Study Section for the National Institute of Mental Health.
- 2000 Served on a Site Visit Team for the National Heart, Lung, and Blood Institute.
- 2000 Served on an *ad hoc* Study Section for the National Institute of Mental Health reviewing a program project.
- 2000 Served on an *ad hoc* Study Section for the National Heart, Lung, and Blood Institute.
- 2001 Served on an *ad hoc* Study Section for the National Institute on Alcohol Abuse and Alcoholism
- 2001 Served on an *ad hoc* Study Section for the National Institutes of Health.
- 2002 Served on an *ad hoc* Study Section for the National Heart, Lung, and Blood Institute reviewing a program project.
- 2003 Served on an *ad hoc* Study Section for a National Institutes of Health Special Emphasis Panel in Psychiatric Genetics.
- 2004 Served on an *ad hoc* NIH Study Section reviewing several Morris K. Udall Centers of Excellence for Parkinson's Disease Research, March 16-17, 2004.
- 2007 External member, Statistical Genetics Graduate Certificate Program Review Committee, University of Washington, Seattle, Washington, April 2-3, 2007.
- 2007 Member, National Eye Institute (NEI) Ocular Epidemiology Planning Panel, an NIH Strategic Planning Committee, May 24-25, 2007.
- 2007- External advisory board, Training Program on Genetic Variation and Human Phenotypes, Vanderbilt University Medical Center, Jonathan L. Haines, Program Director.
- 2005-08 Regular member, Genomics, Computational Biology and Technology (GCAT) NIH Study Section.

- 2010 Site visit, External advisory board, Training Program on Genetic Variation and Human Phenotypes, Vanderbilt University, Nashville, TN, January 28, 2010.
- 2012 Served on an *ad hoc* Study Section for the United States Department of Veterans Affairs, June 1, 2012.
- 2012 Reviewed a Center of Excellence in Genome Health Research proposal for the Academy of Finland, August 2012.
- 2016 Reviewed a research grant proposal for the Medical Research Council, United Kingdom, August 2016.
- 2017 Served as an ad hoc reviewer of an NIH T32 training grant proposal on the "Training and Workforce Development Subcommittee – A" study section, March 20, 2017.

#### Meeting Organization

- 1995 Co-organizer of the Map Integration Workshop, Pittsburgh Supercomputing Center, December 1995.
- 1996 Co-organizer of the 5th Rheumatoid Arthritis Genetics Workshop, University of Manchester, March 1996.
- 2002 Co-organizer of the INSERM Ateliers de formation / Workshop 136 – Methods for the elucidation of genomic variation, La Roche-Posay and Paris, France, May 2002.
- 2002 Co-organizer of an invited session on "Statistical Genetics and Complex Disease" at the Joint Statistical Meetings, New York City, August 2002.
- 2003 Co-organizer, Workshop on *Genetic Epidemiological Methods for Dissection of Complex Human Traits*, Kolkata, India, June 2003.
- 2004 Co-organizer, Second Workshop on *Genetic Epidemiological Methods for Dissection of Complex Human Traits*, Kolkata, India, December 2004.
- 2005 Co-organizer, *Paris Workshop on Molecular and Statistical Genomic Epidemiology*, Paris, France, May 2005.
- 2007 Co-organizer, Third Workshop on *Genetic Epidemiological Methods for Dissection of Complex Human Traits*, Kolkata, India, January 2007.
- 2007 Co-organizer, *Second Paris Workshop on Molecular and Statistical Genomic Epidemiology*, Paris, France, May 2007.
- 2009 Co-organizer, Fourth Workshop on *Genetic Epidemiological Methods for Dissection of Complex Human Traits*, Kolkata, India, February 2009.
- 2009 Co-organizer, *Third Paris Workshop on Genetic Epidemiology*, Paris, France, March 2009.
- 2010 Co-organizer, Fifth Workshop on *Genetic Epidemiological Methods for Dissection of Complex Human Traits*, Kolkata, India, February 2010.
- 2011 Co-organizer, *Fourth Paris Workshop on Genetic Epidemiology*, Paris, France, May 2011.
- 2013 Co-organizer, *Fifth Paris Workshop on Genetic Epidemiology*, Paris, France, May 2013.
- 2015 Co-organizer, *The 6th International Workshop on Genetic Epidemiology*, London, United Kingdom, May 2015.
- 2017 Co-organizer, *The 7th International Workshop on Genomic Epidemiology*, Barcelona, Spain, September 2017 (missed due to illness).

