

# Curriculum Vitae

## Xiang Shu, PhD, MS

**Academic Title:** Research Instructor

**Work Address:** Division of Epidemiology  
Vanderbilt University Medical Center  
2525 West End Avenue, 8<sup>th</sup> Floor  
Nashville, TN 37203

**Phone:** 615-936-3772

**Email:** [xiang.shu@vumc.org](mailto:xiang.shu@vumc.org)

### EDUCATION

#### Postdoctoral training in Molecular and Genetic Epidemiology

10/2016-04/2019 Division of Epidemiology, Vanderbilt University Medical Center  
Mentor: Dr. Wei Zheng

#### Doctor of Philosophy in Epidemiology

08/2012-08/2016 The University of Texas Health Science Center at Houston School of Public Health  
Dissertation topic: *Searching Genetic Markers and miRNA Signatures for Renal Cell Carcinoma Risk and Prognosis*  
Advisor: Dr. Xifeng Wu

#### Master of Science in Epidemiology

08/2010-07/2012 The University of Texas Health Science Center at Houston School of Public Health  
Thesis topic: *Energy Balance, Genetic Polymorphisms in mTOR Pathway and Risk of Renal Cell Carcinoma*  
Advisor: Dr. Xifeng Wu

#### Bachelor of Medical Science in Preventive Medicine

09/2004-07/2010 Harbin Medical University, China

### OTHER TRAINING

2019 Short course: Machine Learning in Data Science. Vanderbilt University  
2019 Short course: Introduction to Natural Language Processing & Machine Learning Application to EHR & Genetics. Vanderbilt Genetics Institute Workshop  
2019 Workshop: Digital Technologies in Cancer Research Workshop. Vanderbilt-Ingram Cancer Center  
2019 Workshop: ENCODE 2019: Research Applications and Users Meeting  
2019 Short course: An Introduction to Causal Inference. Harvard T.H. Chan School of Public Health  
2018 AACR Integrative Molecular Epidemiology Workshop: Bridging Cancer Biology and Precision Medicine  
2016 6th Short Course on Next-Generation Sequencing: Technology and Statistical Methods. University of Alabama at Birmingham

### GRANT APPLICATION EXPERIENCE

2017-2018

### **Pathway to Independence Award K99/R00 Application**

- Title: *Uncovering roles of metabolites in colorectal cancer etiology*
- Funded, 04/01/2019 – 03/31/2023

### **HONORS AND AWARDS**

2019	Nomination for Vanderbilt Ingram Cancer Center Postdoc of the Year
2019	Molecular Epidemiology Working Group (MEG) Scholar-in-Training Award
2018	Poster Presentation Award, 2 <sup>nd</sup> place, Vanderbilt Ingram Cancer Center Annual Scientific Retreat
2018	American Association for Cancer Research Scholar-in-Training Award
2017	Top Peer-Reviewed, High-Scoring Abstract Award, 17 <sup>th</sup> Annual Retreat for Cancer Research, VICC Host-Tumor Interactions Program & Program in Cancer Biology
2017	American Association for Cancer Research-AbbVie Scholar-in-Training Award
2015	Poster Competition Finalist, Trainee Research Day, UT MD Anderson Cancer Center
2014	Nomination for Doctoral Outstanding Trainee in Cancer Prevention Award, UT MD Anderson Cancer Center
2013	Poster Competition Finalist, Trainee Research Day, UT MD Anderson Cancer Center
2011	Nomination for Pre-Doctoral Outstanding Trainee in Cancer Prevention Award, UT MD Anderson Cancer Center
2010	New Student Scholarship, UT Health Science Center at Houston School of Public Health
2004-2010	University Scholarship, Harbin Medical University

### **ACADEMIC APPOINTMENTS AND FELLOWSHIP SUPPORT**

2019-	Research Instructor, Division of Epidemiology, Vanderbilt University Medical Center, effective on April 1, 2019
2016-2019	Postdoctoral Research Fellow, Division of Epidemiology, Vanderbilt University Medical Center Mentor: Dr. Wei Zheng
2010-2016	Graduate Research Assistant, UT MD Anderson Cancer Center Mentor: Dr. Xifeng Wu

### **PROFESSIONAL ORGANIZATIONS AND SERVICE**

#### **Professional Societies**

2010-	American Association for Cancer Research, Associate Member
2018-	The Metabolomics Society, Primary Member
2018-	Early Scientists Working Group, the Consortium of Metabolomics Studies
2018-	Funding Working Group, the Consortium of Metabolomics Studies
2018-	Diet Working Group, the Consortium of Metabolomics Studies
2019-	Society for Epidemiologic Research
2019-	American Society of Human Genetics

