

# MAIYING KONG

## Curriculum Vitae

### CONTACT INFORMATION

Department of Bioinformatics and Biostatistics  
School of Public Health and Information Sciences, Room 138  
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### EDUCATION

- Ph.D.** Statistics, Indiana University – Bloomington (IUB), Indiana, USA, August, 2004  
Dissertation: *Nonparametric Statistical Techniques in Bioassay*.  
Advisor: Professor Rabi Bhattacharya.
- M.Sc.** Computational Mathematics, Xi'an Jiaotong University, Shaanxi, China, July, 1993
- B.Sc.** Computational Mathematics, Xi'an Jiaotong University, Shaanxi, China, July, 1990

### PROFESSIONAL EXPERIENCE

**Professor** July 2019--, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville.

**Wendell  
Cherry Chair  
in Clinical  
Trial  
Research** July 2023--, University of Louisville, Louisville, Kentucky

<b>Director</b>	July 2023--, Biostatistics Shared Facility, James Graham Brown Cancer Center, School of Medicine, University of Louisville.
<b>Associate Member</b>	July 2006 --, James Graham Brown Cancer Center, School of Medicine, University of Louisville.
<b>Associate Professor</b>	July 2012 – June 2019, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville.
<b>Associate Member</b>	May 2018 -- June 2023, Department of Pediatrics, School of Medicine, University of Louisville.
<b>Assistant Professor</b>	July 2006 -- June 2012, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville.
<b>Postdoctoral Fellow</b>	Sept. 2004 -- July 2006, Department of Biostatistics, University of Texas M. D. Anderson Cancer Center, Houston, Texas.
<b>Graduate Assistant</b>	Sept 1999 -- Aug 2004, Department of Mathematics, Indiana University at Bloomington, Bloomington, Indiana.
<b>Instructor</b>	Sept 1993 -- May 1998, Department of Computational Mathematics, Xi'an Jiaotong University, Shaanxi, China.

## RESEARCH INTERESTS

One of my current research interests is to study and develop appropriate statistical methods to compare effectiveness of different treatments and procedures based on observational data such as Medicaid data and electronic health record data. My other current research interest is to study and develop statistical methods for clinical trials and high dimensional data such as mass spectrometry data, and link them with clinical outcomes. My previous experience and expertise includes longitudinal data analysis, mixed effect models, generalized linear models, smoothing splines, high dimensional data analyses, modeling count data, pre-clinical studies, assessing drug interactions, and assessing drug activity in xenograft models.

## HONORS

2023	Elected Member of the International Statistical Institute (ISI)
2016-Present	Commonwealth Scholar, Commonwealth Institute of Kentucky, University of Louisville.
2014-Present	Associate Editor for Journal of Statistical Computation and Simulation
2006	Trainee Excellence Award, M. D. Anderson Alumni & Faculty Association

2003 – 2004 Starr Fellowship, International Program, Indiana University  
2002 Wm. B. Wilcox Mathematics Award, Indiana University  
2000 Grad Student Travel Award, Mathematics Department, Indiana University

## **PROFESSIONAL ASSOCIATION**

1. American Statistical Association (ASA) since 2001
2. Eastern North American Region of the Biometric Society (ENAR) since 2004
3. International Chinese Statistical Association (ICSA) since 2010
4. American Association of Cancer Research (AACR) 2008-2009

## **TEACHING AND MENTORING ACTIVITIES**

### **Courses taught at University of Louisville during Fall 2006- Spring 2023**

PHST 680: Biostatistics Methods I (Fall 2006, fall 2020)

PHST 781: Advanced Linear Models (Fall 2007-2015, 2022)

PHST 782: Generalized Linear Models (Spring 2007-2012, 2014, 2016, 2018, 2020, 2022)

PHST 704: Mixed Effect Models and Longitudinal Data Analysis (Summer 2009, 2011; Spring 2013)

PHST 710: Advanced Computing I (Fall 2014-2023)

PHST 751: High Throughput Data Analysis (Spring 2015, 2017, 2019, 2021, 2023)

PHST 602: Biostatistics-Decision Science Seminar (Spring 2007, 2011, 2012)

PHST 703: BIOSTAT CONSULTING PRACT (Summer 2015-18, 2020-2023)

PHST 671: Special Topics in Biostatistics and Decision Science-Longitudinal Data Analysis (Summer 2007)

PHDA 666: Master's Thesis Research (Fall 2007-Fall 2012, Spring 2014, 2021)

PHDA 603: Biostatistics-Decision Science Public Health Practicum I (Fall 2007, 2013; Spring 2010, 2011)

PHST 675: Independent Study in different topic in Biostatistics (Summer 2008, 2011; Spring 2014, 2016, 2018, 2023)

PHEP 778: Independent Study in Read & Research in Epidemiology (Summer 2011)

### **Teaching Activities At Indiana University Bloomington**

Finite Mathematics Summer 2004

### **Advising Activities as a Primary Advisor for MS students**

1. Ming Wang (co-advised with Dr. Somnath Datta), MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2008. Thesis title “Clustered longitudinal data analysis”. A different version was published in *Statistical Methods in Medical Research*.
2. Lin Sun, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2010. Thesis title “Comparisons of different statistical methods for analyzing longitudinal data with missing observations”.
3. Hyejeong Jang, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in the spring 2011. Thesis title “Mixed-effects models for modeling cardiac functions and treatment effects”. A different version was published in *Computer Methods and Programs in Biomedicine*.
4. Lei Zhou, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Fall 2012. Thesis title “*Application of linear mixed-effects models to crossover designs*”.
5. Sheng Xu (co-advised with Dr. Somnath Datta), MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Spring 2013. Thesis title “*Generalized estimating equation based zero-inflated models with application to examining the relationship between dental caries and fluoride exposures*”. A different version was published in *Computational Statistics and Data Analysis*.
6. Kristopher Cody Gardner, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Spring 2014. Thesis title “*Statistical methods for assessing treatment effects for observational studies*”.
7. John Craycroft, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Spring 2016. Thesis title “*Propensity score methods: a simulation and case study involving breast cancer patients*”.
8. Onajia Josiah Stubblefield, MS in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Summer 2021. Thesis title “*Predictive modeling of clinical outcomes for hospitalized COVID-19 patients utilizing CyTOF and clinical data*”

### **Advising Activities as a Primary Advisor for Ph.D. students**

1. Yubing Wan (co-advised with Dr. Susmita Datta), Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Summer 2014. Dissertation title: “*Penalized regressions for variable selection model, single index model and an analysis of mass spectrometry data*”.
2. Younathan Abdia (co-advised with Dr. Somnath Datta & Dr. K.B. Kulasekera), Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Summer 2016. Dissertation title: “*Propensity score based methods for estimating the treatment effects based on observational studies*”.

3. You Wu (co-advised with Dr. Susmita Datta), Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, summer 2017. Dissertation title: *"Bayesian approach on short time-course data of protein phosphorylation, casual inference for ordinal outcome and causal analysis of dietary and physical activity in T2DM using NHANES data"*.
4. Soutik Ghosal, Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, Graduated in summer 2018. Dissertation title: *"Generalized spatiotemporal modeling and causal inference for assessing treatment effects for multiple groups for ordinal outcome."*
5. Xiaofang Yan, Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in December 2019. Dissertation title: *"Statistical methods for estimating and testing treatment effect for multiple treatment groups in observational studies"*.
6. John A Craycroft, Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in December 2020. Dissertation title: *"Aspects of causal inference"*.
7. Jingchao Sun (co-advised with Dr. Subhadip Pal), Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in December 2020. Dissertation title: *"Modied-Half-Normal distribution and different methods to estimate average treatment effect"*.
8. Indranil Ghosh, Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in December 2021. Dissertation title: *"Estimating Treatment Effect on Medical Cost and Examining Medical Cost Trajectory using Splines and Change-point Techniques"*.
9. Qian Xu, Ph.D. Ph.D in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in May 2022. Dissertation title: *"Statistical methods for assessing drug interactions and identifying effect modifiers using observational data."*
10. Sudaraka Tholkage (co-advising with Dr. KB Kulasekera and Qi Zheng), Ph.D. in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in July 2022. Dissertation title: *"Statistical methods for personalized treatment selection and survival data analysis based on observational data with high-dimensional covariates."*
11. Triparna Poddar, Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in December 2023.
12. Huirong Hu (co-advisor with Riten Mitra), Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2023.
13. Yuchen Han (co-advisor with Riten Mitra), Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2024.
14. Mst Sharmin Akter Sumy, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2025.
15. Stanley Kotey, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2025.

#### **Thesis/Dissertation Committees for Ph.D. students**

1. Ling Lan, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2008. Role: Dissertation committee member.
2. Ashok Krishnamurthy, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2009. Role: Dissertation committee member.
3. Jieru Xie, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2009. Role: Dissertation committee member.
4. Jie Fan, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2010. Role: Dissertation committee member.
5. Farida Mostajabi, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2011. Role: Dissertation committee member.
6. Nicole Ferguson, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2011. Role: Dissertation committee member.
7. Herman Ray, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2011. Role: Dissertation committee member.
8. Juliet Ndukum, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2011. Role: Dissertation committee member.
9. N. Brennan O'Banion, Ph.D. student in the Department of Epidemiology and Population Health, University of Louisville. Role: Evaluator of the candidate's qualifying examination in Summer 2010.
10. Sutirtha Chakraborty, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. graduated in summer 2013. Role: Dissertation committee member.
11. Dimple Patel, Ph.D. student in the Department of Epidemiology and Population Health, University of Louisville. Role: Evaluator of the candidate's qualifying examination in Summer 2011, and served as dissertation committee member.
12. Hyoyoung Choo-Wosoba, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Spring 2016. Role: Dissertation committee member.
13. Dake Yang, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Spring 2016. Role: Dissertation committee member.
14. Sarah Kendrick, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. December 2017. Role: Dissertation committee member.
15. Mike Sekula, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Expect to graduate in summer 2020. Role: Dissertation committee member.
16. Debamita Kundu, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2019. Role: Dissertation committee member.

