

SHAOBO (SEBASTIAN) LI, *Ph.D.*

📍 Los Angeles, CA

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EDUCATION

University of Southern California 2018.08 – 2022.05

Doctor of Philosophy in Cancer Biology and Genomics (Bioinformatics)

- Thesis: Perinatal epigenetic and genetic analyses in childhood cancers
- Advisors: Dr Joseph L. Wiemels, Dr Adam de Smith

Fudan University, Shanghai, China 2009.09 – 2014.06

Bachelor of Medicine (Forensic medicine)

- Coursework: Anatomy, Psychiatry, Radiology, Surgery, Internal Medicine, Obstetrics and Gynecology

WORK EXPERIENCE

University of Southern California, Center for Genetic Epidemiology Los Angeles, CA

Postdoctoral fellow 2022.05 – Present

- Adopted machine learning and deep learning methods to predict childhood leukemia, and eye diseases with DNA methylation data
- Germline and somatic mutation analysis of WGS and WES data in children and adults
- Led a meta-analysis project of US National Institutes of Health (NIH) Pregnancy and Childhood Epigenetics (PACE) study about the effects of birth order on perinatal DNA methylation
- Led collaborations with European (Danish and Sweden) cohorts on meta-analysis of childhood glioma GWAS studies
- Trained new PhD students and pediatrician research fellows

University of Southern California, Center for Genetic Epidemiology Los Angeles, CA

Predoctoral fellow, Research Assistant 2019.06 – 2022.05

- Genetic and epigenetic analysis of leukemia, pediatric glioma, and other childhood cancers

University of California, Berkeley, School of Public Health Berkeley, CA

Research Affiliate 2019.07 – Present

- Genetic association and ancestry analyses for CCLS (California Childhood Leukemia Study)

Zhongshan Hospital Shanghai, China

Volunteer Clinical Researcher 2014.09 – 2018.06

- Glucose metabolic dysfunction in OSAHS patients and its interference with CPAP (Department of Respiration)
- FENO as a novel respiratory indicator for patients with OSAHS (Department of Respiration)
- Application of CT-based radiomics in predicting portal pressure and patient outcome in portal hypertension (Department of Gastroenterology)

LOFT Education Online, China

Founder and English Lecturer 2014.06 – 2018.06

- Online English learning platform with originally designed courses in written and oral English

CERTIFICATES

Statistics and R (PH525.1x)	HarvardX, edX
Introduction to Linear Models and Matrix Algebra (PH525.2x)	HarvardX, edX
Statistical Inference and Modeling for High-throughput Experiments (PH525.3x)	HarvardX, edX
High-Dimensional Data Analysis (PH525.4x)	HarvardX, edX
Machine Learning	Stanford Online, Coursera

RELEVANT SKILLS

Data Analysis: Data Cleaning, Visualization, Modelling, Prediction, Machine Learning, Deep Learning, Ancestry Analyses, Survival Analyses

Programming: R, Python, C, Linux/Unix (HPC), JAVA, SAS, STATA, SPSS

Bioinformatics: EWAS, GWAS (SNPTEST, PLINK), WDL, GATK, Singularity

Languages: English, Mandarin, Japanese

PUBLICATIONS

1. **Li S**, Chiang CWK, Myint SS, Arroyo K, Chan TF, Morimoto L, et al. Localized variation in ancestral admixture identifies pilocytic astrocytoma risk loci among Latino children. Kutalik Z, editor. PLoS Genet. 2022 Sep 7;18(9):e1010388.
2. **Li S**, Sok P, Xu K, Muskens IS, Elliott N, Myint SS, et al. Epigenome-Wide Association Study of Acute Lymphoblastic Leukemia in Children with Down Syndrome. Blood. 2021 Nov 5;138(Supplement 1):214–214.
3. **Li S**, Gai X, Myint SS, Arroyo K, Morimoto L, Metayer C, et al. Mitochondrial 1555 G>A variant as a potential risk factor for childhood glioblastoma. Neuro-Oncology Advances. 2022 Jan 1;4(1):vdac045.
4. Tseng Y, Ma L, **Li S**, Luo T, Luo J, Zhang W, et al. Application of CT-based radiomics in predicting portal pressure and patient outcome in portal hypertension. European Journal of Radiology. 2020 May;126:108927.
5. Feng Q, Zhou M, **Li S**, Morimoto L, Hansen H, Myint SS, et al. Interaction between maternal killer immunoglobulin-like receptors and offspring HLAs and susceptibility of childhood ALL. Blood Advances. 2022 Jun 28;6(12):3756–66.
6. Xu K, **Li S**, Pandey P, Kang AY, Morimoto LM, Mancuso N, et al. Investigating DNA methylation as a mediator of genetic risk in childhood acute lymphoblastic leukemia. Human Molecular Genetics. 2022 Jun 18;ddac137.
7. Xu K, **Li S**, Muskens IS, Elliott N, Myint SS, Pandey P, et al. Accelerated epigenetic aging in newborns with Down syndrome. Aging Cell. 2022 Jul;21(7)..
8. Gallant RE, Arroyo K, Bracci PM, **Li S**, Metayer C, Kogan SC, et al. Clinical characteristics of cytomegalovirus-positive pediatric acute lymphoblastic leukemia at diagnosis. American J Hematol. 2022 Jun;97(6).
9. Jeon S, de Smith AJ, **Li S**, Chen M, Chan TF, Muskens IS, et al. Genome-wide trans-ethnic meta-analysis identifies novel susceptibility loci for childhood acute lymphoblastic leukemia. Leukemia. 2021 Nov 8.

