

- Merged and analyzed large sets of data (~1 million), prepared reports and presentations on a weekly basis.
- Calculated and assigned pesticide exposure from California pesticide surveillance program to individual subjects by zip code and time of blood draw.
- Generated GIS figures displaying pesticide exposure levels in California by zip code using ArcGIS.
- Fit linear mixed models and conducted mediation analysis to analyze associations between pesticides, hormones, and birthweight.
- Generated forest plots to compare effects of different pesticides.

The Role of a Placental Hormone in the Relationship between Maternal First Trimester Body Mass Index and Birthweight in The Infant Development and Environment Study (TIDES)

University of Pittsburgh, *Research Assistant* (Advisor: Jennifer Adibi)

Apr 2019 – Dec 2019

- Conducted a narrative literature review for the topic
- Performed data management, data visualization, and version control for datasets, delivered weekly results presentation.
- Implemented missing data imputation using Multiple Imputation by Chained Equations (MICE) method.
- Generated pilot results and calculated statistical power for grants
- Built multiple linear regression models to estimate associations between maternal BMI and birthweight, wrote R programs to generate reproducible results, summarized results for paper publishing
- Conducted mediation analysis using 4-way decomposition method to estimate the effect of hormone as a potential mediator in the association between maternal BMI and birthweight
- Presented this project on The Society for Pediatric and Perinatal Epidemiologic Research (SPER)

The Association Between Telomere Length and Risk of Breast Cancer in Singapore Chinese Health Study

University of Pittsburgh Cancer Institute,

Jan 2017 - Apr 2018

Research Assistant (Advisor: Jian-Min Yuan)

- Performed literature review and developed proposal for this project.
- Data cleaning and missing data handling.
- Built Cox regression proportional hazard models for the risk factors.
- Published one paper as the second author.

LEADERSHIP EXPERIENCE

Teaching Assistant of Epidemiological Basis Disease Control

Aug 2019 - Dec 2019

- Designed assignments and led the recitations for graduate students.
- Gave a lecture about newborn hearing loss screening.
- Assessed student assignments, class participation, and final presentation.
- Assisted students with coursework questions.

SKILLS

Software: R, SAS, STATA, SPSS, ArcGIS, Tableau

PUBLICATIONS

- Adibi, J. J., **Xun, X.**, Zhao, Y., Yin, Q., LeWinn, K., Bush, N. R., ... & Koistinen, H. (2021). Second-Trimester Placental and Thyroid Hormones Are Associated With Cognitive Development From Ages 1 to 3 Years. *Journal of the Endocrine Society*, 5(5), bvab027.
- Adibi, J. J., Layden, A. J., Yin, Q., **Xun, X.**, Peddada, S., & Birru, R. (2021). A toolkit for the application of placental-fetal molecular biomarkers in epidemiologic studies of the fetal origins of chronic disease. *Current Epidemiology Reports*, 8(1), 20-31.
- Yin, Q., **Xun, X.**, Peddada, S. D., & Adibi, J. J. (2021). Shape Detection Using Semi-Parametric Shape-Restricted Mixed Effects Regression Spline with Applications. *Sankhya B*, 83(1), 65-85.
- Adibi, J. J., Layden, A. J., Birru, R. L., Miragaia, A., **Xun, X.**, Smith, M. C., ... & Mitchell, R. T. (2021). First trimester mechanisms of gestational sac placental and foetal teratogenicity: a framework for birth cohort studies. *Human Reproduction Update*.
- Samavat, H., **Xun, X.**, Jin, A., Wang, R., Koh, W. P., & Yuan, J. M. (2019). Association between prediagnostic leukocyte telomere length and breast cancer risk: the Singapore Chinese Health Study. *Breast Cancer Research*, 21(1), 50.
- Patterson, P. D., Weaver, M. D., Fabio, A., Teasley, E. M., Renn, M. L., Curtis, B. R., ... & Higgins, J. S. (2018). Reliability and validity of survey instruments to measure work-related fatigue in the emergency medical services setting: a systematic review. *Prehospital Emergency Care*, 22(sup1), 17-27.
- Patterson, P. D., Runyon, M. S., Higgins, J. S., Weaver, M. D., Teasley, E. M., Kroemer, A. J., **Xun, X.** & Bizhanova, Z. (2018). Shorter Versus Longer Shift Durations to Mitigate Fatigue and Fatigue-Related Risks in Emergency Medical Services Personnel and Related Shift Workers: A Systematic Review. *Prehospital Emergency Care*, 22(sup1), 28-36
- Xie, X., Shi, X., **Xun, X.**, & Rao, L. (2017). Endothelial nitric oxide synthase gene single nucleotide polymorphisms and the risk of hypertension: a meta-analysis involving 63,258 subjects. *Clinical and experimental hypertension*, 39(2), 175-182.
- Xie, X., Shi, X., **Xun, X.**, & Rao, L. (2016). Associations of NKX2-5 genetic polymorphisms with the risk of congenital heart disease: a meta-analysis. *Pediatric cardiology*, 37(5), 953-961.
- **Xun Xiaoshuang**, Zhai Xinyi, Wang Han, et al. The effect of *Lactobacillus casei* N1115 on the proliferation of human colon cancer LoVo cells[J]. Preventive Medicine Tribune, 2016, 2: 002.

PRESENTATIONS

- **Xun, X.**, Wang, R., Yuan, J. M. The association between telomere length and risk of breast cancer in Singapore Chinese Health Study. Poster presented at: University of Pittsburgh Dean's Day; 2018 Apr; Pittsburgh, PA.
- **Xun, X.**, Peddada, S., Yin, Q., Swan, S. H., Barrett, E., Bush, N., Sathyanarayana, S., Adibi, J. J. The role of placental human chorionic gonadotropin in the relationship between maternal first trimester body mass index and birthweight. Poster presented at: Society for Pediatric and Perinatal Epidemiologic Research; 2019 June; Minneapolis, Minnesota.
- **Xun, X.**, Impact of Prenatal Phthalate Exposure on Anogenital Distance. Presented at: Society for Epidemiologic Research Dissertation Workshop; 2021 June; Via Zoom.

MANUSCRIPT REVIEW

Dates: 2018, 2021

Journal: Environmental Health Perspectives

MEMBERSHIP in PROFESSIONAL and SCIENTIFIC SOCIETIES

2019 – Present

Member, Society for Epidemiologic Research

2019

Member, Society for Pediatric and Perinatal Epidemiologic Research