17. Jamie Young, Ph.D. student in the Department of Pharmacology & Toxicology, University of Louisville. Graduated in December 2020. Role: Dissertation committee member.
18. Mary Elizabeth Gregg, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2020. Role: Dissertation committee member.
19. Md Nazir Uddin, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2021. Role: Dissertation committee member.
20. Ulf Hognas, Ph.D. student in Mathematics, Department of Mathematics, University of Louisville. Graduated in December 2021. Role: Dissertation committee member.
21. Siddhesh Kulkarni, Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2022. Role: Dissertation committee member.
22. Sagnik K. Bhadury, Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduate in December 2022. Role: Dissertation committee member.
23. Uthpala Wanigasekara, Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduate in August 2023. Role: Dissertation committee member.
24. Brian McRoberts, Ph.D. Candidate in Health Management, Department of Health Management & Systems Sciences, University of Louisville. Role: Dissertation committee member.
25. Shaminul Shakib, Ph.D. Candidate in Health Management, Department of Health Management & Systems Sciences, University of Louisville. Role: Dissertation committee member.

#### **Thesis Committees for MS students**

1. Jie Fan, MS student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2007. Role: Thesis committee member.
2. Kindra K Noe, MS student in the Department of Neurology, University of Louisville, graduated in summer 2009. Role: Thesis committee member, and mentored her with statistical analysis.
3. Gina Richardson, MS student in the Department of Epidemiology and Population Health, University of Louisville, graduated in summer 2010. Role: Thesis committee member, and mentored her with statistical analysis.
4. Xiaohong Li, MS student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2010. Role: Thesis committee member.
5. Chengxi Li, MS student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in summer 2010. Role: Thesis committee member.
6. Shekufe Akhter, MS student in the Department of Epidemiology and Population Health, University of Louisville, summer 2014. Role: Thesis committee member.
7. Sarah Alver, MS student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, graduated in fall 2015. Role: Thesis committee member.
8. Steinmetz, Emily Kathleen, MS student in the Department of Epidemiology and Population Health, University of Louisville, summer 2017. Role: Thesis committee member.

## RESEARCH FUNDING

### Funding Received

- Grant Title:** Different services for patients diagnosed with alcohol use disorder: telehealth, certified peer support services, and targeted case management.  
Funding Agency: KY Medicaid and University of Louisville SPHIS  
Grant Number: ON2 746 2300003442 (C4379)  
Role: Principal-Investigator (20% FTE).  
Duration: 7/1/2023-6/30/2024  
Total cost: \$374,160
- Grant Title:** The Impact of CHFS Programs on Cancer Screening in the Rural and Underserved Medicaid Populations.  
Funding Agency: KY Medicaid and University of Louisville SPHIS  
Role: Co-Investigator (10% FTE).  
Duration: 7/1/2023-6/30/2024
- Grant Title:** The Oral Periodontal Pathogens and Checkpoint Blockade in NSCLC  
Funding agency: DEPARTMENT OF THE ARMY  
Grant Number: LC220290 (PI: Qingsheng Li.)  
Role: Co-I (1% FTE)  
Duration: (Recommended for funding)
- Grant Title:** University of Louisville Center for Integrative Environmental Health Sciences  
Funding agency: National Institute of Environmental Health Sciences  
Grant Number: P30 ES030283 (PI: J.C. States)  
Role: Co-Director for Biostatistics and Informatics Facility Core (10% FTE)  
Duration: 7/15/2020-3/31/2025
- Grant Title:** Disparities along the care continuum for rural cancer patients  
Funding agency: American Cancer Society  
Grant Number: CSDG-22-125-01-HOPS (PI: M. Egger)  
Total direct costs: \$540,000  
Role: Co-Investigator (5% FTE +100% for a Ph.D student)  
Duration: 1/1/2023-12/31/2026
- Grant Title:** Low Density Neutrophils Link Inflammation and Coagulopathy in COVID-19  
Grant Number: R01HL158779 (PIs: J. Yan, J. Huang, S.M. Uriarte)  
Funding Agency: National Heart, Lung, and Blood Institute  
Role: Co-Investigator (5% FTE + 50% for a Ph.D. student)  
Duration: 9/2022-8/2026  
Total Direct Costs: \$ 2,442,897



7. **Grant Title:** Neutrophil Heterogeneity and Immunopathogenesis of COVID-19 ARDS  
 Grant Number: R01 AI172873 (PIs: J. Yan, J. Huang, S.M. Uriarte)  
 Funding Agency: National Institute of Allergy and Infectious Diseases  
 Role: Co-Investigator (1% FTE)  
 Duration: 1/1/2023-12/31/2027  
 Level of Funding: \$ 3,811,935
  
8. **Grant Title:** Determine the molecular and metabolic mechanisms by which A-FABP links dysregulated lipid metabolism-induced obesity/breast cancer risk  
 Funding Agency: National Cancer Institute  
 Grant Number: 1U01CA272424-01 to University of Iowa (PI: B. Li)  
 Role: Subcontract PI (5%)  
 Duration: 08/1/2022 – 07/31/2027  
 Total Award Amount (including Indirect Costs): \$1,178,523
  
9. **Grant Title:** COVID Effects on Experimental Alcohol-Associated Liver Disease and the Impact of Novel Nutritional Interventions  
 Grant Number: 3P20GM113226-07S2 (PI: CJ McClain)  
 Role: Co-Investigator (5%)  
 Duration: 09/2022 - 08/2023  
 Total Award Amount (including Indirect Costs): \$939,000
  
10. **Grant Title:** Immunomodulatory mechanisms of E-FABP in psoriasis pathogenesis  
 Funding Agency: National Institute of Allergy and Infectious Diseases  
 Grant Number: R01AI137324 to University of Iowa (PI: B Li)  
 Grant ID: OGMB220100  
 Role: Subcontract PI (5%)  
 Duration: 09/1/2021 – 08/31/2023  
 Total Budget: \$16,088.00 per year  
 Direct cost per year \$250,185
  
11. **Grant Title:** Cell Survival Advantage in Cadmium Induced Carcinogenesis  
 Funding Agency: National Institute of Environmental Health Sciences  
 Grant Number: 1R01ES030019-01A1 to TAMU (PI: Chendil Damodaran)  
 Role: Subcontract PI (5%)  
 Period: 05/01/2020-4/30/2024  
 The goal of this application is to investigate the underlying mechanism of how Cadmium (Cd) causes malignant cell transformation (from normal to transformed cells) and how transformed to tumorigenesis (transformed cells to tumorigenesis).  
 Total Budget: \$ 39,173
  
12. **Grant Title:** Alcohol Use Disorder: Its Risk Factors, Comorbidity, and Long-term Care Cost.  
 Funding Agency: KY Medicaid and University of Louisville SPHIS  
 Role: Principal Investigator (Co-PI: KB Kulasekera).

Percentage effort: 15%  
Period: 07/01/2020-6/30/2022  
Total budget: \$676,198

13. **Grant Title:** Disparities in cancer screening using cancer registry data: KY Medicaid and University of Louisville SPHIS  
Role: Principal Investigator (M. Egger).  
Percentage effort: 5%  
Period: 07/01/2020-6/30/2022
14. **Grant Title:** Point of care ultrasound (POCUS) for recovered COVID-19 patients.  
Funding Agency: Gilead company  
Role: Advisory committee member (PI: J. Huang).  
Percentage effort: 0% (\$5000 support for a student)  
Period: 1/01/2021-12/30/2021  
Total budget: \$70,000
15. **Grant Title:** Hybrid breath analysis: Computer assisted image processing system for Early Assessment of Lung nodule malignancy  
Funding Agency: National Institutes of Health  
Role: Co-Investigator (5%; PI: A. S. El-Baz)  
Percentage effort: 5%  
Duration: 6/1/19-5/31/22
16. **Grant Title:** A wearable sensor system for hand hygiene compliance tracking  
Funding Agency: National Institutes of Health  
Grant Number: 1R44AG060848-01  
Role: Principal Investigator for subcontract (PI: P. Liu)  
Percent Effort: 5% FTE and 50% student support for second year  
Duration: 09/30/2019 – 08/30/2022
17. **Grant Title:** Improving Care Quality for Children enrolled in KY Medicaid. Kentucky Medicaid and UofL CAHRDS unit in the Department of Pediatrics  
Role: Co-Investigator (20%; PI: D. W. Davis)  
Duration: 07/1/2018 – 6/30/2022
18. **Grant Title:** Big data in acute renal rejection  
Funding Agency: National Institutes of Health  
Grant Number: 1R15AI135924-01A1  
Role: Co-Investigator (5%; PI: A. S. El-Baz)  
Duration: 05/10/2018 – 04/30/2021  
Total budget: \$1,363,944.
19. **Grant Title:** Protection of ischemic myocardium.  
Funding Agency: National Institutes of Health  
Grant Number: P01HL078825-11 Rev.

