

CURRICULUM VITAE

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CITIZENSHIP

United States of America

EDUCATION

Ph.D.: August 2011, under Dr. Hemant K. Tiwari. Department of Biostatistics. University of Alabama at Birmingham. Birmingham, Alabama.

August 2005 – May 2006, under Dr. Veronica J. Vieland. Center for Statistical Genetics Research. University of Iowa. Iowa City, Iowa.

B.A.: May 2005, Grinnell College. Grinnell, Iowa. Major: Mathematics/Statistics.

OTHER TRAINING:

NHLBI-funded workshop: “Presentation skills workshop” at the American Heart Association Joint Conference – 50th Cardiovascular Disease Epidemiology and Prevention – and – Nutrition, Physical Activity and Metabolism – 2010. March 3, 2010. San Francisco, California.

Short course: “Information-theoretic approaches to empirical science”. January 29, 2010. University of Alabama at Birmingham. Birmingham, Alabama.

Workshop: “Affymetrix: Best practices in genome-wide association studies data analysis workshop”. May 18-19, 2009. Chicago, Illinois.

Professional Development Workshop Series: “Presenting research to mass media: How scientists do, can and should present their research in the mass media”. November 20, 2008. University of Alabama at Birmingham. Birmingham, Alabama.

Boot camp: “ETLab shared HPC facility user boot camp 2008”. September 26, 2008. University of Alabama at Birmingham. Birmingham, Alabama.

NHGRI-funded conference: “2008 haplotype conference”. May 7-8, 2008. University of Alabama at Birmingham. Birmingham, Alabama.

Workshop: “The 2008 international workshop on methodology of twin and family studies: The introductory course”. March 3-7, 2008. Colorado University. Boulder, Colorado.

Workshop: “The new genetics workshop” organized by the Clinical Nutrition Research Center. February 15, 2008. University of Alabama at Birmingham. Birmingham, Alabama.

Boot camp: “ETLab shared HPC facility user boot camp 2007”. September 10, 2007. University of Alabama at Birmingham. Birmingham, Alabama.

Short course: “Gene mapping/linkage course”. June 4-8, 2007. Rockefeller University. New York City, New York.

Short course: “Seventh annual short course on statistical genetics for obesity and nutrition researchers”. May 14-15, 2007. Baylor University. Houston, Texas.

PROFESSIONAL APPOINTMENTS:

Sept 2010 – present: University of Alabama at Birmingham Medical Alumni 2010-2011 recipient of the Marie and Emmett Carmichael Fund for Graduate Students in Biosciences. University of Alabama at Birmingham. Birmingham, Alabama

Aug 2006 – Sept 2010: NHLBI Pre-doctoral T32HL079888 trainee fellow. Department of Biostatistics. University of Alabama at Birmingham. Birmingham, Alabama.

Aug 2005 – May 2006: Research assistant. Center for Statistical Genetics Research. University of Iowa. Iowa City, Iowa.

OTHER PROFESSIONAL ACTIVITIES:

Fall 2008 – Spring 2009: Member of “Copy number variation club”. Department of Biostatistics and Department of Epidemiology. University of Alabama at Birmingham. Birmingham, Alabama.

February 15, 2008: Co-organized “The new genetics workshop” with the Clinical Nutrition Research Center. University of Alabama at Birmingham. Birmingham, Alabama.

AREAS of RESEARCH INTEREST:

- Copy number variation
- Genetic association analysis in family and population data
- Population genetics
- Molecular evolution
- Genetics of cardiovascular diseases, autism and mental disorders

PROFESSIONAL SOCIETIES:

Member of the American Society of Human Genetics

Member of the International Genetic Epidemiology Society

HONORS and AWARDS:

University of Alabama at Birmingham Medical Alumni 2010-2011 recipient of the Marie and Emmett Carmichael Fund for Graduate Students in Biosciences.

NHLBI T32HL07988 Pre-doctoral Trainee Fellow 2006-2010. University of Alabama at Birmingham.

Midwest Conference Academic All-Conference; 2003, 2004, 2005. Awarded to scholar-athletes maintaining a 3.5 or better GPA and present in the top 25% of their graduating class. Grinnell College.

PRESENTATIONS:

January 10, 2011: Poster presentation on “A new method to assess linkage disequilibrium between SNPs and CNVs”. Functional Consequences of Structural Variation in the Genome, Keystone Symposium. Steamboat Springs, Colorado.

August 9, 2010: Oral presentation on “The misleading nature of current metrics used to assess linkage disequilibrium between SNPs and CNVs”. Section on Statistical Genetics Annual Retreat. Columbiana, Alabama.

July 28, 2010: Poster presentation on “Power and sample size calculations for cardiovascular disease research”. University of Alabama at Birmingham. Birmingham, Alabama.

March 3, 2010: Oral presentation on “Genome-wide joint SNP and CNV analysis of aortic root diameter: the HyperGEN study”. American Heart Association Joint Conference – 50th Cardiovascular Disease Epidemiology and Prevention – and – Nutrition, Physical Activity and Metabolism – 2010. San Francisco, California.

November 26, 2009: Oral presentation “Using Birdsuite software to model SNP and copy number effects from Affymetrix 6.0 data”. University of Alabama at Birmingham. Birmingham, Alabama.

