

Principal Investigator

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Employment History

2004-date Senior Group Leader, Genome Institute of Singapore, Singapore
2003-date Adjunct Senior Research Fellow, Centre for Molecular Epidemiology,
National University of Singapore
2002-date Assistant Professor of Population Genetics, Harvard School of Public Health,
Boston, MA USA
2002-2004 Group Leader, Genome Institute of Singapore, Singapore
2000-2001 Research Associate, Harvard School of Public Health, Boston, MA USA

Research Interests

Research on the genetic basis of complex diseases and phenotypes, primarily those with immune involvement. Conducts large-scale SNP association studies in search of genetic factors which alter susceptibility to: 1.) pulmonary and meningeal Tuberculosis infection, 2.) antibody response to vaccination against hepatitis B virus, and 3.) psoriasis, a chronic inflammatory condition of the skin. A member of collaborative teams investigating genetic variation affecting risk of 1.) sporadic breast cancer, 2.) plasma lipid levels and the risk of coronary disease, and 3.) susceptibility to infections with Dengue virus and its occasional hemorrhagic sequelae.

Academic Qualifications

1998-2000 Post-doctoral Fellow in Population Genetics Program for Population Genetics,
Harvard School of Public Health, Boston, MA USA
1992-1998 Doctor of Philosophy in Genetics, Department of Organismic and Evolutionary
Biology, Harvard University, Cambridge, MA USA
1988-1992 Bachelor of Science in Biological Sciences, Stanford University, Stanford, CA USA
1988-1992 Bachelor of Arts in Classics, Stanford University, Stanford, CA USA

Selected Publications

1. Chia KS, Lee JJM, Cheung P, Cheung KH, **Seielstad Mark**, Wilcox MM, Liu Edison Tak-Bun, (2004) "Twin births in Singapore: a population-based study using the national birth registry" . *Annals Academy of Medicine Singapore* . 33 . 195-199
2. Bereir RE, Mohamed HS, **Seielstad Mark**, El Hassani AM, Khalil EA, Peacock CS, Blackwell JM, Ibrahim ME, (2003) "Allele frequency and genotype distribution of polymorphisms within disease-related genes is influenced by ethnic population sub-structuring in Sudan" . *Genetica* . 119 . 57-63

3. **Seielstad Mark**, Yuldasheva N, Singh N, Underhill P, Oefner P, Shen P, Wells RS, (2003) "A novel Y-chromosome variant puts an upper limit on the timing of first entry into the Americas" . *American Journal of Human Genetics* . 73 . 700-705
4. **Seielstad Mark**, Ardlie K, Lunetta K, (2002) "Testing for population subdivision and association in four case-control studies." . *American Journal of Human Genetics*, 71:304-311.
5. Y Ke, B Su, X Song, D Lu, L Chen, H Li, C Qi, S Marzuki, R Deka, P Underhill, C Xiao, M Shriver, J Lell, D Wallace, S Wells, **Seielstad Mark**, P Oefner, D Zhu, J Jin, W Huang, R Chakraborty, Z Chen, L Jin, (2001) "African Origin of Modern Humans in East Asia: A tale of 12,000 Y chromosomes." . *Science* 292:1151-1153.
6. Niu T, **Seielstad Mark**, Zeng X, Apffel A, Li G, Hahnenberger K, Xu X, (2001) "Detection of novel ALAD gene polymorphisms using denaturing high-performance liquid chromatography" . *Human Biology* . 73 . 429-42
7. Underhill PA, Shen P, Lin AA, Jin L, Passarino G, Yang WH, Kauffman E, Bonn?-Tamir B, Bertranpetit J, Francalacci P, Ibrahim M,, Jenkins T, Kidd J, Mehdi SQ, **Seielstad Mark**, Wells RS, Piazza A,, Davis RW, Feldman M, Cavalli-Sforza LL, Oefner PJ, (2000) "The architecture of Y-chromosome biallelic haplotype diversity: an emerging portrait of mankind." . *Nature Genetics*, 26:358-361
8. Jorde LB, Watkins WS, Bamshad MJ, Dixon ME, Ricker CE, **Seielstad Mark**, Batzer MA, (2000) "The distribution of human genetic diversity: a comparison of mitochondrial, autosomal and Y-chromosome data" . *American Journal of Human Genetics* . 66 . 979-988
9. Su B, Xiao C, Deka R, **Seielstad Mark**, Kangwanpong D, Xiao J, Lu D, Underhill P, Cavalli-Sforza L, Chakraborty R and Jin L, (2000) "Y chromosome haplotypes reveal prehistorical migrations to the Himalayas" . *Human Genetics* . 107 . 582-90
10. Pritchard JK, **Seielstad Mark**, Perez-Lezaun A, Feldman MW, (1999) "Population growth of human Y chromosomes: a study of Y chromosome microsatellites" . *Molecular Biology and Evolution*, 16:1791-1798
11. **Seielstad Mark**, Bekele E, Ibrahim M, Toure A, and Traore M, (1999) "A view of modern human origins from Y chromosome microsatellite variation." . *Genome Research*, 9:558-567
12. **Seielstad Mark**, Minch E, Cavalli-Sforza LL, (1998) "Genetic evidence for a higher female migration rate in humans. ." . *Nature Genetics*, 20:278-280
13. Wells RS, **Seielstad Mark**, Bunce M, Tyan DB, Bekele E, and Parham P, (1997) "Cw*1701 defines a divergent African HLA-C allelic lineage" . *Immunogenetics* . 46 . 173-180