Role: Co-Investigator (10%; PI: R. Bolli)  
Duration: 9/1/2017 – 8/30/2022  
Total budget: \$13,754,678

20. **Grant Title:** Role of Gut Microbiome and DHA Deficiency in Alcohol Induced Neuroinflammation  
Funding Agency: National Institutes of Health  
Grant Number: 1U01AA022618-01A1  
Role: Co-Investigator (5%; PI: S. Barve)  
Duration: 8/15/2016 – 7/31/2021  
Total Cost: \$1,687,500
21. **Grant Title:** Kentucky LEADS (Lung Cancer, Education, Awareness, Detection, Survivorship) Collaborative.  
Funding Agency: Bristol-Myers Squibb Foundation's Bridging Cancer Care™ initiative  
Role: Co-Investigator (5%; PI: C. Sorrell and G. Kloecker).  
Duration: 1/1/2015 – 8/31/2018
22. **Grant Title:** Reversing MDSC-mediated immunosuppression by Beta-glucan treatment  
Funding Agency: American Cancer Society  
Role: Co-Investigator (5%; PI: C. Ding)  
Duration: 1/1/2015 – 12/30/2018
23. **Grant Title:** Identification of Proteins from Mass Spectrometry Data: A Statistical Approach  
Funding Agency: National Cancer Institute  
Grant Number: 1R15CA170091-01A1  
Role: Principle-Investigator (20%)  
Duration: 03/04/2015 – 02/28/2017
24. **Grant Title:** Improving acute SCI assessment with Cine MRI and epidural electrophysiology.  
Funding Agency: PVA Research Foundation  
Role: Co-Investigator (5%; PI: M. Boakye)  
Duration: 1/1/2015 – 12/31/2016
25. **Grant Title:** MicroRNAs as Biomarkers for Tobacco Exposure and Heart Disease  
Funding Agency: National Institutes of Health  
Grant Number: 1R21HL120050-01A1  
Role: Co-Investigator (5%; PI: Y. Li)  
Duration: 06/01/14-05/31/15
26. **GE Appliance Park.** GE Industrial Athlete Program.  
Role: Principle Investigator (15%)  
Duration: 1/1/2014-12/31/2014

27. **Grant Title:** Novel Treatments of Acrolein-induced Cardiotoxicity  
 Funding Agency: National Institutes of Health (NIH: R21)  
 Role: Co-Investigator (10%; PI: D. Conklin)  
 Duration: 9/1/2013-8/31/2015
  
28. **Grant Title:** *Consortium for preclinical assessment of cardioprotective therapies (CAESAR).*  
 Funding Agency: National Institutes of Health/ National Heart Lung and Blood Institute  
 Grant Number: U24 HL094373.  
 Role: Director of the Biostatistics Core (7% first year and 20% thereafter; PI: Roberto Bolli)  
 Duration: 8/1/2010-7/31/2015 (\$9,560,000)
  
29. **Grant Title:** *Protection of ischemic myocardium.* Grant number: P01 HL-78825-06.  
 Funding Agency: National Institutes of Health/ National Heart Lung and Blood Institute  
 Grant Number: P01 HL-78825-06  
 Role: Co-Investigator (10%; PI: R. Bolli)  
 Duration: 7/1/2011-6/31/2014 (\$12,800,000)
  
30. **Grant Title:** *Center of Excellence in Diabetes and Obesity Research*  
 Funding Agency: National Institutes of Health/ National Center for Research Resources  
 Grant Number: 1 P20 RR024489  
 Role: Biostatistician (20%; PI: A. Bhatnagar)  
 Duration: 8/1/2008-7/31/2013 (\$11,600,000)
  
31. **Grant Title:** Effects of diesel emissions on vascular Inflammation and thrombosis.  
 Funding Agency: Health Effects Institute / Advanced Collaborative Emissions Study.  
 Role: Co-Investigator (5%; PI: D.J. Conklin)  
 Duration: 2/1/2010-12/31/2012 (\$125,000)
  
32. **Grant Title:** *Longitudinal Prospective PSP Study*  
 Funding Agency: CurePSP: Foundation of Progressive Supranuclear Palsy  
 Grant number: IOIC070384Z01  
 Role: Statistician (4%; PI: I. Litvan)  
 Duration: 7/1/2007-6/30/2009 (\$100,000)
  
33. **Grant Title:** *Development of Statistical Analyses for Longitudinal Study*  
 Duration: University of Louisville Intramural Research Incentive Grants  
 Role: Principal Investigator  
 Period of funding: 7/1/2007-6/30/2008 (\$4400)

### **Student Support via Research Funds**

1. Huirong Hu and Yuchen Han are supported by Medicaid and CIK from 7/1/2020-6/30/2022.
2. Triparna Poddar is supported by Mike Egger and Dr. McClain 7/1/2021-6/30/2022
3. Sagnik K Bhadury is supported by Medicaid and CAHRDS from 9/1/2020-6/30/2022.

4. Qian Xu has been supported by CleanHand project, Point of care ultrasound (POCUS) for recovered COVID-19 patients” funded by Gilead company, and Dr. McClain from 7/1/2019-6/30/2022.
5. Indranil Ghosh is supported by Mike Egger 7/1/2019-6/30/2021 (year 1 100%FTE, year 2 50%FTE)
6. John Craycroft is supported by Craig McClain from 7/1/2020-12/30/2020
7. Chen Qian is supported by Dr. McClain from 7/1/2019-6/30/2020.
8. Debmitta was supported from my collaboration with G. McClain from 7/1/2018-6/30/2019
9. You Wu, supported by CEASAR study (U24 HL094373) from 7/1/2014-6/31/2015, and then by 1R15CA170091-01A1 (PI: M. Kong) from 7/1/2015-2/28/2017.
10. Yubing Wan, supported by CEASAR study (U24 HL094373) from 7/1/2012-6/31/2014.

### **Grants/Contracts Submitted/Under Review as Principal Investigator**

1. **Grant Title:** Disentangle the mutual impact of COVID-19 and alcohol use disorders: prevalence, comorbidity, treatment utilization and disparity, and post-COVID sequelae  
**Major Goals:** The goal of this application is to disentangle the mutual impact of COVID-19 and alcohol use disorder (AUD) in real-world healthcare settings, and to identify the barriers and disparities in the utilization of psychotherapy and telemedicine in patients with AUD.  
 Status of Support: Pending  
 Project Number: R21AA030876  
 Name of PD/PI: Kong, Maiying  
 Source of Support: NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM  
 Primary Place of Performance: University of Louisville  
 Total Award Amount (including Indirect Costs): \$355,143
2. **Grant Title:** Multifaceted impacts of socioeconomic and environmental factors on people’s health and the treatment disparities for patients with alcohol use disorders.  
 Funding Agency: Humana Hub  
 Role: Principal-Investigator.  
 Submission Date: May 2022 (Unfunded)
3. **Grant Title:** Impact of antecedent opioid/drug exposure on hospitalized COVID-19 patients.  
 Funding Agency: NIH R03  
 Role: Principal-Investigator.  
 Submission Date: Oct. 2020
4. **Grant Title:** Short and long-term outcomes for neonatal abstinence syndrome, and assessment of prenatal opioid exposure.  
 Funding Agency: CIK and KY Medicaid  
 Role: Principal-Investigator.  
 Submission Date: Feb. 2019 (Unfunded)

5. **Grant Title:** Interactions of toxic metals and nutritional essential metals on diabetes and kidney disease.  
Funding Agency: NIH/NIDDK (1R21DK119868-01)  
Role: Principal-Investigator  
Submission Date: Feb. 2018
6. **Grant Title:** Study prescription opioid patterns, identify prescription opioid inappropriate use, and examine the treatment effect of medication-assisted-therapies on opioid addiction and the severity of neonatal abstinence syndrome.  
Funding Agency: CIK and KY Medicaid  
Role: Principal-Investigator.  
Submission Date: Feb. 2018 (Unfunded)
7. **Grant Title:** Impact of Health Risk Behaviors on Cardiovascular Diseases  
Funding Agency: Jewish Heritage Fund for excellent  
Role: Principal-Investigator  
Submission Date: Sept. 2017 (Unfunded)
8. **Grant Title (LOI):** Use of National Society of Thoracic Surgeons Database to Study the Safety of Continuing Preoperative Medications Before Cardiac Surgery  
Funding Agency: The Anesthesia Patient Safety Foundation (APSF)  
Role: Principal-Investigator  
Submission Date: Feb. 2017 (Unfunded)
9. **Grant Title:** Develop Comparative Effectiveness Methods for Ordinal Outcomes  
Funding Agency: Patient-Centered Outcomes Research Institute (PCORI)  
Role: Principal-Investigator  
Submission Date: Feb 2017 (Unfunded)
10. **Grant Title:** Statistical Methods for Assessing Treatment Effects for Observational Studies  
Funding Agency: University of Louisville Intramural Research Incentive Grants  
Role: Principal-Investigator  
Submission Date: June 2014 (Unfunded)
11. **Grant Title:** Novel methods to assess preclinical anti-tumor drug activity and synergy  
Funding Agency: National Institutes of Health  
Role: Principal-Investigator  
Submission Date: June 2009 (Unfunded)
12. **Grant Title:** Statistical methods for assessing preclinical antitumor activity and drug interaction for combination therapy  
Funding Agency: National Institutes of Health  
Role: Principal-Investigator  
Submission Date: June 2008 (Unfunded)

## **Grants/Contracts Under Review/Submitted or Unfunded as Co-Investigator (see Appendix)**

## **SERVICE ACTIVITIES**

### **Services in Department of Bioinformatics and Biostatistics at U of L**

1. Faculty Search Committee member. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2023.
2. Co-chair, Faculty Search Committee. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2014, 2016.
3. Organizer, Decision Science and Biostatistics Seminar. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, KY, Spring 2011.
4. Member, MS and Ph.D. Admission Committee, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2007-present.
5. Member, PhD Comprehensive Examination Committee, Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY. Chair for the Linear Model Section (2008 to present); Generalized Linear Model Section (2008-2014), and Advanced Computational Statistics Section (2015- present).
6. Member, Faculty Search Committee. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2007-2013.
7. Member, Student Recruiting Committee. Department of Bioinformatics and Biostatistics. School of Public Health and Information Sciences. University of Louisville. Louisville, KY, 2006-2008.
8. Reviewer, Brown Cancer Center Clinical Protocols for statistics; and Statistics Consultant, assisted various investigators to design clinical trials in Brown Cancer Center. University of Louisville, Louisville, KY, 2006-2008.