10. Martirosian V, Deshpande K, ... **Li S**, ..., Neman J, Medulloblastoma uses GABA transaminase to survive in the cerebrospinal fluid microenvironment and promote leptomeningeal dissemination. *Cell Reports*. 2021 Jun;35(13):109302.
11. Xu K, **Li S**, Whitehead TP, Pandey P, Kang AY, Morimoto LM, et al. Epigenetic Biomarkers of Prenatal Tobacco Smoke Exposure Are Associated with Gene Deletions in Childhood Acute Lymphoblastic Leukemia. *Cancer Epidemiology, Biomarkers & Prevention*. 2021 Aug 1;30(8):1517–25.
12. Muskens IS, **Li S**, Jackson T, Elliot N, Hansen HM, Myint SS, et al. The genome-wide impact of trisomy 21 on DNA methylation and its implications for hematopoiesis. *Nat Commun*. 2021 Dec;12(1):821.
13. Shen Q, Zhou Z, Liu Z, Hu S, Lin Z, **Li S**, et al. Clinical and Pathological Features of Prostatic Stromal Tumor of Uncertain Malignant Potential: A Retrospective Study of 23 Chinese Cases. *Urol Int*. 2021;105(3–4):206–14.
14. Meng Y, Yu W, Liu Z, Zhang M, Chen Y, **Li S**, et al. The inflammation patterns of different inflammatory cells in histological structures of hyperplastic prostatic tissues. *Transl Androl Urol*. 2020 Aug;9(4):1639–49.
15. Liu Z, Meng Y, Cao Y, Chen Y, Fan Y, **Li S**, et al. Expression and prognostic value of PD-L1 in non-schistosoma-associated urinary bladder squamous cell carcinoma. *Transl Androl Urol*. 2020 Apr;9(2):428–36.
16. Liu Z, Meng Y, **Li S**, Yu W, Jin J. Perioperative recovery in different urinary reconstruction approaches of radical cystectomy: Are the advantages of laparoscopy consistent? *J Min Access Surg*. 2020;16(4):390.
17. Liu Z, Wang H, Zhang L, **Li S**, Fan Y, Meng Y, et al. Metabolic syndrome is associated with improved cancer-specific survival in patients with localized clear cell renal cell carcinoma. *Transl Androl Urol*. 2019 Oct;8(5):507–18.
18. Liu Z, Huang H, **Li S**, Yu W, Li W, Jin J, et al. The prognostic value of preoperative serum albumin-globulin ratio for high-grade bladder urothelial carcinoma treated with radical cystectomy: A propensity score-matched analysis. *J Can Res Ther*. 2017;13(5):837.
19. Han T, Sun H, Wen X, Liu Z, Li S, Wang JG, et al. Expression of CPEB4 in invasive ductal breast carcinoma and its prognostic significance. *OTT*. 2015 Nov;3499.

OTHER SKILLS

Digital multimedia production: Proficient in graphic and video productions using Adobe Suite (Photoshop, Illustrator, Lightroom, After Effect), and Apple Final Cut Pro.

- Producer of USC Keck School of Medicine Virtual Commencement Videos (2020, 2021)
- First Prize in Keck School of Medicine Research Video Competition (2020)
- First Prize of Cambridge Business English (China) video competition (2012)
- First Prize of U21 United Nations Millennium Development Goals (UNMDG) Video Competition (2012)