#### Meeting Workshops

- 2017 Participant, Mock NIH Study Section Workshop, the 67th Annual Meeting of The American Society of Human Genetics. Orlando, Florida, October 20, 2017.

#### Collaborative Research Service

- 2007-2009 Co-chair of the Analysis Subcommittee of the NIH Genes Environment Association Studies (GENEVA) consortium of genome-wide association studies.

#### Consultantships

- 1996-1997 Consultant in statistical genetics, Columbia University, New York, USA.
- 1997-2000 Consultant in statistical genetics, and member of the Population Genetics Advisory Committee, Glaxo Wellcome Inc., North Carolina, USA.
- 1997-2004 Consultant in statistical genetics, Oxagen Limited, Abingdon, England.
- 2001-2004 Consultant in statistical genetics, Triaj, Inc.
- 2005 Consultant in statistical genetics, OptiGen, LCC.
- 2006-2008 Consultant in statistical genetics, Rutgers University, New Jersey, USA (Derek Gordon).



June 9-10, 2009 Consultant in statistical genetics for a pharmacogenetics study, Eli Lilly and Company, Indianapolis, Indiana, USA.  
 2009-2011 Consultant in statistical genetics for a genome-wide association study of pre-term birth, Children's Memorial Hospital, Chicago, Illinois, USA (Xiaobin Wang).  
 2011-2012 Consultant in statistical genetics for a law firm.

## Research and Training

### Grant Support:

“Impact of the obesity-risk variant CREBRF p.Arg457Gln on energy expenditure, intake, and substrate utilization in Samoans” Annual Direct Costs: \$719,935

Principal Investigator: McGarvey, Stephen T. and Delaney, James P.

Agency: NIH/NHLBI R01 HL140570 Period: 2/18 - 1/24

The main goal of this project is to measure the impact of the CREBRF missense variant on measures of energy expenditure, energy intake, and longitudinal relationships between these energy metabolism parameters and adiposity phenotypes.

“Epigenomics of Neurocognitive Function in Breast Cancer” Annual Direct Costs: \$428,428

Principal Investigator: Conley, Yvette P.

Agency: NIH/NCI R01 CA221882 Period: 6/18 - 5/24

The main goal of this project is to use methylation data to identify genes and pathways involved with cognitive function and brain health within the context of breast cancer, initiation of treatment, and an exercise intervention.

“Next Generation Association Studies of Adiposity in Samoans Enhanced by a Samoan-Specific Whole Genome Sequence Reference Panel” Annual Direct Costs: \$494,807

Principal Investigator: Minster, Ryan

Agency: NIH/NHLBI R01 HL133040 Period: 4/17 - 3/23

The main goal of this project is to use a whole genome sequenced Samoan reference panel to impute into a sample of Samoan adults so as to carry out comprehensive association analyses of adiposity-related traits.

“Integrated cellular, mouse and human research on a novel missense variant influencing adiposity in Samoans”

Annual Direct Costs: \$735,219

Principal Investigator: McGarvey, Stephen T

Agency: NIH/NHLBI R01 HL093093 Period: 9/09 - 4/21

The main goal of this project is to characterize a missense variant influencing adiposity in Samoans in cultured cell models, mouse models, and in Samoan adipose tissue, and to characterize the impact of the variant on metabolic and behavioral traits that impact energy homeostasis in deeply phenotyped Samoans selected based on genotype.

“DNA methylomic profiling of preeclampsia across pregnancy” Annual Direct Costs: \$150,000

Principal Investigator: Schmella, Mandy

Agency: NIH/NICHD R21 HD092770 Period: 7/17 - 8/20

The main goal of this project is to longitudinally characterize DNA methylation profiles across the three trimesters of pregnancy in the maternal blood at time points before and after clinically overt preeclampsia.

“Statistical methods for population and family-based whole-genome sequence data” Annual Direct Costs: \$241,427

Principal Investigator: Chen, Wei

Agency: NIH R01 HG007358 Period: 4/14 - 7/19

The main goal of this project is to develop methods and software for family-based whole-genome sequencing association studies.