### **Service to the School and University (at U of L)**

1. Elected Graduate Council member, University of Louisville, July 2022-present
2. Promotion Tenure Committee (PAT) Member, SPHIS, University of Louisville, Louisville, KY, July 2019-present; Acting chair in 2020.
3. Elected faculty member, the Decanal Committee, SPHIS, University of Louisville, Louisville, KY, 2018-2019.
4. Member, SPHIS Rules, Policies & Credentials Committee, University of Louisville, Louisville, KY, 2012-current.

5. Member, Selection Committee for President's Distinguished Faculty Awards, University of Louisville, Louisville, KY, April-May 2013
6. Member, SPHIS Community and Professional Service Committee. University of Louisville, Louisville, KY, 2007-2014.
7. Election Committee Member, for the Committee Members of Dean's Recruitment, 2012
8. Participator, Dare to Care. University of Louisville, Louisville, KY, 2007–current.
9. Judge, Research!Louisville at University of Louisville, Louisville, KY, Oct. 2006, Oct. 2008.

### **Statistical Society Leadership & Service**

1. Organized an invited session " New advancements in personalized medicine under complex regimens and high dimensional data " for WNAR 2023 (June 18-21, 2023), Anchorage, Alaska.
2. Organized a topic-contributed session "Statistical Methods for Causal Inference and Personalized Medicine based on Observational Data" for JSM 2021 (August 8-12, 2021)
3. Session Chair: CONTRIBUTED PAPERS: NETWORK ANALYSIS: CONNECTING THE DOTS, ENAR 2020 (online virtual).
4. Organized a Session “Statistical Methods for Causal Inference and Personalized Medicine based on Observational Data” for ICSA 2020 China Conference (June 26 – 29, 2020) (Cancelled).
5. Co-organized the short course on “Analysis of Big Healthcare Databases-Tutorials”, Kentucky Chapter of the ASA, Fall, 2020.
6. Co-organizer and host for SRCOS research meeting 2019, Butler State Park, Kentucky.
7. Treasurer, Kentucky Chapter of the American Statistical Association, Sept 2016-Oct, 2020.
8. Representative of U of L Department of Bioinformatics and Biostatistics in the Southern Region Council of Statistics (SRCOS) since 2016.
9. Organizer and host for SRCOS business meeting 2017 in the Department of Bioinformatics and Biostatistics at the University of Louisville. Oct. 6-7, 2017
10. Organizer, department involvement with high school regional science fair (Awards for Excellent Application of Statistics), and judged science projects. Louisville, KY, March 2011-2018
11. Member of Panel Discussion, KY-ASA Spring Meeting, Louisville, KY, April 21, 2017
12. Organizer, an invited session for 2015 ICSA China Statistics Conference: “Hypothesis tests, statistical inferences, and applications of semiparametric models”. Shanghai, China, July 6-7, 2015.
13. Organizer, JSM 2010 topic-contributed session “Statistical methods for assessing anti-tumor activity”. Vancouver, British Columbia, July 31–August 4, 2010.
14. Organizer, JSM 2010 topic-contributed session “New directions in marginal inferences for complex problems”. Vancouver, British Columbia, July 5–August 4, 2010.



15. Organizer, the 1<sup>st</sup> Joint Biostatistics Symposium invited session “New perspectives for analyzing bioassay data”. Beijing, China, July 17-18, 2010.

### **External Peer Reviewer for Promotion and Tenure**

1. External reviewer for promotion to Full Professor of faculty member at Kennesaw State University, 2020.
2. Internal reviewer for promotion to Associate Professor of faculty member at University of Louisville, 2016.
3. External reviewer for tenure and promotion to Associate Professor of faculty member in the Department of Public Health Sciences at the New Mexico State University, 2015.

### **Journal Reviewer**

1. Statistical Methods in Medical Research: SMM-17-0322, March 2018; SMM-19-0075, Feb. 2019.
2. Biostatistics: BOSTS-16255, October, 2016.
3. Nature Protocols: NP-P120285, June 2012.
4. Clinical Cancer Research: CCR-11-3215, Jan 2012; CCR-11-3215R, April 2012.
5. Electronic Journal of Statistics: EJS1203-021, March 2012.
6. Journal of Statistical Planning and Inference: JSPI-D-08-00240, June 2008.
7. Biometrics: #071044P, Sept 2007; #090224P, Feb 2009; #131031P, Nov 2013.
8. Statistics in Medicine: SIM-07-0247, May 2007; SIM-12-0379, Aug. 2012; SIM-14-0845, Nov. 2014; SIM-17-0352, July 2017; SIM-19-0412, June 2019; SIM-19-0633, Nov. 2019.
9. Statistics and Probability Letters: STAPRO-D-07-00145, July 2007; STAPRO-D-08-00002, January 2008; STAPRO-D-10-00386, Sept. 2010; STAPRO-D-12-00284, July 2012.
10. Journal of Biopharmaceutical Statistics: JBS080510, May 2008; LBPS-2011-0038, April 2011. LBPS-2012-0052; May 2012.
11. Statistics in Biopharmaceutical Research: SBR - MS08-028, Sept. 2009; SBR - MS11-022, August 2011; MS11-022R, Feb 2012.
12. Statistical Methodology: STAMET-D-08-00061, Aug. 2008.
13. Frontiers in Bioscience: #050108, May 2008
14. BMJ, BMJ.2014.024026
15. Emerging Markets Finance and Trade, EMFT-2019-0564, Oct. 2019.

## **PUBLICATIONS**

## Journal Articles (Peer-Reviewed)

1. Xu Q, Song K, Clifford SP, Kong M, Huang J (2023). Meta-analysis of Traditional Chinese Medicine Lianhua Qingwen in the Treatment of Coronavirus Disease 2019. *Journal of Anesthesia and Translational Medicine* (in press)
2. Xu Q, Antimisiaris D, **Kong M** (2023). Statistical methods for assessing drug interactions using observational data. *Journal of Applied Statistics* (in press), 1-26.  
<https://www.tandfonline.com/doi/abs/10.1080/02664763.2022.2123460?journalCode=cjas20>
3. Sun J, **Kong M** and Pal S (2023). The Modified-Half-Normal distribution: Properties and an efficient sampling scheme. *Communications in Statistics-Theory and Methods*, 52(5), pp.1591-1613.
4. Kulasekera KB, Tholkage S, **Kong M** (2022). Personalized treatment selection using observational data. *Journal of Applied Statistics*, 50(5), pp.1115-1127.
5. Yan X, Zheng Q, **Kong M** (2022). Weighted  $\chi^2$  tests for multiple group comparisons in observational studies. *Journal of Statistical Computation and Simulation*, 92(13), pp.2667-2685.
6. Hu H, Mitra R, Han Y, Pal S, Huang H, Vatsalya V, McClain J, Vatsalya V, Kulasekera KB, **Kong M** (2022). Prevalence and Treatment for Alcohol Use Disorders Based on Kentucky Medicaid 2012-2019 Datasets. *J Alcohol Drug Depend* 10(4).
7. Han Y, Huang H, Mitra R, Hu H, Pal S, McClain C, Kulasekera KB, **Kong M** (2022). Prevalence and Treatment Utilization of Patients Diagnosed with Depression and Anxiety Disorders Based on Kentucky Medicaid 2012-2019 Datasets. *J Dep Anxiety* 11:459.
8. Warner JB, Zirnheld KH, Hu H, Floyd A, **Kong M**, McClain CJ, Kirpich IA (2022). Analysis of alcohol use, consumption of micro-and macronutrients, and liver health in the 2017-2018 National Health and Nutrition Examination Survey. *Alcoholism: Clinical and Experimental Research* (in press). <https://doi.org/10.1111/acer.14944>
9. Le J, Jawad K, Feygin Y, Lohr WD, Creel L, Jones VF, Schultz KV, Stevenson MD, **Kong M**, Davis DW (2022). Examination of US national rates of emergency department visits and hospitalizations for depression and suicidal behaviors after the release of the 13 Reasons Why Netflix series by demographic characteristics. *Journal of Affective Disorders* 311:508-514.
10. Huang J, Xu Q, Liu Y, Cepulis D, Jerde A, Oppy L, Liu P, **Kong M** (2022). Hand Hygiene Behaviors Monitored by an Electronic System in the Intensive Care Unit. *American Journal of Infection Control* 50(7):S33.
11. Sagaram M, Parthasarathy R, Condon SL, Closson CF, **Kong M**, Schwandt ML, Jophlin LL, Feng W, Barve AJ, Vatsalya V (2022). Theragnostic efficacy of K18 response in alcohol use disorder with clinically significant fibrosis using gut-liver axis. *International Journal of Molecular Sciences* 23(10):5852.