#### **Peer Review Activities**

2010-	Ad Hoc Review – Manuscripts <i>British Medical Journal (BMJ); International Journal of Cancer; Carcinogenesis; Scientific Report; Molecular Cancer Therapeutics; Cancer Epidemiology, Biomarkers &amp; Prevention; PLOS ONE; American Journal of Preventive Medicine and Public Health; Medicine; Tumor Biology; Medical Science Monitor</i>
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## **Professional committee**

2018 Poster Competition Judge for Meharry Medical College-Vanderbilt-Ingram Comprehensive Cancer Center-Tennessee State University Partnership 17th Annual Retreat and Mini-Symposium

## **TEACHING EXPERIENCE**

2019 Guest lecture, The Vanderbilt Training Program in the Molecular and Genetic Epidemiology of Cancer (MAGEC)  
2019 Mentor for student internship, Cancer Epidemiology, Summer semester  
2015 Teaching assistant, Cancer Epidemiology, Summer semester  
2015 High school student research tutoring, Summer semester

## **RESEARCH EXPERIENCE**

**10/2016-, Postdoctoral Training, Division of Epidemiology, Vanderbilt University Medical Center**

### **Evaluate associations of obesity and circulating insulin/glucose levels with breast cancer risk using Mendelian randomization approach**

- *Assess potential causal relationship between obesity, fasting insulin, and glucose levels and breast cancer risk by applying Mendelian Randomization approach to summary statistics and individual level data of Breast Cancer Association Consortium*

### **Investigate associations of metabolite, protein, gene expression and methylation markers with cancer risks using genetic instruments and machine learning approach**

- *Search for potential novel metabolite/protein/gene expression/methylation markers for risks of breast/ovarian/colorectal/prostate and kidney cancer using data from large-scale cancer consortia*

### **Search for novel genetic susceptibility loci of breast cancer in East Asians**

- *Genome-wide association meta-analysis to identify novel breast cancer susceptibility loci in East Asians and Europeans*
- *Fine-mapping of 183 identified breast cancer susceptibility loci in East Asians*

### **Prospective metabolomic studies of cancer risk in East Asians**

- *Global metabolomics profiling to identify potential metabolite biomarkers for colorectal, pancreatic, ovarian, gastric, gallbladder cancer risks through case-control studies nested in the Shanghai Women's/Men's Health Study*

### **Health disparity and overall survival of cancer using National Cancer Database**

- *Evaluate health disparity at facility levels and its impact on colon cancer overall survival*
- *Assess the beneficial effect of non-regional lymph nodes metastasis resection among patient with colon cancer*
- *Evaluate treatment variations in patients with young-onset CRC and impact on its survival*
- *Evaluate sex disparity in breast cancer overall survival*
- *Evaluate racial disparity in overall mortality after cancer diagnosis*

### **Glycemic index/load and risk of lung cancer in African Americans**

- *Evaluate the relationship between glycemic index/load and lung cancer risk in the Southern Community Cohort Study*

### **Prospective metabolomic studies of type 2 diabetes risk in East Asians**

- *Global metabolomics profiling to identify potential metabolite biomarkers of incident type 2 diabetes through case-control studies nested in the Shanghai Women's/Men's Health Study*

### **Risk factors of kidney stone in East Asians**

- *Assess the associations of obesity, cardiovascular diseases, and hypertension with incident kidney stone in the Shanghai Women/Men's Health Study*
- *Assess the relationship between green tea intake and incident kidney stone in the Shanghai Women/Men's Health Study*
- *Evaluate the role of dietary animal proteins, non-animal proteins, and dairy proteins in the development of kidney stone in Shanghai cohorts*

**2010-2016, Graduate Research Assistant, Department of Epidemiology, University of Texas MD Anderson Cancer Center**

**Renal Cell carcinoma**

- *Interplay of obesity, weight change, and common variants in mTOR pathway and the impact on renal cell carcinoma (RCC) risk*
- *Gene-set enrichment analysis using RCC GWAS data*
- *Genetic variants in obesity-related genes and RCC risk*
- *Tissue miRNAs as biomarkers of RCC risk and recurrence*
- *Genetic variants in significantly mutated genes and their associations with risk and outcome of non-metastatic RCC*

**Prostate cancer**

- *Genetic variants in Wnt signaling pathway and risk of aggressive prostate cancer and prostate cancer reclassification in an active surveillance cohort*

