MAIYING KONG
Curriculum Vitae

CONTACT INFORMATION

Department of Bioinformatics & Biostatistics
School of Public Health and Information Sciences
University of Louisville
Louisville, KY 40292

Phone: (502)-852-3988
Fax: (502)-852-3294
Email: maiying.kong@louisville.edu

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 **University of Louisville School of Public Health and Information Sciences**
Department of Bioinformatics and Biostatistics, July 2019 to Current. Full time teaching graduate courses for Master's and Doctoral programs in Biostatistics and Public Health. Participating in methodological and collaborative research, as well as serving in department, school, university, and national/international professional communities.

Associate Professor **University of Louisville School of Public Health and Information Sciences**
Department of Bioinformatics and Biostatistics, July 2012 to June 2019. Full time teaching graduate courses for Master's and Doctoral programs in Biostatistics and Public Health. Participating in methodological and collaborative research, as well as serving in department, school, university, and national/international professional communities.

Common-Wealth Scholar **University of Louisville, Commonwealth Institute of Kentucky (CIK)**
October 2016 to present, collaborating with CIK other scholars to carry out research projects.

Associate Member **University of Louisville Department of Pediatrics**
May 2018 to present, collaborating with clinicians and biostatisticians in the Department of Pediatrics to conduct research.

Associate Member — **University of Louisville James Graham Brown Cancer Center**
July 2006 to present, collaborating with basic scientists and clinicians to conduct research.

Assistant Professor — **University of Louisville School of Public Health and Information Sciences**
Department of Bioinformatics and Biostatistics. July 2006 to June 2012. Full time teaching graduate courses for Master's and Doctoral programs in Biostatistics and Public Health. Participating in methodological and collaborative research, as well as serving in department, school, university, and national/international professional communities.

Postdoctoral Fellow — **University of Texas M. D. Anderson Cancer Center, Houston, Texas**
Department of Biostatistics. Sept. 2004 to July 2006. Full time. Performed methodological research for assessing drug synergy, and collaborated with basic scientists.

Graduate Assistant — **Indiana University at Bloomington, Bloomington, Indiana**
Department of Mathematics. Sept 1999 to Aug 2004. Full time. Taught finite mathematics, assisted professors with classes on finite mathematics, statistics, and probability.

Instructor — **Xi'an Jiaotong University, Shaanxi, China**
Department of Computational Mathematics. Sept 1993 to May 1998. Full time.
Taught FORTRAN, C, and Basic programming language, assisted with calculus course in large classes.

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 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

2000 Grad Student Travel Award, Mathematics Department, Indiana University

2002 Wm. B. Wilcox Mathematics Award, Indiana University

2003 – 2004 Starr Fellowship, International Program, Indiana University

2006 Trainee Excellence Award, M. D. Anderson Alumni & Faculty Association

2014-Present Associate Editor for Journal of Statistical Computation and Simulation

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

Teaching Activities At University of Louisville By Semester

Fall 2018
PHST 710 Advanced Computing I
PHDA 703 Biostatistics Consulting Practicum

Spring 2018
PHST 782 Generalized Linear Models
PHST 675 Independent Study in Biostatistics-Path Analysis and Casual Inference

Fall 2017
PHST 710 Advanced Computing I
PHDA 703 Biostatistics Consulting Practicum

Spring 2017
PHST 751 High Throughput Data Analysis
PHPH 679 Public Health Practicum

Fall 2016
PHST 781 Advanced Linear Models (Co-taught with 50% responsibility)
PHST 710 Advanced Computing I (Co-taught with 50% responsibility)
PHST 650 Intermediate Biostatistics for Health Sciences (Co-taught with 25% responsibility)
PHPH 679 Public Health Practicum

Summer 2016
PHPH 679 Public Health Practicum
PHST 703 Biostatistics Consulting Practicum

Spring 2016
PHST 782 Generalized Linear Models
PHST 675 Independent Study in Mixed ZINB Models