12. Sagaram M, Royer AJ, Hu H, Rajhans A, Parthasarathy R, Krishnasamy SS, Mokshagundam SP, **Kong M**, Schwandt ML, Parajuli D, Cave MC. Illustration of gut–thyroid axis in alcohol use disorder: interplay of gut dysfunction, pro-inflammatory responses, and thyroid function. *Cells*. 2022 Oct 1;11(19):3100.
13. Vatsalya V, Parthasarathy R, Verster JC, Royer AC, Sagaram M, Zamani Z, Hu H, Schwandt ML, Leggio L, **Kong M**, Ramchandani VA. Illustration of a novel gut-brain axis of alcohol withdrawal, withdrawal-associated depression, craving and alcohol-severity index in alcohol use disorder patients. medRxiv. 2022 Jan 1.
14. Gibson JM, Chu T, Zeng W, Wethall AC, **Kong M**, Mellen N, Devlin Phinney LA, Cai J (2022). Perinatal methadone exposure attenuates myelination and induces oligodendrocyte apoptosis in neonatal rat brain. *Experimental Biology and Medicine (in press)* DOI: 10.1177/15353702221090457.
15. Furmanek S, Salunkhe V, Pahwa S, Samanapally H, Nathala P, Xu Q, Ali T, Deepti F, Glynn A, McGuffin T, Titus D, **Kong M**, Roser L, and Huang J (2022). Correlations of Before and After Event Echocardiographic Parameters with Troponin and BNP in Hospitalized COVID-19 Patients With Cardiovascular Events. **Journal of Cardiothoracic and Vascular Anesthesia**. 36(12):4553-5.
16. Xu Q, Liu Y, Cepulis D, Jerde A, Sheppard RA, Tretter K, Oppy L, Stevenson G, Bishop S, Clifford SP, Liu P, **Kong M**, Huang J (2022). Hand Hygiene Behaviours Monitored by an Electronic System in the Intensive Care Unit-A Prospective Observational Study. *Journal of Hospital Infection* 123:126-34.
17. Wattles BA, Jawad KS, Feygin YF, Stahl JD, Vidwan NK, Stevenson MD, **Kong M**, Smith MJ (2022). Quality of antibiotic prescribing to children through the coronavirus disease 2019 (COVID-19) pandemic. *Antimicrobial Stewardship & Healthcare Epidemiology* 2(1).
18. Wattles BA, Smith MJ, Feygin Y, Jawad KS, Bhadury S, Sun J, **Kong M**, Woods CR (2022). Recurrent Antibiotic Use in Kentucky Children With 6 Years of Continuous Medicaid Enrollment. *Journal of the Pediatric Infectious Diseases Society* (in press).
19. Wattles BA, Jawad KS, Feygin Y, **Kong M**, Vidwan NK, Stevenson MD, Smith MJ (2022). Inappropriate outpatient antibiotic use in children insured by Kentucky Medicaid. *Infection Control & Hospital Epidemiology* 43(5):582-8.
20. Chan AS, Chandler N, Dong B, Rios Perez CD, Xue R, Hu H, **Kong M**, Sharma VR (2022). Retrospective analysis of management and outcomes of patients with malignant biliary obstruction. *Journal of Clinical Oncology* 40:16\_suppl, e16266.
21. Zhao CB, Yu J, **Kong M**, Han J, Du H, Huang J (2022). Ketamine for Monitored Anesthesia Care During Transcatheter Aortic Valve Replacement. *Journal of PeriAnesthesia Nursing* 37(2):234-7.
22. Speer RM, Meaza I, Toyoda JH, Lu Y, Xu Q, Walter RB, **Kong M**, Lu H, Kouokam JC, Wise JP (2022). Particulate hexavalent chromium alters microRNAs in human lung cells that target key carcinogenic pathways. *Toxicology and Applied Toxicology* 438, p.115890.

23. Nathala P, Salunkhe V, Samanapally H, Xu Q, Furmanek S, Fahmy OF, Deepti F, Glynn A, McGuffin T, Goldsmith DC, Petrey J, **Kong M**, Huang J (2022). Electrocardiographic features and outcome correlations in 124 hospitalized COVID-19 patients with cardiovascular events. *Journal of Cardiothoracic and Vascular Anesthesia* Volume 36, Issue 8, Part B, August 2022, Pages 2927-2934.
24. Young JL, Cave MC, Xu Q, **Kong M**, Xu J, Lin Q, Tan Y, Cai L (2022). Whole life exposure to low dose cadmium alters diet-induced NAFLD. *Toxicology and Applied Pharmacology* 436, p.115855.
25. Clemons R, **Kong M**, Jawad K, Feygin Y, Caperell K (2021). The impact of converting a power plant from coal to natural gas on pediatric acute asthma. *Journal of Asthma* (in press) DOI: 10.1080/02770903.2021.2022159.
26. Wu Y, Datta S, Little BB, **Kong M** (2021). Magnesium dietary intake and physical activity in Type 2 diabetes by gender in White, African-American and Mexican American: NHANES 2011-2014 (2021). *Endocrinology, Diabetes & Metabolism* 4(1):e00203.
27. Xu Q, Samanapally H, Nathala P, Salunkhe V, Furmanek S, Cahill MN, McGuffin T, Mohammad T, Marsili B, Petrey J, Carrico R,..., **Kong M**, Huang J (2021). Outcomes and Risk Factors for Cardiovascular Events in Hospitalized COVID-19 Patients. *Journal of Cardiothoracic and Vascular Anesthesia* 35(12):3581-3593. (Co-corresponding author).
28. Xu Q, Liu Y, Cepulis D, Jerde A, Sheppard RA, Tretter K, Oppy L, Stevenson G, Bishop S, Clifford SP, Liu P, **Kong M**, Huang J (2021). Implementing an Electronic Hand Hygiene System Improved Compliance in the Intensive Care Unit. *American Journal of Infection Control* 49(12):1535-1542.
29. Morrissey SM, Zhang F, Ding C, Montoya-Durango DE,... **Kong M**,..., Yan J (2021). Tumor-derived exosomes drive immunosuppressive macrophages in a pre-metastatic niche through glycolytic dominant metabolic reprogramming. *Cell Metabolism*, 33(10):2040-58.
30. Morrissey SM, Geller AE, Hu X, Tieri D, Cooke EA, Ding C, Woeste M, Zhan HG, Cavallazi R, Clifford SP, Chen J, **Kong M**, Watson CT, Huang J, Yan J (2021). A specific low-density neutrophil population correlates with hypercoagulation and disease severity in hospitalized COVID-19 patients. *JCI Insight* 6(9).
31. Lin Q, Huang Z, Cai G, Fan X, Yan X, Liu Z, Zhao Z, Li J, Li J, Shi H, **Kong M**,... Tan Y (2021). Activating AMP-activated protein kinase mediates fibroblast growth factor 1 protection from nonalcoholic fatty liver disease in mice. *Hepatology* 73(6):2206-22.
32. Song K, Xu Q, Knott VH, Zhao CB, Clifford SP, **Kong M**, Slaughter MS, Huang Y, Huang J (2021). Liposomal bupivacaine-based erector spinae block for cardiac surgery. *Journal of Cardiothoracic and Vascular Anesthesia*. 35(5):1555-9.
33. Song K, Xu Q, Koenig HM, **Kong M**, Slaughter MS, Huang Y, Clifford SP, Huang J (2021). Validation of a novel NeurOs™ cerebral oximetry monitor against the INVOSTM monitor during cardiac surgery. *Journal of Cardiothoracic and Vascular Anesthesia* 35(7):2009-18.
34. Dekhil O, Shalaby A, Soliman A, Mahmoud A, **Kong M**, Barnes G, Elmaghraby A, El-Baz A (2021). Identifying brain areas correlated with ADOS raw scores by studying altered dynamic functional connectivity patterns. *Medical Image Analysis* 68:101899.

35. Saran U, Chandrasekaran B, Kolluru V, Tyagi A, Nguyen KD, Valadon CL, Shaheen SP, **Kong M**, Poddar T, Ankem MK, Damodaran C (2021). Diagnostic molecular markers predicting aggressive potential in low-grade prostate cancer. *Translational Research* 231:92-101.
36. Davis DW, Jawad K, Feygin Y, Creel L, **Kong M**, Sun J, Lohr WD, Williams PG, Le J, Jones VF, Trace M. Disparities in ADHD diagnosis and treatment by race/ethnicity in youth receiving Kentucky Medicaid in 2017 (2021). *Ethnicity & Disease* 31(1):67-76.
37. Vatsalya V, Gala KS, Hassan AZ, Frimodig J, **Kong M**, Sinha N, Schwandt ML (2021). Characterization of early-stage alcoholic liver disease with hyperhomocysteinemia and gut dysfunction and associated immune response in alcohol use disorder patients. *Biomedicines: Molecular and Translational Medicine* 9(1):7.
38. Vatsalya V, Li F, Frimodig J, Gala KS, Srivastava S, Kong M, Ramchandani VA, Feng W, Zhang X and McClain CJ (2021). Repurposing treatment of Wernicke–Korsakoff syndrome for Th-17 cell immune storm syndrome and neurological symptoms in COVID-19: thiamine efficacy and safety, in-vitro evidence and pharmacokinetic profile. *Frontiers in Pharmacology* 11, p.598128.
39. Wattles BA, Stahl JA, Jawad KS, Feygin Y, **Kong M**, Vidwan N, Stevenson MD, Smith MJ (2021). Appropriateness of antibiotic prescribing through the COVID-19 pandemic and associated telehealth visits. In *Open Forum Infectious Diseases* 2021 Nov (Vol. 8, No. Supplement\_1, pp. S653-S653). US: Oxford University Press.
40. Wattles B, Jawad K, Feygin Y, **Kong M**, Vidwan N, Stevenson M, Smith M (2021). Inappropriate outpatient antibiotic use in children insured by Kentucky Medicaid. *Infection Control & Hospital Epidemiology* 12:1-7. PMID: 33975663 DOI: 10.1017/ice.2021.177
41. Zhou B, Gentry A, Xu Q, Young JL, Yan X, Pagidas K, Yang Y, Watson WH, **Kong M**, Cai L, Freedman JH (2021). Effects of cadmium and high-fat diet on essential metal concentration in the mouse testis. *Toxicology Reports* 8:718-23.
42. Bottinor W, Kelsey N, Riley EC, Craycroft J, **Kong M**, Lenneman CG (2020). Using biomarkers to detect the temporal trend of subclinical cardiotoxicity in patients with breast cancer treated with anthracyclines and Her2+ antagonists. *European Journal of Cardiovascular Medicine (in press)*. DOI:10.5083/ejcm20424884.178
43. Ghosal S, Lau TS, Gaskins J, **Kong M** (2020). A hierarchical mixed effect hurdle model for spatiotemporal count data and its application to identifying factors impacting health professional shortages. *Journal of the Royal Statistical Society: Series C (Applied Statistics)* 69(5):1121-1144.
44. Craycroft J, Huang J, **Kong M** (2020). Propensity score specification for optimal estimation of average treatment effect with binary response. *Statistical Methods in Medical Research*, 29(12), pp.3623-3640. <https://doi.org/10.1177/0962280220934847>.
45. Vatsalya V, **Kong M**, Marsano LM, Kurlawala Z, Chandras KV, Schwandt ML, Ramchandani VA, McClain CJ (2020). Interaction of heavy drinking patterns and depression severity predicts efficacy of quetiapine fumarate XR in lowering alcohol intake in alcohol use disorder patients. *Substance Abuse: Research and Treatment* 14:1178221820955185.