**Colorectal cancer**

- *Obesity and overall survival of colorectal cancer*

**Other projects**

- *MicroRNA sequencing to identify novel miRNA biomarkers for esophageal cancer risk*
- *Dietary pattern and bladder cancer risk*
- *Cardiotoxicity in breast cancer patients and its impact on clinical outcomes*
- *Wnt signaling pathway pharmacogenetics in non-small cell lung cancer*
- *Genetic polymorphisms of Src signaling pathway and pulmonary complications in lung cancer patients after lobectomy*
- *Hypoxia pathway genetic variants predict survival of non-small-cell lung cancer patients receiving platinum-based chemotherapy*

**Research practicum, Department of Biostatistics, Harbin Medical University**

2010 Bachelor thesis on drug pharmacokinetics of plant-derived medicine

**Research Assistant, Department of Human Genetics, Harbin Medical University**

2006-2007 Formation mechanism of double minutes chromosome (DMs) in tumor cells

**CLINICAL TRIAL EXPERIENCE**

2019- Stent compared to stentless ureteroscopy for renal stones: A pragmatic multi-center randomized trial from the CoRE group. ClinicalTrials.gov Identifier: NCT03855787.  
Role (trial statistician): oversee the production of intermittent report

**COMPUTER AND ANALYTIC SKILLS**

Statistical software: R, STATA, and SAS

Other software and programs used: PLINK/PLINK2, SNPTEST, GCTA, GENEVAR, VEGAS, GENEPATTERN, ANNOVAR, Bowtie2, MetaXcan, FUSION, GEMMA, MR-MEGA, GARFIELD, EIGENSTRAT, IMPUTE2, Minimac, HAPLOVIEW, LOCUSZOOM

**GRANT SUPPORT**

**Active**

1K99CA230205-01A1 (Shu) 04/01/2019-03/31/2023

NIH/NCI \$948,156

Uncovering roles of metabolites in colorectal cancer etiology

To discover novel metabolite biomarkers for colorectal cancer risk.

Role: PI

### **Past**

UM1 CA182910-06 (Zheng) 09/01/14-08/31/19

NIH/NCI \$958,708

Shanghai Women's Health Study

To continue the follow-up of ~75,000 cohort members and to collect additional data and biological samples

Role: Postdoctoral fellow

R01 DK108159-04 (Wang) 04/01/16-03/31/20

NIDDK \$569,277

Metabolite profiles and the risk of diabetes in Asians

Role: Postdoctoral fellow

## **PUBLICATIONS**

### **Peer Reviewed Publication**

1. **Shu X**, Calvert JK, Cai H, Xiang YB, Li H, Zheng W, Shu XO, Hsi R. Plant and animal protein intakes and risk of incident kidney stones: Results from the Shanghai men's and women's health studies. **J Urol**. 2019 Dec;202(6):1217-1223
2. Yang Y, **Shu X**, Shu XO, Bolla M, other BCAC co-authors, Kraft P, Kang D, Easton D, Zheng W, Long J. Re-evaluating Genetic Variants Identified in Candidate Gene Studies of Breast Cancer Risk Using Data from Nearly 280,000 Women of Asian and European Ancestry. **EBioMedicine**. 2019 Oct;48:203-211
3. Wang F, **Shu X**, Meszoely I, Pal T, Mayer IA, Yu Z, Zheng W, Bailey CE, Shu XO. Overall Mortality After Diagnosis of Breast Cancer in Men vs Women. **JAMA Oncol**. 2019 Sep 19. Epub ahead of print
4. Wu L, **Shu X**, Bao J, Guo X, CRUK, BPC3, CAPS, PEGASUS consortia PRACTICAL, Kote-Jarai Z, Haiman CA, Eeles RA. Analysis of over 140,000 European descendants identifies genetically-predicted blood protein biomarkers associated with prostate cancer risk. **Cancer Res**. 2019 Sep 15;79(18):4592-4598
5. Cabo J, **Shu X**, Shu XO, Parikh A, Bailey C. Treatment at Academic Centers Decreases Insurance-Based Survival Disparities in Colon Cancer. **J Surg Res**. 2019 Aug 14;245:265-272
6. **Shu X**, Bao J, Wu L, Long J, Shu XO, Guo X, Yang Y, Michailidou K, Bolla MK, Wang Q, Dennis J, Andrulis IL, Castela JE, Dörk T, Gago-Dominguez M, García-Closas M, Giles GG, Lophatananon A, Muir K, Olsson H, Rennert G, Saloustros E, Scott RJ, Southey MC, Pharoah PDP, Milne RL, Kraft P, Simard J, Easton DF, Zheng W. Evaluation of associations between genetically predicted circulating protein biomarkers and breast cancer risk. **Int J Cancer**. 2019 Jul 2. Epub ahead of print
7. Kang C, **Shu X**, Herrell SD, Miller NL, Hsi RS. Opiate Exposure and Predictors of Increased Opiate Use After Ureteroscopy. **J Endourol**. 2019 Jun;33(6):480-485
8. Yang Y, Wu L, Shu XO, Cai Q, **Shu X**, Li B, Guo X, Ye F, Michailidou K, Bolla MK, Wang Q, Dennis J4, Andrulis IL, Brenner H, Chenevix-Trench G, Campa D, Castela JE, Gago-Dominguez M, Dörk T, Hollestelle A,

