

Amit Patki

Home:
3425 Wildewood Drive
Pelham, AL 35124
Phone # (205) 588 0902

Office:
Section on Statistical Genetics
Department of Biostatistics
University of Alabama at Birmingham
424 A Ryals Public Health Building
1665 University Boulevard
Birmingham, AL 35294-0022
Phone: (205) 975-9274
Fax : (205) 975-2540
Email: apatki@ms.soph.uab.edu

WORK EXPERIENCE:

University of Alabama at Birmingham, Birmingham, AL
Statistician

Jun. 2004 - Present

Working as a Statistician II in 'Section on Statistical Genetics' at University of Alabama at Birmingham.

Responsibilities:

- Perform statistical analysis on clinical, genetic marker, and micro-array data using SAS, R, SPSS.
- Write manuscript, create reports for publications, and assist writing research grants.
- Develop software for statistical genetic algorithms, developed in the department, using C, JAVA, SAS etc.
- Perform genetic analyses using various genetic software.

Washington University Medical School, St. Louis, MO
Research Assistant

Jun. 2002 – May 2004

Working as a Research Assistant with Washington University School of Medicine on the 'HERITAGE' project carried out by a steering committee composed of five different universities from United States and Canada.

Responsibilities:

- Performed statistical analysis and data management on study data by utilizing appropriate statistical methods using SAS and SAS tools.
- Performed linkage analysis, familial correlation analysis using software like SOLAR, GENE HUNTER, SEGPATH.
- Wrote SAS macro programs for some standard analysis procedure.
- Created and update meta-analysis web page and connected it to the database using SAS to see the analysis results through web page interactively.
- Data preparation & validation: sorting and merging techniques for the input data sets, to get the required output and then writing the code using SAS tools.
- Plotted graphs of linkage analysis result using GPLOT procedure.

Department of Mathematics and Statistics, University of New Orleans, USA

Jan. 2000 – May 2002

Graduate Assistant

Worked as a Graduate Assistant for the department of mathematics. Taught undergraduate courses and worked on the projects undertaken by the department.

Responsibilities:

- Performed a job as a Teaching Assistant with responsibility of teaching undergraduate courses, setting and grading tests, etc.
- Conducted SAS labs for the undergraduate students.
- Worked on the various statistical projects undertaken by the Department of Mathematics and Statistics and successfully completed them.

Mahindra and Mahindra Auto. Ltd., India

Aug. 1997 – Oct. 1998

Manufacturing Engineer

Worked as a Manufacturing Engineer in Manufacturing Engineering Dept. Was a part of a team of Statistical Process Control of the manufacturing processes.

Amit Patki

Responsibilities:

- Improved process and machine capabilities by applying statistical process control.
- Created and analyzed statistical reports, maintained files and presented the reports to higher-level staff.
- Documentation: The process of each project is documented accordingly for future reference.

TECHNICAL SKILLS:

Statistical Software : SAS, SAS/BASE, SAS/GRAPH, SAS/MACROS, SAS/ETS, SAS/IML, SAS/INTERNET , R, SPSS

Genetics Software : PLINK, SOLAR, S.A.G.E., GENE HUNTER, FBAT, GRR

Languages : C, JAVA

Tools : MS-Excel, MS-Word, MS-PowerPoint, MS-FrontPage, HTML

Operating systems : Windows 3x/9x/NT/XP, UNIX, Linux

OTHER TRAINING:

- Tutorial in "R" Statistical Computing by Thomas Lumley, Birmingham AL, February 2006
- A course on 'Missing Data' by Paul D Allison, Birmingham AL, August 2005
- S.A.G.E. (Statistical Analysis for Genetic Epidemiology) workshop by Robert C. Elston, Cincinnati OH, June 2004

EDUCATION:

- **Master of Science in Genetic Epidemiology, Washington University School of Medicine, St. Louis** in May, 2004

Masters Research thesis:

Bivariate Linkage Analysis of Metabolic Syndrome traits in the HERITAGE family study.

The primary aim of this study is to investigate if there are any common genes influencing some of the metabolic traits like adiposity, diabetes, and hypertension. A bivariate linkage analysis is performed using SOLAR computer package. This project a part of a multi-center study called HERITAGE family study.

