Elisabeth A Rosenthal

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Education:

Ph D. Biostatistics: Statistical Genetics. University of Washington, Seattle, WA. (2008). "Linkage and Segregation Analysis allowing for Multiallelic Inheritance." Advisor: Ellen Wijsman
M.S. Biostatistics University of Washington, Seattle, WA. GPA 3.7 (2000)
B.S. Mathematics with minor in Chemistry. University of Houston, Houston, TX. *summa cum laude*, GPA 3.84 (1998)

Research Experience:

Senior Fellow (June 2008 – present) Department of Medical Genetics, University of Washington. Develop analysis methods for whole exon sequence data. Perform linkage analysis on lipids study. Mentor group members in the use and interpretation of the package Loki.
Research Assistant (1999-2008).Department of Biostatistics, University of Washington. Perform statistical analysis and provide quality control support on several studies of complex traits including Alzheimer's disease, autism, schizophrenia, and mathematical ability.
Biochemistry Intern (1997). Department of Biochemistry, University of Houston. Analyze and file ribosomal DNA data.
Chemistry Intern (1995). Department of Chemistry, University of Houston. Programming in FORTRAN.

Teaching Experience:

Speaker (1999-2008). Presented quarterly seminars to students in the statistical genetics seminar course. Topics included reversible jump Markov Chain Monte Carlo, linkage analysis methods, and complex trait models.
Grader (1997). Department of Mathematics, University of Houston. Graded students in differential equations class.
Teacher Assistant (1996-1997). Department of Mathematics, University of Houston. Provided teaching support and graded one Honors calculus class and one regular calculus class.
Tutor (1994-1997). Department of Mathematics, University of Houston. Tutored college students in lower level mathematics courses.
Tutor (1994-1997). Learning Squared, Houston, TX. Tutored high school and middle school students in mathematics, statistics, and chemistry.

Computing Skills:

C
Perl
S-plus
R
RELPAIR
Merlin
SAGE
PAP
Fortran

Honors and Awards:

Genome Training Grant NIH HG 00035 (Spring 2002- fall 2005). Awarded to students performing research in genome sciences.
UW Graduate School Merit Award (1998).
Natural Science and Mathematics Alumni Association Scholarship
Honors College Scholarship
Founder's Scholarship (1993)
Alpha Lambda Delta/ Phi Eta Sigma Honor Society
Outstanding First Year Honor Student (1994)
Dean's List (1993-1997)

Professional Service:

Women in Genome Sciences organizer (June 2008-present), University of Washington.
Faculty Search Committee member (Dec. 2006 – May 2007). Department of Biostatistics, University of Washington. Assisted in search and interviewing of potential faculty in statistical genetics.
Educational Policy and Evaluation Committee (2000-2001). Department of Biostatistics, University of Washington.
Student Representative (2000-2001). Department of Biostatistics, University of Washington.
Core Curriculum Committee (1999-2000). Department of Biostatistics, University of Washington.

Professional Membership:

Women in Genome Sciences (WiGS) (2008-present)
International Genetic Epidemiology Society (2004-2007)
American Society of Human Genetics (2002-present)
American Statistics Association (2002-2007)

Publications

Articles:

1. Chang-En Yu, Howard Seltman, Elaine R. Peskind, Nichole Galloway Peter X. Zhou, **Elisabeth Rosenthal**, Ellen M. Wijsman, Debby W. Tsuang, Bernie Devlin, Gerard D. Schellenberg (2007) Comprehensive Analysis of *APOE* and Selected Proximate Markers for Late-onset Alzheimer Disease: Pattern of Linkage Disequilibrium and Disease/Marker Association. *Genomics* 89 (6): 655-665.
2. Schellenberg GD, Dawson G, Sung YJ, Estes A, Munson J, **Rosenthal E**, Rothstein J, Flodman P, Smith M, Coon H, Leong L, Yu C-E, Stodgell C, Rodier PM, Spence MA, Minshew N, McMahon WM, Wijsman EM (2006) Evidence for multiple loci from a genome scan of autism kindreds. *Molecular Psychiatry* 11:1049-1060.
3. Ellen M Wijsman, Nancy M Robinson, Kathryn H Ainsworth, **Elisabeth A Rosenthal**, Ted Holzman and Wendy H Raskind.(2004) Familial Aggregation Patterns in Mathematical Ability. *Behavior Genetics* 34:51-62.
4. EM Wijsman, **EA Rosenthal**, D Hall, ML Blundell, C Sobin , SC Heath, Rhine Williams, MJ Brownstein, Joseph A Gogos, and M Karayiorgou. (2003) Genome-wide scan in a large complex pedigree with predominantly male schizophrenics from the island of Kosrae: evidence for linkage to chromosome 2q. *Molecular Psychiatry* 8:695-705.

Submitted:

1. **Elisabeth Rosenthal** and Ellen Wijsman. (2009) Joint linkage and segregation analysis under multiallelic trait inheritance: Simplifying interpretations for complex traits. *Genetic Epidemiology*
2. Jarvik GP, Rajagopalan R, **Rosenthal EA**, Wolfbauer G, McKinstry L, Vaze A, Brunzell J, Motulsky AG, Nickerson DA, Heagerty PJ, Wijsman EM, and Albers JJ. Genetic and non-genetic sources of variation in phospholipid transfer protein (PLTP) activity. *Journal of Lipid Research*

Invited Talks:

1. **EA Rosenthal**, R Rajagopalan, G Wolfbauer, JJ Albers, EM Wijsman, and GP Jarvik**.** Identification of multiple functional *PLTP* locus SNPs and their effects on linkage evidence for other chromosomes. Platform presentation at American Society of Human Genetics 59th Annual Meeting. Honolulu, Hawaii. October 2009.

Computer programs:

1. **EA Rosenthal** A new option in Loki: allowing for multiallelic QTLs. In progress.

Posters:

1. **EA Rosenthal** and EM Wijsman. MCMC Analysis of Complex Traits caused by Mutliallelic Loci. Poster presented at the American Society of Human Genetics 53rd Annual Meeting. Los Angeles. November 2003.

2. **EA Rosenthal** and EM Wijsman. MCMC Linkage Analysis with Multiallelic Trait Loci. Poster presented at the American Society of Human Genetics 55th Annual Meeting. Salt Lake City. October 2005.