14. Perez-Lezaun A, Calafell F, **Seielstad Mark**, Mateu E, Comas D, Bosch E, and Bertranpetit J, (1997) "Population genetics of Y-chromosome short tandem repeats in humans" . *Journal of Molecular Evolution* . 45 . 265-270
15. Ruiz-Linares A, Nayar K, Goldstein DB, Hebert JM, **Seielstad Mark**, Underhill PA, Lin AA, Feldman MW, and Cavalli-Sforza LL, (1996) "Geographic clustering of human Y chromosome haplotypes" . *Annals of Human Genetics* . 60 . 401-408
16. **Seielstad Mark**, Hebert JM, Lin AA, Underhill PA, Ibrahim M, Vollrath D, Cavalli-Sforza LL, (1994) "Construction of human Y-chromosomal haplotypes using a new polymorphic A to G transition." . *Human Molecular Genetics*, 3:2159-61.
17. Zhang C, Bailey DK, Awad T, Liu G, Xing G, Cao M, Valmeekam V, Retief J, Matsuzaki H, Taub M, **Seielstad Mark**, Kennedy GC, "A glimpse into population history: using 116,204 SNPs and a genome-wide long-range haplotype test to identify regions of positive selection in human populations" . (submitted)

Honors and Awards

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| 2000-2002 | Visiting Assistant Professor, Institute of Endemic Diseases, University of Khartoum, visits funded by the Third World Academy of Sciences, Trieste, Italy. |
| 2000-2005 | Research Career Award, National Human Genome Research Institute (K22 HG00053-01; \$1,047,678) |
| 2000 | National Research Service Award, National Institute of General Medical Sciences (F32 GM20425-01) |
| 1993-1996 | National Science Foundation Predoctoral Fellow |
| 1992-1993 | National Institutes of Health Genetics Trainee, Harvard University |
| 1996 | L.S.B. Leakey Society Grant for field research in Mali |
| 1997-1998 | L.S.B. Leakey Society Grant for field research in Thailand and Vietnam |
| 1994-1998 | Arthur Green Fund (Harvard University) Grants for field research in Sudan (1994 and 1998); Ethiopia (1995); and Thailand and Vietnam (1997-1998). |
| 1994 | U.S. National Science Foundation -- Graduate University for Advanced Studies, Yokohoma; Summer Research Fellow at the Japanese National Institute of Genetics, Mishima |
| 1994-1996 | Visiting Scholar, Department of Genetics, Stanford University Medical School |
| 1995 | Visiting Scholar, Department of Biology, Addis Ababa University |
| 1991 | Howard Hughes Medical Institute Major Grant for thesis research on the molecular systematics of the butterfly genus, <i>Colias</i> , Stanford University Dept. of Biological Sciences |
| 1991 | Travel Grant for excavation work in Panakton, Greece and for archeological study in Jordan and Egypt; Stanford Dept. of Classics |
| 1990-1992 | Lionel Pearson Travel Grant for study at the Intercollegiate Center for Classical Studies (Rome) and for archeological study in Tunisia and Turkey; Stanford University (1990); Classics Undergraduate |