Fall 2015
PHST 781 Advanced Linear Models (Co-taught with 50% responsibility)
PHST 710 Advanced Computing I (Co-taught with 50% responsibility)

Summer 2015
PHST 675 Independent Study in Observational Studies
PHST 703 Biostatistics Consulting Practicum

Spring 2015
PHST 751 High Throughput Data Analysis

Fall 2014
PHST 781 Advanced Linear Models (Co-taught with 50% responsibility)
PHST 710 Advanced Computing I

Spring 2014
PHST 782 Generalized Linear Models
PHST 675 Independent Study in Data Analysis Using R
PHDA 666 Master's Thesis Research

Fall 2013
PHST 781 Advanced Linear Models
PHDA 666 Master's Thesis Research
PHDA 603 Public Health Practicum I

Spring 2013
PHST 704 Mixed Effect Models and Longitudinal Data Analysis
PHCI 624 Clinical Trials I (Co-taught with 50% responsibility)

Fall 2012
PHST 781 Advanced Linear Models
PHDA 666 Master's Thesis Research
PHDA 603 Public Health Practicum I

Courses taught at University of Louisville during Fall 2006- Spring 2012

PHST 680: Biostatistics Methods I (Fall 2006)

PHST 781: Advanced Linear Models (Fall 2007-2011)

PHST 782: Generalized Linear Models (Spring 2007-2012)

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

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

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

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

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

PHST 675: Independent Study in Biostatistics-Mixed models with application to PD/PK models (Summer 2008)

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

PHST 675: Independent Study in Biostatistics (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*".

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

1. Yubing Wan (co-advise 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-advise 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-advise 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. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2020.

7. Jingchao Sun (co-advisor with Dr. Subhadip Pal), Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2020.

8. Indranil Ghosh (co-advisor with Dr. Dongfeng Wu), Ph.D. Candidate in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville, expect to graduate in summer 2021.

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. Expect to graduate in summer 2020. Role: Dissertation committee member.

18. Mary Elizabeth Gregg, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Expect to graduate in summer 2020. Role: Dissertation committee member.
19. Sagnik K. Bhadury, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2022. Role: Dissertation committee member.
20. Md Nazir Uddin, Ph.D. student in Biostatistics, Department of Bioinformatics and Biostatistics, University of Louisville. Graduated in summer 2021. 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

1. **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.
   Percentage effort: 15%
   Period: 07/01/2020-6/30/2022
   Total budget: $676,198

2. **Grant Title:** Cell Survival Advantage in Cadmium Induced Carcinogenesis

Funding Agency: National Institutes of Health
Grant Number: 1R01ES030019-01A1
Role: Co-investigator (PI: Chendil Damodaran)
Percentage effort: 5%
Period: 07/01-2019-16/30/2024
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).

3. **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

4. **Grant Title:** Immunomodulatory mechanisms of E-FABP in psoriasis pathogenesis
Funding Agency: National Institutes of Health
Grant Number: 1R01AI137324-01A1
Role: Co- Investigator (5%; PI: B. Li)
Duration: 09/24/2018 – 08/31/2023
Total Budget: $1,925,000

5. **Grant Title**: Medication Prescribing to Children Insured By Kentucky Medicaid
Funding Agency: Kentucky Medicaid and UofL CAHRDS unit in the Department of Pediatrics
Role: Co-Investigator (20%; PI: D. W. Davis)
Duration: 07/1/2018 – 6/30/2020

6. **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.

7. **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

8. **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

9. **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

10. **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

11. **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

12. **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

13. **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

14. **GE Appliance Park.** GE Industrial Athlete Program.
Role: Principle Investigator (15%)
Duration: 1/1/2014-12/31/2014

15. **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

16. **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)

17. **Grant Title***: Center of Excellence in Diabetes and Obesity Research*.
Funding Agency: National Institutes of Health/ National Center for Research Resources
Grant Number: 2 P20 RR024489
Role: Biostatistician (10%; PI: A. Bhatnagar)
Duration: 8/1/2013-4/31/2014

18. **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)

19. **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)

20. **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)

21. **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)

22. **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. Yubing Wan, supported by CEASAR study (U24 HL094373) from 7/1/2012-6/31/2014.
2. 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.