46. Mazzocco JC, Jagadapillai R, Gozal E, **Kong M**, Xu Q, Barnes G, and Freedman J. (2000). Disruption of essential metal homeostasis in the brain by cadmium and high-fat diet. *Toxicology Reports* 7:1164-1169.
47. Tian S, Chu T, Shields LBE, Zhu Q, Zhang YP, **Kong M**, Barnes GN, Wang Y, Shields CB and Cai J (2020). Platelet-activating factor deteriorates lysophosphatidylcholine-induced demyelination via its receptor-dependent and -independent mechanisms. *Molecular Neurobiology* 57(10):4069-4081.
48. Davis D, Feygin Y, Creel L, **Kong M**, Jawad K, Sun J, Blum N, Lohr WD, Williams PG, Le J, Jones VF, Pasquenza N (2020). Epidemiology of treatment for preschoolers on Kentucky Medicaid diagnosed with attention-deficit/hyperactivity disorder, *Journal of Child and Adolescent Psychopharmacology* 30(7):448-455.
49. Ghosal S, Trivedi J, Barlowe D, Zhao L, Ji X, Slaughter MS, **Kong M**, Huang J (2020). Preoperative functional platelet number is inversely associated with 30-day mortality after cardiac surgery-A retrospective cohort study. *Seminars in Cardiothoracic and Vascular Anesthesia* 24(4), pp. 313-320.
50. Hammouda K, Khalifa F, Abdeltawab H, Elnakib A, Giridharan G, Zhu M, Ng CK, Dassanayaka S, **Kong M**, Darwish HE, Mohamed TM (2020). A New Framework for Performing Cardiac Strain Analysis from Cine MRI Imaging. *Scientific Reports* 10(1):1-5.
51. Elmasry M, Gala K, Cai W, Diamond S, Shine A, Liu D, Liu N, Tholkage DR, **Kong M**, McClain C, Parajuli D. S0227 Patient Factors Affecting Cecal Intubation Time During Colonoscopies Performed by Gastrointestinal Fellows. Official journal of the American College of Gastroenterology| ACG. 2020 Oct 1;115:S68.
52. Li B, Hao J, Yan X, **Kong M**, Sauter E (2019). A-FABP and estrogens are independently involved in the development of breast cancer. *Adipocyte* 8(1):379-385.
53. Vatsalya V, Hassan HZ, **Kong M**, Stangl BL, Schwandt ML, Schmidt-Teron VY, Verster JC, Ramchandani VA, McClain CJ (2019). Exacerbation of hangover symptomology significantly corresponds with heavy and chronic alcohol drinking: A pilot study. *MDPI: Clinical Neurology* 8(11): 1943.
54. Vatsalya V, Cave MC, **Kong M**, Gobejishvili L, Clair H, Falkner KC, Craycroft J, Mitchell MC, Szabo G, McCullough A, Dasarathy S, Radaeva S, Barton B, McClain CJ (2019). Keratin 18 is a biomarker for the diagnosis and prognosis in acute alcoholic hepatitis. *Hepatology* 70: 174A-175A.
55. Chu T, Zhang YP, Tian Z, Ye C, Zhu M, Shields LB, **Kong M**, Barnes GN, Shields CB, Cai J (2019). Dynamic response of microglia/macrophage polarization following demyelination in mice. *Journal of Neuroinflammation* 16(1):1-22.

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57. Liang Y, Young JL, **Kong M**, Tong Y, Qian Y, Freedman JH, Cai L (2019). Gender differences in cardiac remodeling induced by a high-fat diet and lifelong, low-dose cadmium exposure. *Chemical Research in Toxicology* 32(6):1070-81. DOI: 10.1021/acs.chemrestox.8b00386
58. Yan XF, Abdia Y, Datta S, Kulasekera KB, Ugiliweneza B, Boakye M, **Kong M** (2019). Estimation of average treatment effects among multiple treatment groups by using an ensemble approach. *Statistics in Medicine* 38(15), 2828-2846. <https://doi.org/10.1002/sim.8146>
59. Kolluru V, Chandrasekaran B, Tyagi A, Dervishi A, Ankem M, Yan X , **Kong M**, Alatassi H, Shaheen SP, Haddad A, Damodaran C (2018). miR-301s expression: diagnostic and prognostic marker for prostate cancer. *Urologic Oncology* 36(11):503-e9. doi: 10.1016/j.urolonc.2018.07.014
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61. Hao J, Zhang Y, Yan X, Yan F, Sun Y, Zeng J, Waigel S, Yin Y, Fraig M, Egilmez N, Suttles J, **Kong M**, Liu S, Cleary M, Sauter E, and Li B (2018). Circulating adipose fatty acid binding protein promotes obesity-associated breast/mammary tumor development. *Cell Metabolism* 28, 1–17. e1–e5, November 6, 2018.
62. Vatsalya V, **Kong M**, Cave MC, Liu N, Schwandt ML, George DT, Ramchandani VA, McClain CJ (2018). Association of serum zinc with markers of liver injury in very heavy drinking alcohol dependent patients. *The Journal of Nutritional Biochemistry* 59: 49-55.
63. Satten GA, **Kong M**, Datta S (2018). Multi-sample adjusted U-statistics that account for confounding covariates. *Statistics in Medicine* 37(23): 3357-3372. DOI: 10.1002/sim.7825
64. Wu Y, Gaskins J, **Kong M**, Datta S (2018). Profiling the effects of short time-course cold ischemia on tumor protein phosphorylation using a Bayesian approach. *Biometrics*. 74(1):331-341. doi: 10.1111/biom.12742. [PMID: 28742267]
65. Ghosal S, Trivedi J, Chen J, Rogers M, Cheng A, Slaughter MS, **Kong M**, Huang J (2017). Regional cerebral oxygen saturation level predicts 30 day mortality rate after left ventricular assist device surgery. *Journal of cardiothoracic and Vascular Anesthesia*. S1053-0770(17)30711-5. PMID: 29158058.
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67. Abdia Y, Kulasekera KB, Datta S, Boakye M and **Kong M** (2017). Propensity scores based methods for estimating average treatment effect and average treatment effect among treated: a comparative study. *Biometrical Journal* 59(5):967-985. DOI: 10.1002/bimj.201600094 [PMID: 28436047]
68. Wan Y, Datta S, Lee JJ, **Kong M** (2017). Monotonic single-index models to assess drug interactions. *Statistics in Medicine* 36: 655–670. [PMID: 27804146]
69. Conklin DJ, Haberzettla P, Jagatheesan G, **Kong M**, and Hoyle GW (2017). Role of TRPA1 in acute cardiopulmonary toxicity of inhaled acrolein. *Toxicology and applied pharmacology*, 324: 61-72. [PMID: 27592100]
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75. **Kong M**, Xu S, Levy S, and Datta S (2015). GEE type inference for clustered zero-inflated negative binomial regression with application to dental caries. *Computational Statistics and Data Analysis* 85, 54-66. [PMID: 25620827]
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111. **Kong M**, Lee JJ (2008). A semiparametric model for assessing drug interaction. *Biometrics* 64, 396-405. [PMID: 17900314]
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### Book Chapters

1. **Kong M**, Lee JJ (2015). Confidence Interval for Interaction Index. In Zhao W and Yang H (Eds), *Statistical Methods in Drug Combination Studies* (pp. 55-72). Boca Raton, FL: Chapman & Hall/CRC.
2. Sokhadze EM, Frederick J, Wang Y, **Kong M**, El-Baz AS, Tasman A, and Casanova MF (2015). Event-related potential (ERP) study of facial expression processing deficits in autism. In Flores B (Editor), *Emotional and Facial Expressions: Recognition, Developmental Differences and Social Importance* (pp. 109-130). New York: Nova Science Publishers, Inc.

