

PERSONAL DATA

NAME: Musani, Solomon K.
DOB: xxxxxx
MARITAL STATUS: Married with three children
GENDER: Male
STATUS: United States Permanent Resident
SSN: xxx-xx-xxxx
CITIZENSHIP: Kenyan
HOBBIES: Reading, going on safari, camping, soccer

ADDRESS (Office): 1665 University Blvd, 317C Ryals PHB, 1530 3rd Av S.
 Birmingham, AL 35294-0022
 Tel: (205) 975-9213
 Fax: (205) 975-2540

EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEAR(S)	FIELD OF STUDY
University of Alabama at Birmingham, AL, USA	Post-doctoral	Oct 2003 - 2005	Statistical Genetics
University of Guelph, Centre for Genetic Improvement in Livestock, ON CANADA	PhD	2003	Animal & Poultry Science
Egerton University, Nakuru KENYA	MSc	1995	Animal Production (Breeding option)
Egerton University, Nakuru KENYA	BSc	1992	Animal Production

POSITIONS AND HONORS**Positions**

Oct 2005 to date: Instructor in The Section on Statistical Genetics, Department of Biostatistics, University of Alabama at Birmingham.

Oct 2003 to Oct 2005: Post-doctoral fellow in the Section on Statistical Genetics, Department of Biostatistics, under the mentorship of Dr. David B. Allison.

Jan 2000 to April 2003: Graduate teaching assistant in quantitative genetics, University of Guelph, ON CANADA.

- Set, administered and examined undergraduate first year veterinary students in quantitative genetics under Dr. Andrew Robinson.
- Set, administered and examined undergraduate 4 year agriculture students in applied animal breeding under Dr. Gerald Jansen

May 1995 to Sept 1999: Assistant lecturer, department of Animal Science, Egerton University

- Taught introduction to quantitative genetics and dairy production to undergraduate students
- Supervised livestock management procedures for undergraduate students

Dec 1991 to Aug 1992: Teaching assistant, department of Animal Science, Egerton University

- Taught introduction to statistical genetics to MD and PhD students in epidemiology.

Honors & Awards

- 2005:** Travel award to the 18th annual International Workshop on the Methodology of Twin and Family Studies. Boulder CO, March 2005.
- 2004:** Awarded career advancement award by office of Post Doctoral Education, UAB. Monetary worth US \$ 5,000
- 2004:** Awarded IGEP Travel Grant to attend Minority Post Doctoral Summit in Austin, TX.
- 2002:** Awarded Ontario Graduate scholarship worth CAD \$ 2000.
- 2002:** Awarded CGIL Travel Grant to attend 7th World Congress on Genetics Applied to Livestock Production. Monetary Worth: CAD \$ 1,200
- 1999:** Won a Canadian Commonwealth scholarship to pursue graduate studies, 1999
- 1997:** Nominated for Israeli fellowship to attend a workshop in Shefayim, Tel Aviv, 1997.
- 1996:** Best proposal on impact of privatization of AI technology on small-holder dairy production, IDRC Nairobi.

JOB RELATED SKILLS & EXPERIENCE

- I have 4 years experience in linkage and association genetic tools (e.g., GENEHUNTER, ALLEGRO, LOKI, MERLIN, SOLAR), analysis of genetic and phenotypic data, including whole genome mapping studies, admixture analysis and population genetics
- Proficient in computer skills such as UNIX, Windows and Programming in C
- Experienced programming R, SAS and limited ASREML
- As indicated in the number of my first author papers, I have strong initiative and excellent collaborative skills to constitute a multidisciplinary team.

GRANT SUPPORT

Pending Support

1K01DK080170-01 (PI: Musani)
NIH/NIDDK

10/15/06 – 10/15/12

Ongoing Research Support

NIH RO1DK5243-12S1 (PI: Leibel)
Supplement to Molecular Genetic Analysis of Human Obesity
Goal: To evaluate the association of obesity candidate genes with obesity phenotypes

10/01/05 – 09/30/07

Completed Research Support

NIH T32HL 072757-01 (PI: Allison)
NIH/NIDDK

4/15/03 – 03/31/08

UAB Statistical Genetics Post Doctoral Training Program (Fellow)

REVIEWING ACTIVITY

- Genetics
- Human Heredity
- PLoS Genetics
- Behavior Genetics
- Arthritis Research & Therapy
- International Journal of Obesity