“Mega2: Manipulation Environment for Genetic Analysis” Annual Direct Costs: \$207,633

Principal Investigator: Weeks

Agency: NIH/NIGMS R01 GM076667 Period: 3/06 - 6/19

The main goal of this project is to improve and extend our Mega2 program for transforming genetic data into proper files for statistical analyses.

“Mapping Disease pathways in Biliary Atresia” Annual Direct Costs: \$424,458

Principal Investigator: Rakesh, Sindhi

Agency: NIH/NIDDK R01 DK109365 Period: 4/17 - 3/19

The main goal of this project is to carry out association tests to identify genes associated with biliary atresia, to evaluate the function of these genes using zebrafish models and liver tissue, and to examine pathways that these genes are involved in.

“Symptom Clusters in Oncology Patients Receiving Chemotherapy” Annual Direct Costs: \$54,717

Principal Investigator: Miaskowski, Christine

Agency: The Sharon Lamb

Period: 1/17 – 12/17

Endowed Chair Fund

The main goal of this project is to carry out genome-wide association analyses testing for association with clusters of symptom trajectories in oncology patients during the 4 weeks post-treatment.

“AMD genetics: methods and analysis for progression, prediction, and association” Annual Direct Costs: \$31,369 (subcontract)

Principal Investigator: Chen, Wei

Agency: NIH/NEI

R01 EY024226

Period: 4/14 - 3/18

The main goal of this project is to develop and apply novel statistical methods for the study of progression, association, and prediction of age-related macular degeneration (AMD), using existing data from our collaborators and public databases.

“Epigenomics of Patient Outcomes after Traumatic Brain Injury” Annual Direct Costs: \$32,640 (subcontract)

Principal Investigator: Conley, Yvette P

Agency: NIH/NR

R21 NR015142

Period: 8/14 - 7/17

The major goals of this project are to characterize the DNA methylome from samples representing the central nervous system environment post-traumatic brain injury and to use these methylation data to differentiate patient outcomes.

“Epigenetic Variation and Childhood Asthma in Puerto Ricans” Annual Direct Costs: \$21,065 (subcontract)

Principal Investigator: Celedon, Juan Carlos

Agency: NIH

R01 HL117191

Period: 7/13 - 6/18

The main goal of this project is to study the influence of methylation on risk for childhood asthma in Puerto Ricans.

"Post Genome-Wide Association Study of Food Allergy" Annual Direct Costs: \$13,387 (subcontract)

Principal Investigator: Wang

Agency: NIH/NIAID

U01 AI090727

Period: 7/10 – 6/15

The central focus of this study is to further replicate promising genetic variants identified by the ongoing GWAS and to conduct fine mapping to search for potential causative genes of food allergy.

“Epigenomics of Patient Outcomes after Aneurysmal SAH” Annual Direct Costs: \$251,780

Principal Investigator: Conley, Yvette P

Agency: NIH/NR

R01 NR013610

Period: 9/12 - 6/18

The main goal of this project is to study how methylation of the genome after aneurysmal subarachnoid hemorrhage (aSAH) impacts symptoms and complications in the aSAH survivor.

“Improving Vision and Preventing Visual Impairment in rural Amish and urban African Americans”

Principal Investigator: Stambolian, Dwight

Annual Direct Costs: \$69,411 (subcontract)

Agency: Pennsylvania Department of Health

State funding

Period: 6/10 - 5/14

The main goal of this project is to carry out gene and gene-environment studies, combined with modern imaging technology, in age-related macular degeneration in African Americans and Amish.

“Genome-Wide Association Studies of Adiposity in Samoans” Annual Direct Costs: \$127,898 (subcontract)

Principal Investigator: McGarvey

Total Direct Costs (TDC): \$1,161,658

Agency: NIH/NHLBI

R01 HL093093

Period: 9/09 - 12/15

The main goal of this project is to carry out a genome-wide association study of obesity and obesity-related phenotypes in adult Samoans.