Lophatananon A, Muir K, Neuhausen SL, Olsson H, Sandler DP, Simard J, Kraft P, Pharoah PDP, Easton DF, Zheng W, Long J. Genetically predicted levels of DNA methylation biomarkers and breast cancer risk: data from 228,951 women of European descent. **J Natl Cancer Inst.** 2019 May 29. Epub ahead of print

9. **Shu X**, Wu L, Khankari NK, Shu XO, Wang TJ, Michailidou K, Bolla MK, Wang Q, Dennis J, Milne RL, Schmidt MK, Pharoah PDP, Andrulis IL, Hunter DJ, Simard J, Easton DF, Zheng W, Breast Cancer Association Consortium. Authors' response: associations of obesity and circulating insulin and glucose with breast cancer risks. **Int J Epidemiol.** 2019 Jun 1;48(3):1016-1017.
10. Yang Y, Wu L, **Shu X**, Lu Y, Shu XO, Cai Q, Beeghly-Fadiel A, Li B, Ye F, Berchuck A, Anton-Culver H, Banerjee S, Benitez J, Bjørge L, Brenton JD, Butzow R, Campbell IG, Chang-Claude J, Chen K, Cook LS, Cramer DW, DeFazio A, Dennis J, Doherty JA, Dork T, Eccles DM, Edwards DV, Fasching PA, Fortner RT, Gayther SA, Giles GG, Glasspool RM, Goode EL, Goodman MT, Gronwald J, Harris HR, Heitz F, Hildebrandt MA, Høgdall E, Høgdall CK, Huntsman DG, Kar SP, Karlan BY, Kelemen LE, Kiemeny LA, Kjaer SK, Koushik A, Lambrechts D, Le ND, Levine DA, Massuger LF, Matsuo K, May T, McNeish IA, Menon U, Modugno F, Monteiro AN, Moorman PG, Moysich KB, Ness RB, Nevanlinna H, Olsson H, Onland-Moret NC, Park SK, Paul J, Pearce CL, Pejovic T, Phelan CM, Pike MC, Ramus SJ, Riboli E, Rodríguez-Antona C, Romieu I, Sandler DP, Schildkraut JM, Setiawan VW, Shan K, Siddiqui N, Sieh W, Stampfer MJ, Sutphen R, Swerdlow AJ, Szafron LM, Teo SH, Tworoger SS, Tyrer JP, Webb PM, Wentzensen N, White E, Willett WC, Wolk A, Woo YL, Wu AH, Yan L, Yannoukakos D, Chenevix-Trench G, Sellers TA, Pharoah PD, Zheng W, Long J. Genetic Data from Nearly 63,000 Women of European Descent Predicts DNA Methylation Biomarkers and Epithelial Ovarian Cancer Risk. **Cancer Res.** 2019 Feb 1;79(3):505-517
11. **Shu X**, Cai H, Xiang YB, Li H, Lipworth L, Miller NL, Zheng W, Shu XO, Hsi RS. Green tea intake and risk of incident kidney stones: Prospective cohort studies in middle-aged and elderly Chinese individuals. **Int J Urol.** 2019 Feb;26(2):241-246
12. **Shu X**, Wu L, Khankari NK, Shu XO, Wang TJ, Michailidou K, Bolla MK, Wang Q, Dennis J, Milne RL, Schmidt MK, Pharoah PDP, Andrulis IL, Hunter DJ, Simard J, Easton DF, Zheng W, Breast Cancer Association Consortium. Associations of obesity and circulating insulin and glucose with breast cancer risk: A Mendelian randomization analysis. **Int J Epidemiol.** 2019 Jun 1;48(3):795-806
13. Shi J, Wu L, Zheng W, Wen W, Wang S, **Shu X**, Long J, Shen CY, Wu PE, Saloustros E, Chang-Claude J, Brenner H, Shu XO, Cai Q. Genetic evidence for the association between schizophrenia and breast cancer. **J Psychiatr Brain Sci.** 2018;3(4). pii: 7
14. Liu X, Xu W, Cai H, Gao YT, Li H, Ji BT, **Shu X**, Wang T, Gerszten RE, Zheng W, Xiang YB, Shu XO. Green tea consumption and risk of type 2 diabetes in Chinese adults: the Shanghai Women's Health Study and the Shanghai Men's Health Study. **Int J Epidemiol.** 2018 Dec 1;47(6):1887-1896
15. Hsi RS, Kabagambe EK, **Shu X**, Han X, Miller NL, Lipworth L. Race- and sex-related differences in nephrolithiasis risk among blacks and whites in the Southern Community Cohort Study. **Urology.** 2018 Aug;118:36-42
16. **Shu X**, Zheng W, Yu D, Li HL, Lan Q, Yang G, Cai H, Ma X, Rothman N, Gao YT, Jia W, Xiang YB, Shu XO. Prospective metabolomics study identifies potential novel blood metabolites associated with pancreatic cancer