October 19, 2009: Poster presentation on “Genome wide characterization of CNVs in African Americans from HyperGEN”. 2009 18th Annual International Genetic Epidemiology Society Meeting. Kahuku, Hawaii.

September 21, 2009: Journal club presentation on “Of beauty, sex, and power”. Department of Biostatistics. University of Alabama at Birmingham. Birmingham, Alabama.

August 12, 2009: Oral presentation on “Copy number variation in African Americans”. Section on Statistical Genetics Annual Retreat. Birmingham, Alabama.

February 27, 2009: Oral presentation on “Hidden Markov models: with application to CNV calling algorithms”. Section on Statistical Genetics Copy Number Variation Club. University of Alabama at Birmingham. Birmingham, Alabama.

February 20, 2009: Oral presentation on “Change-point methodology: CNV data analysis”. Section on Statistical Genetics Copy Number Variation Club. University of Alabama at Birmingham. Birmingham, Alabama.

February 5, 2009: Journal club presentation on “Extending genome-wide association studies to copy number variation”. Section on Statistical Genetics. University of Alabama at Birmingham. Birmingham, Alabama.

August 18, 2008: Oral presentation on “The current state of copy number variation”.
Section on Statistical Genetics Annual Retreat. Columbiana, Alabama.

TEACHING ACTIVITY RELATED to BIOSTATISTICS and STATISTICAL GENETICS:

Fall 2010: Teaching assistant BST 631: Statistical Theory I. Department of Biostatistics.
University of Alabama at Birmingham. Birmingham, Alabama.

Spring 2010: Teaching assistant BST 632: Statistical Theory II. Department of
Biostatistics. University of Alabama at Birmingham. Birmingham, Alabama.

July 2, 2009: Guest lecturer in BST 690: Biostatistics Consulting and Applied
Probability. Department of Biostatistics. University of Alabama at Birmingham.
Birmingham, Alabama.

PEER REVIEWED MANUSCRIPTS:

Wineinger NE, Pajewski N, Kennedy R, Wojcznski MK, Vaughan LK, Hunt SC, Gu
CC, Broeckel U, Rao DC, Arnett DK, Tiwari HK. Characterization of autosomal CNVs
in African Americans: the HyperGEN study. [To appear in Eur J Hum Genet].

Wineinger NE, Pajewski NM, Tiwari HK. A method to assess linkage disequilibrium
between CNVs and SNPs inside copy number variable regions. *Front Gene*. 2011;2:17.

Wineinger NE, Patki A, Meyers KJ, Broeckel U, Gu CC, Rao D, Devereux RB, Arnett
DK, Tiwari HK. Genome-wide joint SNP and CNV analysis of aortic root diameter in
African Americans: the HyperGEN study. *BMC Med Genomics*. 2011 Jan 11;4:4.

Tiwari HK, Barnholtz-Sloan J, **Wineinger N**, Padilla MA, Vaughan LK, Allison DB.
Review and evaluation of methods correcting for population stratification with a focus on
underlying statistical principles. *Hum Hered*. 2008;66(2):67-86.

Wineinger NE, Kennedy R, Erickson S, Wojcynski M, Bruder C, Tiwari HK. Statistical
Issues in the Analysis of DNA Copy Number Variations. *Int J Comput Biol Drug Des*.
2008;1(4), 368-95.

MANUSCRIPTS SUBMITTED:

Irvin MR, **Wineinger NE**, Pajewski NM, Kabagambe EK, Gu CC, Pankow J, North KE,
Wilk JB, Freedman B, Franceschini N, Tiwari HK, Arnett DK. Genome wide detection of
allele specific copy number variation associated with diabetes related traits in African
Americans from the HyperGEN study. [In revision: PLoS One].

Zhao W, **Wineinger NE**, Tiwari HK, Moseley TM, Broeckel U, Arnett DK, Kardia SL, Kabagambe EK, Sun YV. Copy number variation associated with obesity related traits in African Americans: a joint analysis between GENOA and HyperGEN.

MANUSCRIPTS in PREPARATION:

Wineinger NE & Tiwari HK. The impact of errors in CNV detection algorithms on association analysis.

Rasi C, Forsberg L, Absher D, **Wineinger NE**, Dumanski JP, *et al.* Somatic mosaicism in monozygotic twins.

PUBLISHED ABSTRACTS:

Wineinger NE, Pajewski NM, Tiwari HK. A new method to assess linkage disequilibrium between SNP and CNVs. Functional Consequences of Structural Variation in the Genome, Keystone Symposium, January 8-13, 2011, Steamboat Springs, Colorado.

Wineinger N, Broeckel U, Rao DC, Devereux RB, Patki A, Arnett DK, Tiwari HK. Genome-wide joint SNP and CNV analysis of aortic root diameter: the HyperGEN study. American Heart Association Joint Conference - 50th Cardiovascular Disease Epidemiology and Prevention - and - Nutrition, Physical Activity and Metabolism, March 2-5, 2010. San Francisco, California.

Wineinger N, Pajewski N, Kennedy R, Wojczynski MK, Hunt SC, Gu CC, Broeckel U, Rao DC, Arnett DK, Tiwari HK. Genome wide characterization of CNVs in African Americans from HyperGEN. 18th Annual Meeting of International Genetic Epidemiology Society, October 18-20, 2009, Kahuku, Hawaii.