“Genetics of age-related maculopathy” Annual Direct Costs: \$99,737 (subcontract)

Principal Investigator: Gorin

Agency: NIH/NEI

R01 EY009859

Period: 9/93 - 3/14

The main goal of this project is to map genes involved in age-related maculopathy via linkage and association analysis of marker data collected on disease families by my collaborators.

“Genetics of age-related maculopathy” Annual Direct Costs: \$80,207 (subcontract)

Principal Investigator: Gorin

Agency: NIH/NEI

R01 EY009859 Administrative

Period: 9/09 - 9/12

Supplement

The major goals of this project are to map genes involved in age-related maculopathy via linkage and association analyses of marker data collected on disease families. Our efforts under this Supplement will be aimed at improving our databases that store and manage our genetic data.

“Utility of Genomic Data in Population Screening for Abdominal Aortic Aneurysm”

Principal Investigator: Carey, David J

Annual Direct Costs: \$13,870 (subcontract)

Agency: Pennsylvania Department of Health

PA CURE

Period: 6/12 - 6/16

of Health

The main goal of this project is to create a risk stratification tool for abdominal aortic aneurysm screening that combines clinical and genetic risk factor data and to test the tool in a real-world clinical setting.

“Genomic variability and symptomatology after traumatic brain injury” Annual Direct Costs: \$281,851

Principal Investigator: Conley, Yvette P

Agency: NIH

R01 NR013342

Period: 9/11 - 7/15

The main goal of this project is to determine the extent that variability in genes involved in the mitochondrial oxidative phosphorylation (OXPHOS) pathway, responsible for cellular energy production, is responsible for variability in symptoms related to cognition, behavior, and emotion after traumatic brain injury.

“Genetics of Emphysema: Extracellular Matrix and Growth Factor Signaling” Annual Direct Costs: \$25,000

Principal Investigator: Urban, Zsolt

Agency: University of Pittsburgh

BaCCoR

Period: 7/11 - 6/12

The main goal of this project is to investigate genetic risk factors of pulmonary emphysema using a candidate gene approach.

"Genome-Wide Association Study of Food Allergy" Annual Direct Costs: \$20,461 (subcontract)

Principal Investigator: Wang, Xiaobin

Agency: NIH/NIAID

R56 AI080627

Period: 8/10 - 7/11

The major goals of this project are to carry out a genome-wide association study to identify susceptibility genes for food allergy.

“Genomic and Proteomic Biomarkers for Head and Neck Cancer Risk and Prognosis ”

Principal Investigator: Egloff, Ann Marie

Agency: NIH/NCI

K07 CA137140

Period: 9/09 - 8/14

The main goal of this project is to evaluate the effect of Epidermal growth factor receptor (EGFR) and gastrin-releasing peptide receptor (GRPR) on head and neck squamous cell carcinoma development/progression.

“Dental caries: whole genome association and gene x environment studies” Annual Direct Costs: \$323,836

Principal Investigator: Marazita

Agency: NIH/NIDCR

5U01DE018903

Period: 8/07 - 5/10

The main goal of this project is to carry out genome-wide association and gene x environment studies of dental caries.

“Genome-wide association studies of prematurity and its complications”

Principal Investigator: Murray

Agency: NIH/NHGRI

U01 HG004423

Period: 8/07 - 5/09

The main goal of this project is to carry out genome-wide association studies of preterm birth.

