Shicheng Guo

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Education

2009-2015	Ph.D.	School of Life Sciences, Fudan University, Shanghai, China
2005-2009	B.S.	School of Life Sciences, Northeast Agricultural University, Harbin, China

Present Position

2017-Pres	Postdoctoral Research Fellow, Center for Human Genetics, Marshfield Clinic Research Institute, Marshfield, WI

Experience

2015-2017	Postdoctoral Fellow, Department of Bioengineering, University of California, San Diego, CA
2013-2014	Research Assistant, University of Texas Health Science Center at Houston, Houston, TX
2012-2013	Visiting Scholar, University of Texas Health Science Center at Houston, Houston, TX
2012-2013	Internship, CAS-MPG Partner Institute for Computational Biology, Shanghai, China
2011-2014	Internship, Institute of Rheumatology, Immunology and Allergy, Shanghai, China

Patents

Methods and kits for diagnosising of bladder cancer with urine exfoliated cell, China
Methods and kits for prognosising of bladder cancer after surgery with urine exfoliated cell, China
Methods for quantitative deconvolution and detection of heterogeneous nucleic acid sample, US (under review)

Awards and Honors

2014	First Place Poster, 17th Annual Human and Molecular Genetics Symposium, GSBS, Houston, TX
2012	Silver award of “Cup of Challenge” for College Students’ Innovative Contest in Shanghai, China
2009-2013	Model Student of Academic Records (2009, 2012, 2013, Fudan University), Shanghai, China
2007	Second Prize of National Mathematical Modeling Contest in Heilongjiang province, Harbin, China
2007	Social Practice Scholarship (NEAU), Harbin, China
2006	National Encouragement Scholarship, Harbin, China
2005-2007	Model Student of Academic Records (NEAU), Harbin, China
2005	National Scholarship (NEAU), Harbin, China

Publications

S. Guo, S. Jiang, N. Epperla, Y. Ma, M. Maadooliat, Z. Ye, B. Olson, M. Wang, T. Kitchner, J. Joyce, R. Stenn, J.J. Mazza, J.K. Meece, W. Wu, L. Jin, J.A. Smith, J. Wang, S.J. Schrodi. A Gene-Based Recessive Diplotype Exome Scan Discovers FGF6, a Novel Hepcidin-Regulating Iron Metabolism Gene. Blood (under review)

S. Guo, J. Liu, S. Schrodi, D. He. Genome-Wide lncRNA and Transcriptome Analysis of Fibroblast-like Synoviocytes in Response to (5R)-5-Hydroxytriptolide (LLDT-8). Scientific Reports (Under review)

S. Guo, S. Schrodi. Incorporation of Linkage Disequilibrium in Epigenetic Results Reveals Surprisingly Frequent Correlation between Regulatory Regions and Rheumatoid Arthritis GWAS SNPs (Completed)

1. Xu, X.-H., Y. Bao, X. Wang, F. Yan, **S. Guo**, Y. Ma, D. Xu, L. Jin, J. Xu, J. Wang (2018) Hypoxic-Stabilized Epas1 Proteins Transactivate Dnmt1 and Cause Promoter Hypermethylation and Transcription Inhibition of Epas1 in Non-Small Cell Lung Cancer*. The FASEB Journal*, 2018: p. fj. 201700715.
2. Wang, C., W. Pu, D. Zhao, Y. Zhou, T. Lu, S. Chen, Z. He, X. Feng, Y. Wang, C. Li, S. Li, **S. Guo**[#], J Wang[#], M Wang[#]. (2018) Identification of Hyper-Methylated Tumor Suppressor Genes-Based Diagnostic Panel for Esophageal Squamous Cell Carcinoma (Escc) in a Chinese Han Population. *Front Genet*, 9:356.