3. One student is supported by Medicaid and CIK from 7/1/2018-6/30/2020.
4. One additional student is currently supported from my collaboration with G. McClain from 7/1/2018-6/30/2021.

Grants/Contracts Submitted/Under Review as Principal Investigator

1. **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)

2. **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

3. **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)

4. **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)

5. **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)

6. **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)

7. **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)

8. **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)

9. **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. Co-chair, Faculty Search Committee. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2014, 2016.
2. Organizer, Decision Science and Biostatistics Seminar. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, KY, Spring 2011.
3. 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.
4. 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).
5. Member, Faculty Search Committee. Department of Bioinformatics and Biostatistics, School of Public Health and Information Sciences, University of Louisville, Louisville, KY, 2007-2013.
6. Member, Student Recruiting Committee. Department of Bioinformatics and Biostatistics. School of Public Health and Information Sciences. University of Louisville. Louisville, KY, 2006-2008.
7. 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. Promotion Tenure Committee (PAT) Member, SPHIS, University of Louisville, Louisville, KY, July 2019-present
2. Elected faculty member, the Decanal Committee, SPHIS, University of Louisville, Louisville, KY, 2018-2019.
3. Member, SPHIS Rules, Policies & Credentials Committee, University of Louisville, Louisville, KY, 2012-current.
4. Member, Selection Committee for President's Distinguished Faculty Awards, University of Louisville, Louisville, KY, April-May 2013
5. Member, SPHIS Community and Professional Service Committee. University of Louisville, Louisville, KY, 2007-2014.
6. Election Committee Member, for the Committee Members of Dean's Recruitment, 2012
7. Participator, Dare to Care. University of Louisville, Louisville, KY, 2007–current.
8. Judge, Research!Louisville at University of Louisville, Louisville, KY, Oct. 2006, Oct. 2008.

Statistical Society Leadership & Service

1. Session Chair: CONTRIBUTED PAPERS: NETWORK ANALYSIS: CONNECTING THE DOTS, ENAR 2020 (online virtual).
2. Organized an Session "Statistical Methods for Causal Inference and Personalized Medicine based on Observational Data" for ICSA 2020 China Conference (June 26 – 29, 2020) (Cancelled).
3. Co-organizer and host for SRCOS research meeting 2019, Butler State Park, Kentucky.
4. Treasurer, Kentucky Chapter of the American Statistical Association, Sept 2016-current.
5. Representative of U of L Department of Bioinformatics and Biostatistics in the Southern Region Council of Statistics (SRCOS) since 2016.
6. Organizer and host for SRCOS business meeting 2017 in the Department of Bioinformatics and Biostatistics at the University of Louisville. Oct. 6-7, 2017
7. Organizer, department involvement with high school regional science fair (Awards for Excellent Application of Statistics), and judged science projects. Louisville, KY, March 2011-2018
8. Member of Panel Discussion, KY-ASA Spring Meeting, Louisville, KY, April 21, 2017
9. 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.
10. Organizer, JSM 2010 topic-contributed session "Statistical methods for assessing anti-tumor activity". Vancouver, British Columbia, July 31–August 4, 2010.

11. Organizer, JSM 2010 topic-contributed session “New directions in marginal inferences for complex problems”. Vancouver, British Columbia, July 5–August 4, 2010.
12. Organizer, the 1st 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: BIOSTS-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. Song K, Xu Q , Knott VH, Zhao CB, Clifford SP, **Kong M**, Huang J (2020). Liposomal bupivacaine based erector spinae block for cardiac surgery. *Journal of Cardiothoracic and Vascular Anesthesia (in press).*

2. 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 Royal Statistical Society Series C: Applied statistics* (in press)

3. 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* (*in press*).