risk. **Int J Cancer**. 2018 Nov 1;143(9):2161-2167

17. **Shu X**, Gu J, Huang M, Tannir NM, Matin SF, Karam JA, Wood CG, Wu X, Ye Y. Germline genetic variants in somatically significantly mutated genes in tumors are associated with renal cell carcinoma risk and outcome. **Carcinogenesis**. 2018 May 28;39(6):752-757
18. **Shu X**, Xiang YB, Rothman N, Yu D, Li HL, Yang G, Cai H, Ma X, Lan Q, Gao YT, Jia W, Shu XO, Zheng W. Prospective study of blood metabolites associated with colorectal cancer risk. **Int J Cancer**. 2018 Aug 1;143(3):527-534
19. **Shu X**, Cai H, Xiang YB, Li H, Lipworth L, Miller NL, Zheng W, Shu XO, Hsi RS. Nephrolithiasis among middle aged and elderly urban Chinese: A report from prospective cohort studies in Shanghai. **J Endourol**. 2017 Dec;31(12):1327-1334
20. **Shu X**, Purdue MP, Ye Y, Tu H, Wood CG, Tannir NM, Wang Z, Albanes D, Gapstur SM, Stevens VL, Rothman N, Chanock, SJ, Wu X. Potential susceptibility loci identified for renal cell carcinoma by targeting obesity-related genes. **Cancer Epidemiol Biomarkers Prev**. 2017 Sep;26(9):1436-1442
21. Wang Q, **Shu X**, Dong Y, Zhou J, Teng R, Shen J, Chen Y, Dong M, Zhang W, Huang Y, Xie S, Wei Q, Zhao W, Chen W, Yuan X, Qi X, Wang L. Tumor and serum gamma-glutamyl transpeptidase, new prognostic and molecular interpretation of an old biomarker in gastric cancer. **Oncotarget**. 2017 May 30;8(22):36171-36184
22. Li R, Gu J, Heymach JV, **Shu X**, Zhao L, Han B, Ye Y, Roth J, Wu X. Hypoxia pathway genetic variants predict survival of non-small-cell lung cancer patients receiving platinum-based chemotherapy. **Carcinogenesis**. 2017 Apr 1;38(4):419-424
23. **Shu X**, Hildebrandt MA, Gu J, Tannir NM, Matin SF, Karam JA, Wood CG, Wu X. MicroRNA profiling in clear cell renal cell carcinoma tissues potentially links tumorigenesis and recurrence with obesity. **Br J Cancer**. 2017 Jan 3;116(1):77-84
24. **Shu X**, Ye Y, Gu J, He Y, Davis JW, Thompson TC, Logothetis CJ, Kim J, Wu X. Genetic variants of the Wnt signaling pathway as predictors of aggressive disease and reclassification in men with early stage prostate cancer on active surveillance. **Carcinogenesis**. 2016 Oct;37(10):965-71.
25. Daniel CR, **Shu X**, Ye Y, Gu J, Raju GS, Kopetz S, Wu X, Severe obesity prior to diagnosis limits survival in colorectal cancer patients evaluated at a large cancer centre. **Br J Cancer**. 2016 Jan 12;114(1):103-9
26. **Shu X**, Purdue MP, Ye Y, Wood CG, Chen M, Wang Z, Albanes D, Pu X, Huang M, Stevens VL, Diver WR, Gapstur SM, Virtamo J, Chow WH, Tannir NM, Dinney CP, Rothman N, Chanock SJ, Wu X. Multilevel-analysis identify a cis-expression quantitative trait locus associated with risk of renal cell carcinoma. **Oncotarget**. 2015 Feb 28;6(6):4097-109
27. Stewart DJ, Chang DW, Ye Y, Spitz M, Lu C, **Shu X**, Wampfler JA, Marks RS, Garces YI, Yang P, Wu X. Wnt signaling pathway pharmacogenetics in non-small cell lung cancer. **The pharmacogenomics J**. 2014; 14(6):509-522
28. **Shu X**, Lin J, Wood CG, Tannir NM and Wu X. Energy balance, polymorphisms in the mTOR pathway, and renal