3. Feng, W., X. Guo, H. Huang, C. Xu, Y. Li, **S. Guo**, Z. Zhao, Q. Li, D. Lu, L. Jin (2018) Polymorphism Rs3819102 in Thymidylate Synthase and Environmental Factors: Effects on Lung Cancer in Chinese Population. *Current Problems in Cancer* [Jul 21, Epub ahead of print].

4. Pu, W., C. Wang, S. Chen, D. Zhao, Y. Zhou, Y. Ma, Y. Wang, C. Li, Z. Huang, L. Jin, **S. Guo**[#], J. Wang[#], M. Wang[#] (2017) Targeted Bisulfite Sequencing Identified a Panel of DNA Methylation-Based Biomarkers for Esophageal Squamous Cell Carcinoma (ESCC). *Clinical Epigenetics*, 9:129.

5. Lei, Y., L. Liu, S. Zhang, **S. Guo**, X. Li, J. Wang, B. Su, Y. Fang, X. Chen, H. Ke (2017) Hdac7 Promotes Lung Tumorigenesis by Inhibiting Stat3 Activation. *Molecular cancer*, 16(1):170.

6. He, D., J. Liu, Y. Hai, Q. Zhu, Y. Shen, **S. Guo**, W. Zhang, X. Zhou (2017) Increased Dot1l in Synovial Biopsies of Patients with Oa and Ra. *Clin Rheumatol*, 37:1327-1332

7. **Guo, S.**, Q. Zhu, T. Jiang, R. Wang, Y. Shen, X. Zhu, Y. Wang, F. Bai, Q. Ding, X. Zhou (2017) Genome-Wide DNA Methylation Patterns in Cd4+ T Cells from Chinese Han Patients with Rheumatoid Arthritis. *Mod Rheumatol*, 27:441-447.

8. **Guo, S*.**, D. Diep*, N. Plongthongkum, H.-L. Fung, K. Zhang, K. Zhang (2017) Identification of Methylation Haplotype Blocks Aids in Deconvolution of Heterogeneous Tissue Samples and Tumor Tissue-of-Origin Mapping from Plasma DNA. *Nature Genetics*, 49(4):635-642.

9. Geng, X., W. Pu, Y. Tan, Z. Lu, A. Wang, L. Tan, S. Chen, **S. Guo**[#], J. Wang[#], X. Chen[#] (2017) Quantitative Assessment of the Diagnostic Role of Fhit Promoter Methylation in Non-Small Cell Lung Cancer. *Oncotarget*, 8(4):6845.

10. Fan, L., L. Chen, X. Ni, **S. Guo**, Y. Zhou, C. Wang, Y. Zheng, F. Shen, V.K. Kolluri, M. Muktiali (2017) Genetic Variant of Mir-4293 Rs12220909 Is Associated with Susceptibility to Non-Small Cell Lung Cancer in a Chinese Han Population. *PLoS One*, 12(4):e0175666.

11. Ding, W., W. Pu, L. Wang, S. Jiang, X. Zhou, W. Tu, L. Yu, J. Zhang, **S. Guo**, Q. Liu (2017) Genome-Wide DNA Methylation Analysis in Systemic Sclerosis Reveals Hypomethylation of IFN-Associated Genes in Cd4+ and Cd8+ T Cells. *Journal of Investigative Dermatology*, 138:1069-1077.

12. Zhang, X., J. Zhang, R. Wang, **S. Guo**, H. Zhang, Y. Ma, Q. Liu, H. Chu, X. Xu, Y. Zhang (2016) Hypermethylation Reduces the Expression of Pnpla7 in Hepatocellular Carcinoma. *Oncology letters*, 12(1):670-674.

13. Suzuki, K., Y. Tsunekawa, R. Hernandez-Benitez, J. Wu, …, **S. Guo**, …K. Zhang, J.C. Belmonte (2016) In Vivo Genome Editing Via Crispr/Cas9 Mediated Homology-Independent Targeted Integration. *Nature*, 540(7631):144-149.