PROFESSIONAL SOCIETY MEMBERSHIP

- North American Association for the Study of Obesity (NAASO)
- International Biometric Society, Eastern North American Region (ENAR)
- Animal Production Society of Kenya (APSK)
- Agricultural Society of Kenya (ASK)

PUBLICATIONS IN PEER-REVIEWED JORUNALS

1. **Musani, S.K.**, Shriner, D., Liu, N., Rui, F., Coffey, C.S., Yi, N., Tiwari, H.K., & Allison, D.B. Detection of Gene \times Gene Interactions in Association Studies of Human Data. *Invited review. Hum. Hered.* 63, 67-84 (2007).
2. **Musani, S.K.**, Halbert, N.D., Redden, D.T., Allison, D.B., & Derr, J.N. Marker genotypes, population admixture, and their association with body weight, height, and relative body mass in U.S. federal bison herds. *Genetics* 174, 775-783 (2006).
3. **Musani, S.K.**, Zhang, H.-G., Hsu, H.-C., Yi, N., Allison, D.B., & Mountz, J.D. Principal Component Analysis for Quantitative Trait Loci for Adenovirus Gene Therapy. *Hereditas* 143, 189-197 (2006).
4. Tiwari, H.K., Patki, A., **Musani, S.K.**, Beasley, M.T., Wiener, H., & Allison D.B. Modeling missing data in pedigree data analysis to control for type I error rate and to increase power of association tests. *JSM Proceed.* 402-406 (2005).
5. Mayer, M., & **Musani, S.K.** A surface regression approach for estimation of genetic and environmental trends under widely varying meteorological conditions between years. *J. Anim. Breed. Genet.* 119, 116-124 (2002).
6. **Musani, S.K.**, & Mayer, M. Genetic and Environmental trends in a large commercial Jersey herd in the Central Rift Valley, Kenya. *Trop. Anim. Hlth. Prod.* 29, 108-116 (1997).

PUBLISHED ABSTRACTS

1. **Musani, S.K.**, Patki, A., & Tiwari, H.K. Performance of statistical procedures for the detection of interlocus interactions in genome-wide association studies: Statistical power and type I error rates. In: *International Biometric Society; Eastern North American Region (ENAR). Spring Meeting 2007. Hyatt Regency Hotel, Atlanta, GA (2007).*
2. **Musani, S.K.**, Patki, A., Matsouka, N., Loraine, A., Tiwari, H.K., Allison, D.B., Leibel, R.L., & Chung, W.K. Evidence of gene \times gene interactions of 30 candidate genes for human obesity in a Caucasian sample. *Suppl. Obesity* 14, A198 (2006).
3. Tiwari, H.K., Patki, A., Matsouka, N., **Musani, S.K.**, Boyer, B., Allison, D.B., Leibel, R.L., & Wendy, C.K. Case-control association study of candidate genes of energy balance. *Suppl. Obesity* 14, A47 (2006).

4. **Musani, S.K.**, Halbert, N.D., Derr, J.N., Redden, D.T., & Allison, D.B. Contribution of candidate gene genotype and admixture to weight and height in four US bison herds. *Obesity Research (Abstract)* 870, P A221 (2004).
5. **Musani, S.K.**, Zhang, H.-G., Hsu, H.-C., Yi, N., Allison, D.B., & Mountz, J.D. Principal Component Analysis for Quantitative Trait Loci for Adenovirus Gene Therapy. *ASHG*, Toronto ON CANADA, October (2004).
6. **Musani, S.K.**, & Jansen, G.B. Combining family and breed information to detect QTL in crosses of outbred populations. *J. Anim. Sci. (Suppl.)* 81, 160 (2003).
7. **Musani, S.K.**, & Mayer, M. Environmental risks and genetic and managerial improvements in a large commercial Jersey herd in Kenya during the period 1980-1993. *Proc. All Afric Congr. Anim. Agric. Pretoria*, SA April 1-4 1996 (1995).

BOOK CHAPTERS

1. Shriner D, **Musani SK**, Yi N, (2006). Statistical methods for multiple QTL mapping in experimental cross. In *"Human Genetic"* ed. Hong-Wen Deng. (In press).
2. Redden DT, Divers J, Vaughan LK, Padilla M, **Musani SK**, Tiwari HK, Allison DB, (2006). Methodological Challenges in Genetic Studies of Obesity. In *'Genetics of Obesity'* ed. Clement (In Press).