cell carcinoma risk. **J Natl Cancer Inst.** 2013; 105(6):424-432

29. He Y, Han L, Li W, **Shu X**, Zhao C, He Y, Bi M, Li Y and Sun C. Effects of the calcium-sensing receptor A986S polymorphism on serum calcium and parathyroid hormone levels in healthy individuals: a meta-analysis. **Gene.** 2012; 491(2):110-115

#### **Peer Reviewed Publication Submitted and In Progress**

30. **Shu X**, Zheng W, et al. Genome-wide association meta-analysis identifies 31 novel susceptibility loci for breast cancer in the populations of East Asians and European ancestry. (In revision by **Nat Comm**)
31. Wang F, **Shu X**, Pal T, Berlin J, Nguyen SM, Zheng W, Bailey CE, Shu XO. Racial/Ethnic Disparities in Mortality Related to Access-to-Care for Major Cancers in the United States (Under review by **JNCI**)
32. Wu L, Yang Y, Guo X; Shu XO, Cai Q, **Shu X**, Li B, Tao R, Roobol MJ, Giles GG, Brenner H, John EM, Clements J, Grindedal EM, Park JY, Stanford JL, Kote-Jarai Z, Haiman CA, Eeles RA, Zheng W, PRACTICAL Consortia. An integrative multi-omics analysis to identify candidate DNA methylation biomarkers related to prostate cancer risk. (Under review by **Nature Comm**)
33. **Shu X**, Yu D, Shu XO, Zheng W, Blot W. Investigation of associations of glycemic load and index with lung cancer risk in the Southern Community Cohort Study. (Under review by **Am J Clin Nutr**)
34. Zhu J, **Shu X**, Guo X, Bao J, Milne R, Giles GG, Wu C, Du M, White E, Risch HA, Malats N, Duell EJ, Goodman PJ, Li D, Bracci P, Katzke V, Jacobs E, Neale R, Gallinger S, Van Den Eeden S, Arslan A, Canzian F, Kooperberg C, Wolpin B, Beane-Freeman L, Scelo G, Visvanathan K, Le Marchand L, Yu H, Petersen GM, Stolzenberg-Solomon R, Klein AP, Amundadottir LT, Cai Q, Long J, Shu XO, Zheng W, Wu L. Associations between genetically predicted blood protein biomarkers and pancreatic cancer risk. (Under review by co-authors)

#### **Edited Book Chapter**

1. Wu X, **Shu X**, Chow WH, Gu J. Renal Cell Carcinoma. Chapter 1. Epidemiology of Renal Cell Carcinoma. Renal Cell Carcinoma. Oxford University Press. ISBN: 9780199988136
2. Wu X, **Shu X**. Renal Cell Carcinoma - Molecular Features and Treatment Updates. Chapter 1. Epidemiology of Renal Cell Carcinoma. Springer Japan. ISBN: 978-4-431-55530-8

#### **Conference/Research Oral Presentation**

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| 12/2019 | Invited talk (upcoming). Department of Epidemiology and Population Health, Albert Einstein College of Medicine   |
| 11/2019 | Invited talk. Department of Epidemiology and Public Health, University of Maryland School of Medicine & Marlene and Stewart Greenebaum Cancer Center   |
| 10/2019 | Invited speaker for 2019 Vanderbilt Translational Research Forum. Title: "Identification of circulating protein biomarkers for colorectal cancer risk: A genetic instrument analysis"  |
| 09/2019 | Invited talk. Department of Preventive Medicine, University of Southern California.  |
| 09/2019 | Invited talk. Department of Epidemiology and Cancer Control, St. Jude Children's Research Hospital.  |
| 04/2019 | Invited speaker for AACR Annual Meeting 2019 in Atlanta, Georgia, minisymposium. Title: "Identification of circulating protein biomarkers for colorectal cancer risk: A genetic instrument analysis" ( <b>AACR MEG Scholar-in-Training Award</b> ) |