14. Shen, F., J. Chen, **S. Guo**, Y. Zhou, Y. Zheng, Y. Yang, J. Zhang, X. Wang, C. Wang, D. Zhao (2016) Genetic Variants in Mir-196a2 and Mir-499 Are Associated with Susceptibility to Esophageal Squamous Cell Carcinoma in Chinese Han Population. *Tumor Biology*, 37(4):4777-4784.

15. Pu, W., X. Geng, S. Chen, L. Tan, Y. Tan, A. Wang, Z. Lu, **S. Guo**, X. Chen, J. Wang (2016) Aberrant Methylation of Cdh13 Can Be a Diagnostic Biomarker for Lung Adenocarcinoma. *J Cancer*, 7(15):2280.

16. **Guo, S.**, Y. Li, Y. Wang, H. Chu, Y. Chen, Q. Liu, G. Guo, W. Tu, W. Wu, H. Zou (2016) Copy Number Variation of Hla-Dqa1 and Apobec3a/3b Contribute to the Susceptibility of Systemic Sclerosis in the Chinese Han Population. *J Rheumatol*, 43(5):880-886.

17. Zhang, P., J. Wang, T. Lu, X. Wang, Y. Zheng, **S. Guo**, Y. Yang, M. Wang, V.K. Kolluri, L. Qiu (2015) Mir-449b Rs10061133 and Mir-4293 Rs12220909 Polymorphisms Are Associated with Decreased Esophageal Squamous Cell Carcinoma in a Chinese Population. *Tumor Biology*, 36(11):8789-8795.

18. Wang, J., J. Li, J. Gu, J. Yu, **S. Guo**, Y. Zhu, D. Ye (2015) Abnormal Methylation Status of Fbxw10 and Smpd3, and Associations with Clinical Characteristics in Clear Cell Renal Cell Carcinoma. *Oncology letters*, 10(5):3073-3080.

19. Pan, L.l., Y.M. Huang, M. Wang, X.E. Zhuang, D.F. Luo, **S. Guo**, Z.S. Zhang, Q. Huang, S.L. Lin, and S.Y. Wang (2015) Positional Cloning and Next-Generation Sequencing Identified a Tgm6 Mutation in a Large Chinese Pedigree with Acute Myeloid Leukaemia. *European Journal of Human Genetics*, 23(2):218-223.

20. Lin, N., J. Jiang, **S. Guo**, M. Xiong (2015) Functional Principal Component Analysis and Randomized Sparse Clustering Algorithm for Medical Image Analysis*. PLoS One*, 10(7):e0132945.

21. Jiang, J., N. Lin, **S. Guo**, J. Chen, M. Xiong (2015) Multiple Functional Linear Model for Association Analysis of Rna-Seq with Imaging. *Quantitative biology* (Beijing, China), 3(2):90.

22. **Guo, S**., F. Yan, J. Xu, Y. Bao, J. Zhu, X. Wang, J. Wu, Y. Li, W. Pu, Y. Liu (2015) Identification and Validation of the Methylation Biomarkers of Non-Small Cell Lung Cancer (NSCLC). *Clinical Epigenetics*, 7(1):3.

23. **Guo, S.**, T. Jiang, R. Wang, Y. Shen, X. Zhu, F. Bai, Q. Ding, G. Chen, D. He (2105) Genome-Wide Dna Methylation Patterns in Cd4+ T Reveal Significant Contribution of Dna Methylation to Rheumatoid Arthritis. *Arthritis & Rheumatology*, 67:1596-1597.

24. Dong, Z., **S. Guo**, Y. Yang, J. Wu, M. Guan, H. Zou, L. Jin, J. Wang (2015) Association between Abcg2 Q141k Polymorphism and Gout Risk Affected by Ethnicity and Gender: A Systematic Review and Meta-Analysis. *Int J Rheum Dis*, 18(4):382-391.