### Letters to the Editor

1. Xu Q, **Kong M**, Huang J. (2019). Letter to Editor in Response to "Regional Cerebral Oxygen Saturation and Mortality in Patients with Left Ventricular Assist Device". *Journal of Cardiothoracic and Vascular Anesthesia*. (in press)
2. Lefer D, Jones S, Steenbergen C, Kukreja R, Guo Y, Tang XL, Li Q, Ockaili R, Salloum F, **Kong M**, Polhemus D. Sodium nitrite fails to limit myocardial infarct size: Results from the CAESAR cardioprotection consortium (Ib645). *The FASEB Journal*. 2014 Apr 1;28(1 Supplement):LB645.
3. Kukreja R, Tang XL, Lefer D, Steenbergen C, Jones S, Guo Y, Li Q, **Kong M**, Stowers H, Hunt G, Tokita Y. Administration of sildenafil at reperfusion fails to reduce infarct size: Results from the CAESAR cardioprotection consortium (Ib650). *The FASEB Journal*. 2014 Apr 1;28(1 Supplement):LB650.
4. Lee JJ, **Kong M** (2011). Combined treatment of pancreatic cancer with mithramycin A and tolfenamic acid promotes Sp1 degradation and synergistic antitumor activity-Response. *Cancer Research* 71, 2794-2795. [PMID: 21447746]
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### Published Abstracts

1. Zirnheld K, Warner J, Hu H, Floyd A, Kong M, McClain C, Kirpich I. Alcohol Consumption Pattern and Nutritional Intake: Analysis of the 2017-2018 National Health and Nutrition Examination Survey.
2. Roser L, Huang J, **Kong M**, McGuffin T, Nathala P, Salunkhe V, Samanapelly H, Xu Q (2021). Risk Factors for Cardiovascular Events In Hospitalized Patients with COVID-19. *Heart & Lung* 50(4):567-8.
3. Roser LP, McGuffin TC, Xu Q, Salunkhe V, Samanapally H, Nathala P, **Kong M**, Huang J. What Risk Factors Are Associated with Cardiovascular Complications in Patients with COVID-19? (2021). *American Journal of Infection Control*. 49(6):S17-8.
4. Smith M, **Kong M**, Cambon A, Woods C (2010). Effectiveness of antimicrobial guidelines for pneumonia in children. *The 48<sup>th</sup> Infectious Diseases Society of America Annual Meeting*. Vancouver, BC.
5. Rogers W, Meyer J, Rothschild C, Bonner J, Das N, Richardson K, Mokshagundam SP, Krishnasamy S, **Kong M**, Stetson B (2009). Social isolation is associated with geographic socioeconomic status and quality of life in at-risk, underserved adults with type 2 diabetes. *Annals of Behavioral Medicine* 37, s199.
6. Richardson K, Rogers W, Bonner J, Rothschild C, Meyer J, Das N, Mokshagundam SP, Krishnasamy S, **Kong M**, Stetson B (2009). Geographic socioeconomic status, health literacy and perceived barriers to self-care in at-risk, underserved adults with type 2 diabetes. *Annals of Behavioral Medicine* 37, s197.
7. Das BB, Kemparajurs S, Bertolone S, **Kong M**, and Raj AB (2008). Hemodynamic monitoring during erythrocytapheresis in Sickle Cell disease patients using impedance cardiography. *Blood* (ASH Annual Meeting Abstracts) 112, 4800.

### **Manuscripts Submitted or to Be Submitted for Publication**

1. Ghosal S, Smith MJ, Myers J, **Kong M**. Generalized spatiotemporal additive model implemented in R and its application to assessing overuse of antibiotics drugs for upper respiratory tract infections in KY. *Computer Methods and Programs in Biomedicine* (Under review).
2. Sun J, Pal S, Duncan S, **Kong M**. Directed acyclic graph assisted methods for estimating average treatment effect. *Journal of Biopharmaceutical Statistics* (Under Review)
3. Ghosh I, Michael Egger M, **Kong M**. Estimating treatment effect on medical cost trajectory using propensity scores and I-Splines. *Statistical Methods in Medical Research* (to be submitted)
4. Ghosh I, Zheng Q, Michael Egger M, **Kong M**. Estimating healthcare cost using parametric change point models. *Health Economics* (to be submitted)
5. Xu Q, Craycroft JA, Zheng Q, **Kong M**. Doubly robust methods for identifying effect modifiers and estimating optimal treatment based on observational data (To be submitted)
6. Craycroft JA, **Kong M**, Pal S. Bayesian causal inference using MCMC (To be submitted)

7. Stubblefield O, Geller A, Rai S, Yan J, Huang J, **Kong M**. Predictive modeling of clinical outcomes for hospitalized COVID-19 patients utilizing CyTOF and Clinical Data (to be submitted)
8. Tholkage S, Kulasekera KB, **Kong M**, Zheng Q. Personalized treatment selection using observational data and single index models. *Journal of Applied Statistics* (Under preparation).
9. Ghosal S, **Kong M** . Assess treatment effects for multiple treatment groups when outcome is ordinal and confounding exists (under preparation).
10. Poddar T, Yan X., Zheng Q., **Kong M**. Estimation of treatment effect for time-to-event outcomes. (Under preparation)
11. Xu Q, Zheng Q, **Kong M**. Statistical methods for assessing drug interactions using observational data with treatment in continuous scale. (Under preparation)
12. Zheng Q, **Kong M**, Kulasekera KB. Group testing In observational studies (Under preparation)
13. Hu H, Mitra R, McClain C, Kulasekera KB, Kong M. Treatment evaluation for patients with alcohol use disorders. (Under preparation)
14. Kuravackel GM, Roth EA, Baker EE, Cooley-Cook H, **Kong M**, Xu Q. The Psychological functioning and quality of life among siblings of children with autism spectrum disorder. *Journal of Child and Family Studies* (Under Review).

## PROFESSIONAL ACTIVITIES

### Invited Talks

1. “Doubly Robust Methods for Identifying Effect Modifiers and Selecting Optimal Treatment based on Observational Data”, JSM 2023, August 6-10, Toronto, ON, Canada, 2023
2. “Statistical methods for assessing treatment effects on ordinal outcomes using observational data”, WNAR 2023, June 18-21, Anchorage, Alaska
3. “Doubly Robust Methods for Identifying Effect Modifiers and Selecting Optimal Treatment based on Observational Data”, Department of Mathematical Sciences, IUPUI, Nov 8, 2022
4. “Evaluating different methods for estimating optimal treatment based on observational data”, ICOSA, Gainesville, Florida, June 19-22, 2022
5. “Statistical Methods for Assessing Drug Interactions Using Observational Data”, ENAR, Houston, TX, March 27-30, 2022
6. “Alcohol Use Disorder: Its Risk Factors, Comorbidity, and Long-term Care Cost”, Student Government Association, School of Public Health & Information Sciences, University of Louisville. August 25, 2021.
7. “Estimation of average treatment effects among multiple treatment groups by using an ensemble approach”, JSM (Virtual) August 8-12, 2021.

8. "Propensity score specification for optimal estimation of average treatment effect with binary response" Division of Biostatistics, Department of Preventive Medicine, the University of Tennessee Health Science Center. March 15, 2021.
9. "Propensity Scores Based Methods for Estimating Average Treatment Effect and Average Treatment Effect Among Treated: A Comparative Study", Department of Bioinformatics and Biostatistics, University of Louisville. January 27, 2017
10. "Monotonic single index models with application to assessing drug interactions", 2015 ICSA China Statistics Conference, July 6-7, 2015, Shanghai, China
11. "GEE type inference for clustered zero-inflated negative binomial regression with application to dental caries." Department of Bioinformatics and Biostatistics, UofL, Oct. 31, 2014.
12. "Extended variable selection models for missing data with application to predict median effective dose and maximum effect", 2nd International Conference and Exhibition on Biometrics & Biostatistics, Chicago, USA, June 10-12, 2013.
13. "Applying nonlinear mixed effect models to assess treatment effect and drug interaction of combination therapy". JSM 2012, San Diego, California, July 28- Aug 2, 2012.
14. "Comparisons of parametric and nonparametric methods to assess treatment effect and drug interaction of combination therapy". ICSA Applied Statistics Symposium, Boston, MA, June 26-29, 2012.
15. "Modeling and testing treated tumor growth using cubic smoothing splines". University of Texas M.D. Anderson Cancer Center, Houston, Texas, May 4, 2011.
16. "Modeling and testing treated tumor growth using cubic smoothing splines". Indiana University-Purdue University Indianapolis, April 13, 2011.
17. "Application of smoothing splines to assessing tumor growth and antitumor activity in xenograft models". Department of Statistics, Purdue University, Indiana, Oct. 29, 2010.
18. "Application of smoothing splines to assessing tumor growth and antitumor activity in xenograft models", JSM 2010, Vancouver, British Columbia, Canada, July 31- Aug 4, 2010.
19. "New perspectives for models involving bioassay components", The 1<sup>st</sup> Joint Biostatistics Symposium 2010, Beijing, China, July 17-18, 2010.
20. "Application of smoothing splines to assessing tumor growth and antitumor activity in xenograft models", Xi'an Jiaotong University, Xi'an, Shaanxi, China, July 13, 2010.
21. "Nonparametric approach for assessing multiple drug interaction in combination drug discovery." Mid-West Biopharmaceuticals Statistics Workshop, Muncie, Indiana, May 22-24, 2010.
22. "Splines, mixed models, and their applications". Statistics colloquium, the University of Arizona, April 3, 2009.
23. "Application of mixed models in drug combinations". The Joint Statistical Meeting 2008, Denver, Colorado, August 3-7, 2008.
24. "A semiparametric approach and bootstrap method for assessing drug interaction". The Joint Statistical Meeting, Salt Lake City, Utah, July 29-Aug 2, 2007.