- **Master of Science in Statistics, University of New Orleans, USA** in May, 2002

Internship:

Designed a Time Series Model, for the Hibernia National Bank, of the monthly shortage in the loan recovery. Estimated the monthly shortage values for the future months.

- **Bachelor of Engineering in Production Engineering, University of Bombay, India** in May, 1997

HONOURS AND ACTIVITIES:

- Member of editorial board of 'Journal of the National Medical Association'.
- Recipient of 'Mathematical Association of America Membership Award', awarded by Department of Mathematics, University of New Orleans in 2001.

PAPER PUBLICATIONS:

- Prinal Trivedi, Jode W. Edwards, Jelai Wang, Gary L. Gadbury, Vinodh Srinivasasainagendra, Stanislav O. Zakharkin, Kyoungmi Kim, Tapan Mehta, Jacob P. L. Brand, **Amit Patki**, Grier P. Page and David B. Allison. HDBStat!: A platform-independent software suite for statistical analysis of high dimensional biology data. *BMC Bioinformatics* 2005, 6:86
- Nancy A. Wilson, Jason Reed, Gnankang S. Napoe, Shari Piaskowski, Andy Szymanski, Jessica Furlott, Edna J. Gonzalez, Levi J. Yant, Nicholas J. Maness, Gemma E. May, Taeko Soma, Matthew R. Reynolds, Eva Rakasz, Richard Rudersdorf, Adrian B. McDermott, David H. O'Connor, Thomas C. Friedrich, David B. Allison, **Amit Patki**, Louis J. Picker, Dennis R. Burton, Jing Lin, Lingyi Huang, Deepa Patel, Gwendolyn Heindecker, Jiang Fan, Michael Citron, Melanie Horton, Fubao Wang, Xiaoping Liang, John W. Shiver, Danilo R. Casimiro, and David I. Watkins. Vaccine-Induced Cellular Immune Responses Reduce Plasma Viral Concentrations after Repeated Low-Dose Challenge with Pathogenic Simian Immunodeficiency Virus SIVmac239. *J. Virol.* 2006 80: 5875-5885

Amit Patki

- N Matsuoka, **A Patki**, HK Tiwari, A Luke, SB Johnson, PK Gregersen, DB Allison, RL Leibel, WK Chung Association of K121Q polymorphism in ENPP1 (PC-1) with BMI in Caucasian and African-American adults. *International Journal of Obesity* (2006) 30, 233–237.
- W. Scott Butsch, Jamy D. Ard, **Amit Patki**, C. Suzanne Henson, Miriam M. Rueger, Katherine A. Hubbert, Gerry L. Glandon, David B. Allison, Douglas C. Heimbarger. Effects of a reimbursement incentive on enrollment in a weight control program: Does reimbursement increase enrollment? *Obesity*, 2007; 15:2733–2738
- N Matsuoka, **A Patki**, HK Tiwari, A Luke, SB Johnson, PK Gregersen, DB Allison, RL Leibel, WK Chung (2007). Association of MC3R with Body Mass Index in African-Americans. *International Journal of Body Composition*, Vol 5, No 4: 123-129.
- Chung, WK, **Patki, A.**, Matsuoka, N., Boyer, B. B., Liu, N., Musani, S. K., Goropashnaya, A., Tan, P. L., Katsanis, N., Johnson, S. B., Gregersen, P. K., Allison, D. B., Leibel, R. L. & Tiwari, H. K. (2009). Analysis of 30 Genes (355 SNPS) Related to Energy Homeostasis for Association with Adiposity in European-American and Yup'ik Eskimo Populations. *Human Heredity*, 67(3):193-205.
- Tiwari, H. K., **Patki, A.**, & Allison, D. B. (2010). Within-Cluster Resampling (Multiple Outputation) for Analysis of Family Data: Ready for Prime-Time? *Statistics and Its Interface*, 3, 169-175.
- Xuxia Wu, **Amit Patki**, Cristina Lara-Castro, Xiangqin Cui, Kui Zhang, R. Grace Walton, Michael V Osier, Gary L. Gadbury, David B. Allison, Mitchell Martin, and W. Timothy Garvey. Genes and Biochemical Pathways in Human Skeletal Muscle Affecting Resting Energy Expenditure and Fuel Partitioning. Submitted to *J Appl Physiol*.
- Donna K. Arnett, Kristin J. Meyers, DC Rao, Richard B. Devereux, Hemant K. Tiwari, Charles C. Gu, **Amit Patki**, Steven A. Claas, Yan V. Sun, Ulrich Broeckel, Sharon L. Kardia. Genetic variation in NCAM1 contributes to left ventricular wall thickness in hypertensive African Americans. Submitted to *NEJM*.
- K Y Williams, Yun Joo Yoo, **Amit Patki**, David B. Allison. Real Data Examples in Statistical Methods Papers: Tremendously Valuable, and Also Tremendously Misvalued. Submitted to *Statistics and Its Interface*.
- Hemant K. Tiwari, Thomas Birkner, Ankur Moondan, Shiju Zhang, Grier P. Page, **Amit Patki**, & David B. Allison. Accurate and Flexible Power Calculations on the Spot: Applications to Genomic Research. Submitted to *Statistics and Its Interface*.
- Nianjun Liu, Hongyu Zhao, **Amit Patki**, Nita A. Limdi, and David B. Allison. Controlling Population Structure in Human Genetic Association Studies with Samples of Unrelated Individuals. Submitted to *Statistics and Its Interface*.