25. Zhao, Y., F. Xue, J. Sun, **S. Guo**, H. Zhang, B. Qiu, J. Geng, J. Gu, X. Zhou, W. Wang (2014) Genome-Wide Methylation Profiling of the Different Stages of Hepatitis B Virus-Related Hepatocellular Carcinoma Development in Plasma Cell-Free DNA Reveals Potential Biomarkers for Early Detection and High-Risk Monitoring of Hepatocellular Carcinoma. *Clinical Epigenetics*, 6(1):30.

26. Zhao, Y., J. Sun, H. Zhang, **S. Guo**, J. Gu, W. Wang, N. Tang, X. Zhou, J. Yu (2014) High-Frequency Aberrantly Methylated Targets in Pancreatic Adenocarcinoma Identified Via Global DNA Methylation Analysis Using Methylcap-Seq. *Clinical Epigenetics*, 6(1):18.

27. Xiao, Q., S. Gao, H. Luo, W. Fan, **S. Guo**, H. Yao, S. Leng, Z. Xu, T. Tao, X. Liu (2014) 9q33.3, a Stress-Related Chromosome Region, Contributes to Reducing Lung Squamous Cell Carcinoma Risk. *Journal of Thoracic Oncology*, 9(7):1041-1047.

28. Wang, R., J. Zhang, Y. Ma, L. Chen, **S. Guo**, X. Zhang, Y. Ma, L. Wu, X. Pei, S. Liu (2014) Association Study of Mir‑149 Rs2292832 and Mir‑608 Rs4919510 and the Risk of Hepatocellular Carcinoma in a Large ‑Scale Population. *Molecular Medicine Reports*, 10(5):2736-2744.

29. Song, X., **S. Guo**, Y. Chen, C. Yang, H. Ji, F. Zhang, Z. Jiang, Y. Ma, Y. Li, L. Jin (2014) Association between Hla-Dqa1 Gene Copy Number Polymorphisms and Susceptibility to Rheumatoid Arthritis in Chinese Han Population. *Journal of Genetics*, 93(1): 215-218.

30. Huang, L*****., Y. Li*****, **S. Guo***, Y. Sun, C. Zhang, Y. Bai, S. Li, F. Yang, M. Zhao, B. Wang (2014) Different Hereditary Contribution of the Cfh Gene between Polypoidal Choroidal Vasculopathy and Age-Related Macular Degeneration in Chinese Han Peoplehereditary Contribution of Cfh in Pcv and Amd. *Investigative Ophthalmology & Visual Science*, 55(4):2534-2538.

31. He, D., J. Wang, L. Yi, X. Guo, **S. Guo**, G. Guo, W. Tu, W. Wu, L. Yang, R. Xiao (2014) Association of the Hla-Drb1 with Scleroderma in Chinese Population. *PLoS One*, 9(9):e106939.

32. **Guo, S.**, Y.L. Wang, Y. Li, L. Jin, M. Xiong, Q.H. Ji, J. Wang (2014) Significant Snps Have Limited Prediction Ability for Thyroid Cancer. *Cancer Med*, 3(3):731-735.

33. **Guo, S.**, L. Tan, W. Pu, J. Wu, K. Xu, J. Wu, Q. Li, Y. Ma, J. Xu, L. Jin (2014) Quantitative Assessment of the Diagnostic Role of Apc Promoter Methylation in Non-Small Cell Lung Cancer. *Clinical Epigenetics*, 6(1):5.

34. Zhao, Y., H. Zhou, K. Ma, J. Sun, X. Feng, J. Geng, J. Gu, W. Wang, H. Zhang, Y. He, **S. Guo**, X. Zhou, J. Yu, Q. Lin (2013) Abnormal Methylation of Seven Genes and Their Associations with Clinical Characteristics in Early Stage Non-Small Cell Lung Cancer. *Oncology Letters*, 5(4):1211-1218.

35. Wu, L., **S. Guo**, D. Yang, Y. Ma, H. Ji, Y. Chen, J. Zhang, Y. Wang, L. Jin, and J. Wang (2013) Copy Number Variations of Hla-Drb5 Is Associated with Systemic Lupus Erythematosus Risk in Chinese Han Population. *Acta Biochim Biophys Sin*, 46(2):155-160.