- 12/2018 The Molecular and Genetic Epidemiology of Cancer Meeting, Division of Epidemiology, Vanderbilt University Medical Center. Title: “Genome-wide association meta-analysis identifies 28 novel susceptibility loci of breast cancer”
- 05/2018 The American Urological Association Annual Meeting. Title: “Green tea intake and risk of incident kidney stones: A report from the Shanghai Men’s and Women’s Health Studies”
- 01/2018 The Molecular and Genetic Epidemiology of Cancer Meeting, Division of Epidemiology, Vanderbilt University Medical Center. Title: “Prospective Study of Blood Metabolites Associated with Colorectal and Pancreatic Cancer Risks”
- 11/2017 17th Annual Retreat for Cancer Research, Vanderbilt-Ingram Cancer Center. Title: “Prospective Study of Blood Metabolites Associated with Colorectal and Pancreatic Cancer Risks”
- 02/2017 The Molecular and Genetic Epidemiology of Cancer Meeting, Division of Epidemiology, Vanderbilt University Medical Center. Title: “Association between Insulin Resistance and Breast Cancer Risk: A Mendelian Randomization Analysis”

### **Conference Poster Presentation**

1. Huang S, **Shu X**, Ping J, Guo X, Wang J, Bauer JA, Long J, Wu J, Zheng W, Cai Q. *TBX1* functions as a potential oncogene in breast cancer. AACR Annual Meeting 2020
2. Zhu J, **Shu X**, Guo X, Liu D, Bao J, Milne R, Giles GG, Wu C, Du M, White E, Risch HA, Malats N, Duell EJ, Goodman PJ, Li D, Bracci P, Katzke V, Jacobs E, Neale RE, Gallinger S, Van Den Eeden S, Arslan A, Canzian F, Kooperberg C, Wolpin B, Beane-Freeman L, Scelo G, Visvanathan K, Haiman CA, Le Marchand L, Yu H, Petersen GM, Stolzenberg-Solomon R, Klein AP, Amundadottir LT, Cai Q, Long J, Shu XO, Zheng W, Wu L. Associations between genetically predicted blood protein biomarkers and pancreatic cancer risk. AACR Annual Meeting 2020
3. Shidal C, **Shu X**, Wang J, Wang S, Bauer JA, Guo X, Wu J, Shu XO, Cai Q. Functional genomic analyses of 21q22.3 locus identifies potential functional variants and YBEY gene for breast cancer risk. AACR Annual Meeting 2020
4. Wu L, Yang Y, Zhu J, Guo X, Shu XO, Cai Q, **Shu X**, Zheng W, Long J. Genetically predicted methylation biomarkers and pancreatic cancer risk: A methylome-wide association study in over 15,000 European descendants. American Society of Human Genetics (ASHG) Annual Meeting 2019
5. Edwards G, **Shu X**, Tan M, Idrees K, Bailey C. Assessing pancreatic cancer survival disparities using the National Cancer Database. Society of Surgical Oncology Annual Cancer Symposium 2019
6. Yang Y, Cai Q, Wu L, **Shu X**, Shu XO, Zheng W, Long J. Integrating genome, transcriptome and methylome data to identify novel genes for lung cancer: Data from over 50,000 European participants. AACR Annual Meeting 2019
7. Jia G, **Shu X**, Shu XO, Long J, Cai Q, Moysich KB, Goode EL, Sellers TA, Pharoah P, Zheng W on behalf of the Ovarian Cancer Association Consortium (OCAC). Genetically predicted concentration of circulating proteins and epithelial ovarian cancer risk. AACR Annual Meeting 2019
8. Ewing JK, Cabo JJ, **Shu X**, Shu XO, Tan M, Idrees K, Bailey C. Setting of care in colon cancer: which patients benefit the most from care at academic centers? Tennessee Chapter, American College of Surgeons 2018 Annual Meeting