ONLINE PAPER PRESENTATIONS:

- Hemant K. Tiwari, **Amit Patki**, Solomon Musani, T. Mark Beasley, V George, & David B. Allison (2005). Incorporating Missing Data Methods in Familial Genetic Data Analyses. ASA Section on Biometrics Section. The 2005 JSM Proceedings: 402-406.
- Hemant Tiwari, **Amit Patki**, Mark Beasley, David B. Allison (2006). Comparative Validity and Power of Methods for Association-Testing with Related Individuals. Joint Statistical Meetings (JSM) 2006 in Seattle, Washington.
- Tiwari HK, **Patki A**, Padilla M, Beasley TM, Allison DB (2006). Within-cluster Resampling Methods in Association Analysis with Pedigree Data ASA Section on Biometrics Section. Joint Statistical Meetings (JSM) 2006 in Seattle, Washington.

ABSTRACT SUBMISSIONS:

- Solomon K. Musani, **Amit Patki**, Hemant K. Tiwari. Performance of Statistical Procedures for the Detection of Interlocus Interactions in Genome-wide Association Studies: Statistical Power and Type I Error Rates. International Biometric Society Eastern North American Region 2007 in Atlanta, GA.
- Hemant Tiwari, **Amit Patki**, Naoki Matsuoka, Solomon Musani, Bert Boyer, David Allison, Rudolph Leibel, Wendy Chung. Case-Control association study of candidate genes of energy homeostasis. NAASO annual scientific meeting 2006 in Boston, MA.
- Solomon Musani, **Amit Patki**, Naoki Matsuoka, Ann Loraine, Hemant Tiwari, David Allison, Rudolph Leibel, Wendy Chung. Evidence for epistasis from SNP × SNP interactions of 30 candidate genes for human obesity in a Caucasian Sample. NAASO annual scientific meeting 2006 in Boston, MA.
- Bert Boyer, Wendy Chung, **Amit Patki**, Naoki Matsuoka, Anna Goropashnaya, David Allison, Rudolph Leibel, Hemant Tiwari. Obesity candidate gene association study in Yup'ik Eskimos indicates a role for several hypothalamic genes involved in the control of energy homeostasis. NAASO annual scientific meeting 2006 in Boston, MA.

POSTER PRESENTATIONS:

- Hemant K. Tiwari PhD, **Amit Patki**, Yichen Wang MS, Anna V. Goropashnaya PhD, Gabriela Antunez de Mayolo PhD, Rosemarie Plaetke PhD, Gerald V. Mohatt EdD, David B. Allison PhD, and Bert B. Boyer PhD. Heritability Analysis of Obesity Related Traits in Alaskan Yup'ik Eskimos: The CANHR Study. Presented at the *Alaska Native Health Research Conference*, March 30-31, 2006