36. Wang, Y.L., S.H. Feng, **S. Guo**, W.J. Wei, D.S. Li, Y. Wang, X. Wang, Z.Y. Wang, Y.Y. Ma, L. Jin (2013) Confirmation of Papillary Thyroid Cancer Susceptibility Loci Identified by Genome-Wide Association Studies of Chromosomes 14q13, 9q22, 2q35 and 8p12 in a Chinese Population. *J Med Genet*, p. jmedgenet-2013-101687.

37. Wang, X., L. Wang, **S. Guo**, Y. Bao, Y. Ma, F. Yan, K. Xu, Z. Xu, L. Jin, D. Lu (2013) Hypermethylation Reduces Expression of Tumor-Suppressor Plzf and Regulates Proliferation and Apoptosis in Non-Small-Cell Lung Cancers. *The FASEB Journal*, 27(10):4194-4203.

38. Wang, J., Y. Yang, **S. Guo**, Y. Chen, C. Yang, H. Ji, X. Song, F. Zhang, Z. Jiang, Y. Ma (2013) Association between Copy Number Variations of Hla-Dqa1 and Ankylosing Spondylitis in the Chinese Han Population. *Genes Immun*, 14(8):500-503.

39. Lin, S., L. Pan, **S. Guo**, J. Wu, L. Jin, J.C. Wang, S. Wang (2013) Prognostic Role of Microrna-181a/B in Hematological Malignancies: A Meta-Analysis. *PLoS One*, 8(3):e59532.

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41. Wu, J., J. Liu, Y. Zhou, J. Ying, H. Zou, **S. Guo**, L. Wang, N. Zhao, J. Hu, D. Lu (2012) Predictive Value of Xrcc1 Gene Polymorphisms on Platinum-Based Chemotherapy in Advanced Non–Small Cell Lung Cancer Patients: A Systematic Review and Meta-Analysis. *Clinical Cancer Research*, 18(14):3972-3981.

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43. He, Y., Y. Cui, W. Wang, J. Gu, **S. Guo**, K. Ma, X. Luo (2011) Hypomethylation of the Hsa-Mir-191 Locus Causes High Expression of Hsa-Mir-191 and Promotes the Epithelial-to-Mesenchymal Transition in Hepatocellular Carcinoma. *Neoplasia*, 13(9):841-853.

44. Zhou, X., J. Sun, Y. He, H. Zhang, J. Yu, **S. Guo**, Y. Cai, X. Hu, J. Zhu (2010) Correlation of the Methylation Status of Cpg Islands in the Promoter Region of 10 Genes with the 5-Fu Chemosensitivity in 3 Breast Cancer Cell Lines. Zhonghua zhong liu za zhi [Chinese journal of oncology], 32(5):328.

45. Xiang, H., J. Zhu, Q. Chen, F. Dai, X. Li, M. Li, H. Zhang, G. Zhang, D. Li, Y. Dong, L. Zhao, Y. Lin, D. Cheong, J. Yu, J. Sun, X. Zhou, K. Ma, Y. He, Y. Zhao, **S. Guo**, M. Ye, G. Guo, Y. Li, R. Li, X. Zhang, L. Ma, K. Kristiansen, Q. Guo, J. Jiang, S. Beck, Q. Xia, W. Wang, J. Wang (2010) Single Base-Resolution Methylome of the Silkworm Reveals a Sparse Epigenomic Map. *Nature Biotechnology*, 28(5):516-520.

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47. Ao, J.X., X.J. Gao, Y.B. Yu, B. Qu, X.H. Yuan, Y. Liu, **S. Guo** (2009) Construction of a General Standard Molecule for the Qualitative Detection in Different Transgenic Foodcrops. *Journal of Northeast Agricultural University* (English Edition), 16(2):37-41.

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