9. **Shu X**, Shu XO, Rothman N, Yu D, Li H, Yang G, Cai H, Ma X, Lan Q, Gao YT, Jia W, Xiang YB, Zheng W. Prospective metabolomics study identifies potential novel blood metabolites associated with pancreatic cancer risk. Metabolomics Conference 2018
10. Kang CL, **Shu X**, Herrell SD, Miller N, Hsi R. Predictors of persistent opiate use after ureteroscopy. AUA Annual Meeting 2018
11. **Shu X**, Bao J, Wu L, Long J, Guo X, Michailidou K, Bolla MK, Wang Q, Dennis J, Shu XO, Simard J, Easton DF, Zheng W On behalf of the Breast Cancer Association Consortium (BCAC). Evaluation of associations between circulating proteins and breast cancer risk using genetic variants. AACR Annual Meeting 2018 (**AACR Scholar-in-Training Award**)
12. Yang Y, Cai Q, **Shu X**, Wu L, Li B, Guo X, Michailidou K, Bolla MK, Wang Q, Dennis J, Simard J, Easton DF, Zheng W, Long J On behalf of the Breast Cancer Association Consortium (BCAC). DNA methylation quantitative trait loci and breast cancer risk: data from nearly 230,000 women of European descent. AACR Annual Meeting 2018
13. Wu L, **Shu X**, Bao J, Guo X, the PRACTICAL, CRUK, BPC3, CAPS, PEGASUS consortia, Kote-Jarai Z, Haiman CA, Eeles RA, Zheng W. Genetically predicted blood protein biomarkers and prostate cancer risk: an analysis in over 140,000 European descendants. AACR Annual Meeting 2018
14. **Shu X**, Bao J, Wu L, Long J, Guo X, Michailidou K, Bolla MK, Wang Q, Dennis J, Shu XO, Simard J, Easton DF, Zheng W On behalf of the Breast Cancer Association Consortium (BCAC). Evaluation of associations between circulating proteins and breast cancer risk using genetic variants. 2018 Vanderbilt Ingram Cancer Center Annual Scientific Retreat (**Poster Presentation Award, 2<sup>nd</sup> place**)
15. **Shu X**, Wu L, Khankari NK, Michailidou K, Bolla MK, Wang Q, Dennis J, Shu XO, Simard J, Easton DF, Zheng W On behalf of the Breast Cancer Association Consortium (BCAC). Association between insulin resistance and breast cancer risk: A Mendelian randomization analysis of data from 228,000 women of European descent. AACR Annual Meeting 2017 (**AACR Scholar-in-Training Award**)
16. **Shu X**, Wu L, Khankari NK, Michailidou K, Bolla MK, Wang Q, Dennis J, Shu XO, Simard J, Easton DF, Zheng W On behalf of the Breast Cancer Association Consortium (BCAC). Association between insulin resistance and breast cancer risk: A Mendelian randomization analysis of data from 228,000 women of European descent. 2017 Vanderbilt Ingram Cancer Center Annual Scientific Retreat
17. **Shu X**, Wu L, Khankari NK, Michailidou K, Bolla MK, Wang Q, Dennis J, Shu XO, Simard J, Easton DF, Zheng W On behalf of the Breast Cancer Association Consortium (BCAC). Association between insulin resistance and breast cancer risk: A Mendelian randomization analysis of data from 228,000 women of European descent. 2017 Meharry Medical College-Vanderbilt-Ingram Comprehensive Cancer Center-Tennessee State University Partnership 16th Annual Retreat and Mini-Symposium
18. **Shu X**, Hildebrandt MA, Borges dos Reis R, Ye Y, Gu J, Wood CG, Wu X. Urinary miRNAs as predictors of tumor metastasis in localized patients with clear cell renal cell carcinoma: a pilot study. AACR Annual Meeting 2016

19. **Shu X**, Hildebrandt MA, Gu J, Tannir NM, Matin S, Karam JA, Wood CG, Wu X. MicroRNA expression links obesity and recurrence in renal cell carcinoma. AACR Annual Meeting 2015
20. Daniel CR, **Shu X**, Ye Y, Gu J, Raju GS, Kopetz S, Wu X. Severe obesity and colorectal cancer patient survival. AACR Annual Meeting 2015
21. **Shu X**, Hildebrandt MA, Gu J, Tannir NM, Matin S, Karam JA, Wood CG, Wu X. MicroRNA expression links obesity and recurrence in renal cell carcinoma. 2015 Trainee Research Day, UT MD Anderson Cancer Center
22. **Shu X**, Lu C, Chang JY, Roth JA, Wu X. Genetic Variations in apoptosis pathway are associated with survival in late stage non-small cell lung cancer. AACR Annual Meeting 2013
23. **Shu X**, Lu C, Chang JY, Roth JA, Wu X. Genetic Variations in apoptosis pathway are associated with survival in late stage non-small cell lung cancer. 2013 Trainee Research Day, UT MD Anderson Cancer Center.
24. **Shu X**, Chen M, Ye Y, Huang M, Gu J, Wood CG, Wu X. Gene set enrichment analysis of renal cell carcinoma genome-wide association data identifies the JAK-STAT pathway mediating susceptibility. 11th Annual AACR International Conference on Frontiers in Cancer Prevention Research 2012
25. Lin J, **Shu X**, Kamat A, Hawk ET, Dinney CP, Wu X. Interplay between dietary trace metal, energy balance, genes in DNA repair pathway and bladder cancer risk. AACR Annual Meeting 2012
26. **Shu X**, Lin J, Wood CG, Tannir NM, Wu X. Obesity, weight gain, physical activity and polymorphism in mTOR pathway and risk of renal cell carcinoma. AACR Annual Meeting 2012