“Autism Genome Project” Annual Direct Costs: \$178,580

- Principal Investigator: Devlin  
 Agency: Autism Speaks/Medical Research Council      No number      Period: 3/07-3/10  
 The main goal of this project is to fine-map genes for autism and to carry out a genome-wide association study of autism.
- “Statistical Genetic Analysis of Orofacial Cleft Families”      Annual Direct Costs: \$100,000  
 Principal Investigator: Maher  
 Agency: NIH/NIDCR      R03DE016632      Period: 8/07 - 7/09  
 The main goal of this project is to study the genetics of nonsyndromic cleft lip with or without cleft palate, testing for gene x gene interaction, association, and to model diagnostic uncertainty.
- “Predictors for drug selection and minimization in pediatric liver transplantation”  
 Principal Investigator: Sindhi      Annual Direct Costs: \$10,000 (subcontract)  
 Agency: NIH/NIAID      R01AI073895      Period: 9/06-8/10  
 The main goal of this project is to minimize organ rejection and immunosuppressant toxicity, in each child with liver transplantation (LTx), by searching for genes influencing rejector/non-rejector status.
- “Alcoholism Susceptibility Genes in High Density Families”      Annual Direct Costs: \$495,266  
 Principal Investigator: Hill  
 Agency: NIH/NIAAA      R01AA015168      Period: 6/05 – 5/11 (no cost extension)  
 The main goal of this project is to localize alcoholism susceptibility genes using a genetically informative set of pedigrees.
- “Human QTL Mapping with Selected Samples”      Annual Direct Costs: \$125,000  
 Principal Investigator: Feingold  
 Agency: NIH      R01HG002374      Period: 07/00 - 07/08  
 The main goal of this project is to develop powerful statistics for QTL mapping in humans with selected samples, and powerful designs for selecting such samples. (NOTE: My support on this grant started 7/1/05).
- “Indo-US Collaboration in Genomic Studies on Diabetes”  
 Principal Investigator: Sanghera  
 Agency: NIH/Fogarty      5K01TW006087      Period: 9/02 - 8/08  
 The main goal of this project is to carry out a genome-wide scan for Type 2 Diabetes susceptibility genes in an endogamous community from North India.
- “The Genetic Basis of a Disease Free Model of Aging”      Annual Direct Costs: \$175,000  
 Principal Investigator: Conley  
 Agency: NIH/NIA      R21AG024177      Period: 6/05 – 3/07  
 The main goal of this project is to evaluate the feasibility of using the normal decline in human lens transparency with age as a biomarker of the aging process. The long term goals of this project are to utilize these lens measurements to conduct a genome wide scan for gene involved with the normal aging process using genetic epidemiologic analyses.
- “India-US Research Training Program in Genetics”      Total Direct Costs (TDC): \$1,771,498  
 Principal Investigator: Daniel E. Weeks  
 Agency: NIH/Fogarty      5D43TW006180      Period: 9/02 - 8/10 (no cost extension)  
 The main goal of this project is to enhance genetic-epidemiological capacity in India via a pre- and post-doctoral training program.
- “Enhanced linkage maps from family-based genetics studies”      Total Direct Costs (TDC): \$200,000  
 Principal Investigator: Matise; Co-Investigator: Daniel E. Weeks  
 Agency: NIH      1R01HL071029      Period: 9/02 – 8/05  
 The main goal of this project is to build highly-precise sex-specific linkage maps utilizing thousands of individuals who have already been genotyped.

“Genetic epidemiology of otitis media” Annual Direct Costs: 308,793  
 Principal Investigator: Casselbrant; Co-Investigator: Daniel E. Weeks  
 Agency: NIH/NIDCD 1 R01 DC005630 Period: 8/02 – 7/07  
 The main goal of this project is to carry out a genome-wide screen for genes influencing otitis media in a sample of 500 affected sib pairs.

“Robust integrated system for mapping complex diseases” TDC: \$2,009,755  
 Principal Investigator: Daniel E. Weeks  
 Agency: NIH/NIA 9R01MH064205 Period: 9/98 – 6/06  
 The main goal of this project is to develop robust allele-sharing statistics and to implement them in a program that uses Markov chain Monte Carlo methods to compute approximate likelihoods on large pedigrees.

“Discovering Genes for Mental Health” (NRSA Institutional Training Grant) TDC: \$501,000  
 Principal Investigator and Program Director: Daniel E. Weeks  
 Agency: NIH/NIMH T32 MH20053 Period: 7/00 – 6/06  
 The Training Program in Statistical Genetics provides support for post-doctoral training at the interface of human genetics, statistics, and psychiatry.

“Genome scan for obesity susceptibility loci among Samoans” Total Direct Costs (TDC): \$124,170  
 Co-Investigator: Daniel E. Weeks (McGarvey/subcontract to Weeks)  
 Agency: NIH/NIDDK 1 R01 DK59642 Period: 9/00 – 7/06  
 The major goal of this project is to carry out a genome-wide scan for obesity susceptibility loci among the Samoans.