ORAL PRESENTATIONS

1. Detection of epistatic genes that influence obesity. *MD Anderson, Texas* June 2006
2. Hands on experience on methods for detangling structure in population data, admixture mapping and errors associated with it, regional admixture mapping and structured association testing, and software such as ADMIXMAP, STRUCTURE/STRAT, and MLE. *Progeni Network NHLBI GxE Interaction Studies: Admixture and Population Stratification Analysis Workshop. March 20-21, 2006.*
3. Population genetic structure of North American Bison (*Bison bison*): Plasmode evidence that STRUCTURE works 'as advertised'. *Postdoctoral Research Day, University of Alabama at Birmingham, Birmingham AL*, February 2005.
4. Overview of methods for epistatic model selection with many polymorphisms, *Progeni Meeting. New Orleans, LA*, May 2004
5. Contribution of candidate gene genotype and admixture to weight and height in four US bison herds. *SSG Seminar* July 29, 2004.
6. Principal Component Analysis of Adenovirus Gene Therapy. *Joint Research Meeting b/w SSG and MD Anderson, Texas*, June 2004.
7. Combining breed and family Information to detect quantitative trait loci in crosses of outbred populations. *Special Seminar, University of Pittsburgh Monday* June 30th 2003.
8. Environmental and genetic trends in a Jersey herd in upper midland Agro-ecological zone of Kenya. *Symposium for Animal Production Society of Kenya*, 19-22 February, 1995, Nanyuki, Kenya

9. Impact on privatization policy on the livestock sub-sector in Kenya: A case study of Artificial Insemination (AI) technology on small-holder dairy production in Nakuru, Kericho and Nandi Districts, *Third Annual Workshop of the African Technology Policy Studies*, 20-26 October, 1996, Harare Zimbabwe.

CONTINUING EDUCATION

1. Attended the 18th international workshop on methodology of twin and family studies: *March 07-12, 2005*, held at the Millennium Harvest Hotel, Boulder, Colorado.
2. Attended advanced gene mapping linkage course *Dec 12-18, 2004*, held at the Rockefeller University New York.
3. QTL mapping in complex pedigrees: *July 12-16, 2004*, Summer Course by Dr. Rohan L. Fernando, Professor of Animal Breeding, Iowa State University, Iowa
4. Progeni network NHLBI GxE Interaction Studies: *Analysis Workshop, June 14-15, 2004* John Hopkins School of Nursing, Baltimore MD.
5. HMS 2nd Annual Genomics and Genetic epidemiology course, *April 21 – 23, 2004*, Harvard University, Boston
6. Economic aspects of Animal Breeding programs: *June 9-13, 2001* Summer course by Dr. Jack C.M. Dekkers, Iowa State University
7. Statistical approaches for utilization of DNA-markers in animal breeding programs: Course for PhD students, *June 12-16, 2000* Summer course by Dr. Luc Janss, ID-Lelystad Institute for Animal Science and Health.
8. Quantitative trait loci (QTL) markers and mapping. *June 5-9, 2000* Summer course by Dr. Michel Georges and Woutter Copieters, University of Liege.

REFERENCES

1. David B. Allison, PhD (Post doctoral mentor)
University of Alabama at Birmingham
1665 University Avenue
Ryals Public Health Building, Suite 327
Birmingham, Alabama 35294-0022
Phone: (205) 975-9169
Email: DAllison@uab.edu
2. Hemant K. Tiwari, PhD
University of Alabama at Birmingham
1665 University Avenue
Ryals Public Health Building, Suite 327
Birmingham, Alabama 35294-0022
Phone: (205) 934-4907
Email: HTiwari@ms.soph.uab.edu
3. Andrew Robinson
University of Guelph
Department of Animal & Poultry Science
Guelph, ON Canada N1G 2W1

Tel: (519) 824-4120 ext 53679
Email: andy@uoguelph.ca

4. Nengjun Yi, PhD
University of Alabama at Birmingham
1665 University Avenue
Ryals Public Health Building, Suite 327
Birmingham, Alabama 35294-0022
Phone: (205) 934-4924
Email: Nyi@ms.soph.uab.edu