25. "A semiparametric approach for assessing drug interaction in combination drug discovery." Mid-West Biopharmaceuticals Statistics Workshop, Muncie, Indiana, May 22-24, 2006.

### Contributed Talks and Seminars

1. "Estimation of average treatment effects among multiple treatment groups by using an ensemble approach". Virtual IBC2020.
2. "Weighted F test and weighted chi-square test for multiple group comparisons in observational studies", ENAR 2020, Nashville, TN, March 22-25, 2020.
3. "Estimate average treatment effects among multiple treatment groups by using adaptive ensemble method". The Joint Statistical Meeting, Baltimore, Maryland, July 29 - August 3, 2017.
4. "Inverse probability weighting methods for estimating treatment effects of multiple treatments in observational studies" The Joint Statistical Meeting, Chicago, IL July 30-Aug 4, 2016.
5. "GEE type inference for clustered zero-inflated negative binomial regression with application to dental caries." The Joint Statistical Meeting, Boston, MI, Aug 2-7, 2014.
6. "Study designs and analysis methods for medical research", Internal Medicine Journal Club, University of Louisville, Louisville, KY, August 8, 2013.
7. "Modeling and testing treated tumor growth using cubic smoothing splines". University of Louisville, Louisville, KY, January 27, 2012.
8. Mixed-effects models for modeling cardiac functions and testing treatment effects. ICSA Applied Statistics Symposium, New York City, New York, June 26-29, 2011.
9. Mixed-effects models for modeling cardiac functions and testing treatment effects. The 4<sup>th</sup> Erich L. Lehmann Symposium, Rice University, Houston, Texas, May 9-12, 2011.
10. "Linear regression modeling strategies for data with missing observations and large numbers of covariates", Department of Bioinformatics and Biostatistics, University of Louisville, Nov 27, 2009.
11. "Dose-Time-Effect modeling for cancer cell growth in *in vitro* experiments", The Joint Statistical Meeting, Washington DC, Aug 3, 2009.
12. "Controlling experiment-wise type I error when performing multiple comparisons using Student's t-test and one-way ANOVA", COBRE, University of Louisville, June 2, 2009.
13. "Applications of smoothing splines for assessing antitumor activity in xenograft models," Department of Bioinformatics and Biostatistics, University of Louisville, March 6, 2009.
14. "Assessing drug interaction when data collected at fixed rays." ENAR, Arlington, Virginia, March 16-19, 2008.
15. "Response surface models for assessing drug interaction as synergy, additivity, and antagonism." Cleveland Clinic Foundation, Feb 27, 2006.
16. "Response surface models for assessing drug interaction as synergy, additivity, and antagonism." Virginia Commonwealth University, March 2, 2006.
17. "Assessing drug interaction under different experimental conditions." ENAR, Tampa, FL, March 26, 2006.



18. "A semiparametric response surface model for assessing drug interaction as synergy, additivity, and antagonism." The Joint Statistical Meeting, Minneapolis, MN, Aug 10, 2005.
19. "A new response surface model for assessing drug interactions." ENAR, Austin, TX, March 21, 2005.
20. "Nonparametric statistical techniques in bioassay." Texas Tech University, May 5, 2004.

### **Talks and Presentations from Students Under My Supervision**

1. Xu Q\*, **Kong M.** Doubly Robust Methods for Identifying Effect Modifiers and Estimating Optimal Treatment Based on Observational Data. ENAR, Houston, TX, March 20, 2022.
2. Xu Q\*, **Kong M.** Doubly robust approach for identifying effect modifiers and estimating optimal treatment based on observational data, 2021 Southern Regional Council on Statistics. Summer Research Conference, Jekyll Island, Georgia, Oct 2021.
3. Ghosh I\*, **Kong M.** Estimating the treatment effect on medical cost trajectory using inverse probability of treatment weighting method and I-Splines. Summer Research Conference, Jekyll Island, Georgia, Oct 2021.
4. Yan X\*, Zheng Q, **Kong M.** Weighted  $\chi^2$  test and F test for multiple group comparisons in observational studies. JSM 2021, Virtual, August 6-12, 2021
5. Tholkage S, Kulasekara KB, **Kong M.** Personalized Treatment Selection Using Observational Data. JSM 2021, Virtual, August 6-12, 2021
6. Xu Q, Kong M. Statistics Methods for Assessing Drug Interactions Using Observational Data. JSM 2021, Virtual, August 6-12, 2021
7. Ghosh I\*, **Kong M.** Estimating the treatment effect on medical cost trajectory using inverse probability of treatment weighting method and I-Splines. JSM 2020, Virtual, August 1-6, 2020.
8. Craycroft J\*, **Kong M** and Pal S. "Identifying Effect Modifiers and Subgroups that May Benefit from Treatment when the Number of Covariates is Large". ENAR 2020, Virtual, March 22-25, 2020.
9. Sun S\*, **Kong M**, Duncan SD and Pal S. "Directed Acyclic Graph Assisted Methods for Estimating Average Treatment Effect". ENAR 2020, Virtual, March 22-25, 2020.
10. Yan X, Kulasekera KB, **Kong M.** Estimation of average treatment effects among multiple treatment groups by using an ensemble approach. SRCOS Summer Research Conference, General Butler Park, KY June 2-5, 2019.
11. Craycroft J, **Kong M.** Propensity score specification for optimal estimation of average treatment effect with binary response. SRCOS Summer Research Conference, General Butler Park, KY June 2-5, 2019.
12. Bayesian Analysis of Hierarchical Mixed Effect Hurdle Model for Time and Spatially Correlated Count Data, Ghosal S, **Kong M**, Gaskins J. The Joint Statistical Meeting, Baltimore, Maryland, July 29 - August 3, 2017.
13. Profiling the Effects of Short Timecourse Cold Ischemia on Tumor Protein Phosphorylation using a Bayesian Approach, Wu Y, Datta S, Gaskins J, **Kong M.** KY-ASA Spring Meeting, Louisville, KY, April 21, 2017.

14. Bayesian Analysis of Hierarchical Mixed Effect Hurdle Model for Time and Spatially Correlated Count Data, Ghosal S, Gaskins J, **Kong M**. KY-ASA Spring Meeting, Louisville, KY, April 21, 2017
15. Comparing Power of Various Propensity Score Methods, Craycroft J, **Kong M**. KY-ASA Spring Meeting, Louisville, KY, April 21, 2017
16. Study of different statistical methods for estimating treatment effects when outcome variable is ordinal and confounding exists, Wu Y, **Kong M**. SRCOS Summer Research Conference, Jekyll Island, GA June 4-7, 2017.
17. Bayesian Analysis of Hierarchical Mixed Effect Hurdle Model for Time and Spatially Correlated Count Data, Ghosal S, Gaskins J, **Kong M**. SRCOS Summer Research Conference, Jekyll Island, GA June 4-7, 2017.
18. Using Propensity Scores to Infer Causal Effects on Heart Health from Chemotherapy Treatment of Breast Cancer Patients, Craycroft J, **Kong M**, Lenneman C. The Joint Statistical Meeting, Chicago, IL July 30-Aug 4, 2016.
19. Profiling the effects of short time-course cold ischemia on tumor protein phosphorylation using a Bayesian approach, Wu Y, Gaskins J, **Kong M**, Datta S. The Joint Statistical Meeting, Chicago, IL July 30-Aug 4, 2016 (Poster).
20. Inference for marginal linear mixed models with clustered longitudinal data with potentially informative cluster sizes, Wang M, **Kong M**, Datta S. ENAR, San Antonio, TX, March 15-18, 2009.

### **Continuing Education**

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|-------------|---|
| June, 2011  | International Chinese Statistical Association (ICSA) Year 2011 Applied Statistics Symposium. One day continuing education course on "Design and analysis of group sequential trials: recent advances and software". New York City, NY                           |
| June, 2011  | School of Public Health and Information Sciences. Half day continuing education broadcast on "The health data initiative forum" organized by the Institute of Medicine and Department of Health and Human Services ". University of Louisville, Louisville, KY. |
| April, 2011 | Delphi Center for Teaching and Learning and School of Public Health and Information Sciences. Continuing education workshop on "Promoting active learning in lecture classes: strategies and tips from the trenches". University of Louisville, Louisville, KY. |
| March, 2011 | Delphi Center for Teaching and Learning and School of Public Health and Information Sciences. Continuing education workshop: "Using the latest instructional tools for teaching". University of Louisville, Louisville, KY.                                     |
| July 13-19  | American Association for Cancer Research (AACR) Cancer Biostatistics 2008 Workshop 2008. One week continuing education workshop on broad spectrum of biostatistics in cancer research. Sonoma, CA.  |
| March, 2008 | Eastern North American Region (ENAR) International Biometric Society 2008. One day continuing education workshop for junior researchers. Arlington, VA.   |

- March, 2008 Eastern North American Region (ENAR) International Biometric Society 2008. One day continuing education course: "Modeling covariance structures in mixed models". Arlington, VA.
- April, 2007 American Statistical Association: Greater Cincinnati Chapter. One day continuing education course: "Sample-size analysis in study planning: concepts and issues". Cincinnati, OH.
- March, 2006 Eastern North American Region (ENAR) International Biometric Society 2006. One day continuing education course: "Continuous, discrete, and incomplete longitudinal data". Tampa, FL.
- Aug. 2005 Joint Statistical Meetings. One day continuing education course: "Regression modeling strategies". Minneapolis, MN.

Updated July 1, 2023