“Genome scan for NIDDM susceptibility genes among Samoans” TDC: \$102,616  
 Co-Investigator: Daniel E. Weeks (Deka/subcontract to Weeks)  
 Agency: NIH 5 R01 DK55406 Period: 6/98 – 4/03  
 The major goal of this project is to carry out a genome-wide scan for NIDDM susceptibility genes among the Samoans.

“Rapid multipoint methods for mapping complex diseases” TDC: \$401,020  
 Co-Investigator: Daniel E. Weeks, Ph.D (O’Connell)  
 Agency: NIH/NIA 5 R01 AG16992 Period: 9/98 – 8/01  
 The major goal of this project is to develop a faster engine for computing likelihoods on general pedigrees.

“Novel algorithms for genetic mapping” TDC: \$488,270  
 Principal Investigator: Daniel E. Weeks  
 Agency: NIH/NCHGR 5 R01 HG00932 Period: 9/93 – 8/00  
 The major goals of this project are to improve and extend the capabilities of our memory-efficient computer program, VITESSE, for extremely rapid computation of exact multipoint likelihoods.

“Statistical methods and software tools for the genetic analysis of monogenic and multifactorial diseases”  
 Principal Investigator: Daniel E. Weeks  
 Agency: European Community BIOMED EC PL 96 2532 Period: 7/97 – 6/00  
 The major goals of this project are to develop and improve theoretical models and software tools for analysis of the genetics of monogenic and multifactorial diseases. In particular, we will integrate VITESSE with the REGRESS program.

"Collaborative molecular genetic study of autism"  
 Co-Investigator: Daniel E. Weeks (Rutter and Monaco)  
 Agency: MRC Period: 5/95 - 11/98  
 To undertake a genomic scan for autism-susceptibility genes using an affected-sibling approach.

"Isolation of the gene causing dopa-responsive dystonia" TDC: \$22,386  
 Co-Investigator: Daniel E. Weeks (Nygaard)  
 Agency: NIH/NINDS 5 R29 NS32035 Period: 7/93 – 6/98  
 The major goal of this project is to fine-map the dopa-responsive dystonia locus via linkage analysis of marker data collected on disease families by my collaborators at Columbia University.

"Linkage analysis of complex human traits using affected pedigree members" TDC: \$496,915  
 Principal Investigator: Daniel E. Weeks  
 Agency: NIH/NCHGR 5 R29 HG00719 Period: 7/92 – 12/97  
 The major goals of this project are to evaluate by computer simulation, improve, and extend the Affected Pedigree Member (APM) method of linkage analysis.

"Linkage studies of candidate genes for growth and adult height"  
 Co-Investigator: Daniel E. Weeks (Finegold)  
 Agency: Genetech Foundation Period: 11/94 - 10/96  
 This grant supports linkage analysis of candidate genes for growth and adult height, using a sib-pair approach for mapping quantitative trait loci (QTLs).

"Multilocus models of genetic interference"  
 Principal Investigator: Daniel E. Weeks  
 Agency: NATO Collaborative Research Grant CRG 910950 Period: 1/92 - 12/94  
 This grant supported travel and living costs for collaborative research with Dr. Mark Lathrop. We explored genetic chiasma interference using human and mouse marker data, using a specialized linkage program that models interference in a more general way than was previously possible.

"Genetic linkage study of essential myoclonus"  
 Principal Investigator: Daniel E. Weeks (on subcontract; PI: Wilhelmssen)  
 Agency: Myoclonus Foundation Period: 3/91 - 3/93  
 This grant supported linkage analysis of marker data collected on disease families by my collaborators at Columbia University.

"Genetic linkage study of dopa-responsive dystonia"  
 Principal Investigator: Daniel E. Weeks (on subcontract; PI: Wilhelmssen)  
 Agency: Dystonia Medical Research Foundation Period: 3/91-3/92  
 This grant supported linkage analysis of marker data collected on the appropriate disease families by my collaborators at Columbia University.

"Linkage analysis methods for human gene mapping"  
 Co-Investigator: Daniel E. Weeks (Ott)  
 Agency: National Center for Human Genome Research R01HG00008 Period: 4/90 - 12/91  
 This grant supported the development of computer simulation methods in the area of human gene mapping. These simulation methods were used to investigate empirical significance levels of lod scores, interval estimation, the effects of unequal marker heterozygosity, and tests for heterogeneity of recombination fractions.