4. Vatsalya V, **Kong M**, Marsano L, Kurlawala Z, Chandras K, Schwandt M, Ramchandani V, McClain C. (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*. (in press)10.1101/2020.07.01.20144311.

5. 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 (in press)*

6. 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 (in press).*

7. 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 Psychaopharmacology (in press)*

8. 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 (in press)*

9. Hammouda K, Khalifa F, Abdeltawab H, Elnakib A, Giridharan G, Zhu M, Ng C, Dassanayaka S, **Kong M**, Darwish H, Mohamed T, Jones S, and El-Baz A (2020). A New Framework for Performing Cardiac Strain Analysis from Cine MRI Imaging. Scientific Reports (in press)

10. 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.

11. 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.*

12. 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.*

13. 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.*

14. Young JL, Yan X, Xu J, Yin X, Zhang X, Arteel GE, Barnes GN, States JC, Watson WH, **Kong M**, Cai L Freedman JH (2019). Cadmium and high-fat diet disrupt renal, cardiac and hepatic essential metals. *Scientific Reports* 9(1):1-11.

15. 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

16. 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*

17. 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

18. Vatsalya V, **Kong M**, Gobejishvili L, Chen WY, Srivastava S, Barve S, McClain CJ, Joshi-Barve S. (2019). Urinary acrolein metabolite levels in severe acute alcoholic hepatitis patients. *American Journal of Physiology-Gastrointestinal and Liver Physiology* 316(1): G115-G122. *https://doi.org/10.1152/ajpgi.00209.2018.*

19. 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.*

20. 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.

21. 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

22. Wu Y, Gaskins J, **Kong M**, Datta S (2018). Profilng 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]

23. 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.

24. Li B, Hao J, Yan X, **Kong M**, Sauter ER (2017). A-FABP decreases in the wean milk of nursing women with a family history of breast cancer. *International Journal of Women's Health and Wellness*. 3(4), 3:063. DOI: 10.23937/2474-1353/151006.

25. 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]

26. 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]

27. 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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29. Chen J, Wang S, Luo M, Zhang Z, Dai X, **Kong M**, Cai L, Wang Y, Shi B, Tan Y. (2016). Zinc deficiency worsens and supplementation prevents high-fat diet induced vascular inflammation, oxidative stress, and pathological remodeling. *Toxicological Sciences* 153(1):124-136. [PMID: 27370414]

30. Ma Z, Zhang YP, Liu W, Yan G, Li Y, Shields LB, Walker M, Chen K, Huang W, **Kong M**, Lu Y, Brommer B, Chen X, Xu X, Shields CB (2016). A controlled spinal cord contusion for the rhesus macaque monkey. *Experimental Neurology* 279:261-273. [PMID: 26875994]

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32. Wan Y, Datta S, Conklin D, **Kong M** (2015). Variable selection models based on multiple imputation with an application for predicting median effective dose and maximum effect. *Journal of Statistical Computation and Simulation* 85(9), 1902-1916. [PMID: 26412909]

33. **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]

34. S Jones, X Tang, Y Guo,C Steenbergen, D Lefer, R Kukreja, **M Kong**, Q Li, S Bhushan, X Zhu, J Du, Y Nong, H Stowers, K Kondo, G Hunt, T Goodchild, A Orr, C Chang, R Ockaili, F Salloum, and R Bolli (2015). The NHLBI-sponsored Consortium for preclinicAl assESsment of cARdioprotective therapies (CAESAR): a new paradigm for rigorous, accurate, and reproducible evaluation of putative infarct-sparing interventions in mice, rabbits, and pigs. *Circulation Research* 116, 572-586. [PMID: 25499773]

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36. Sokhadze EM, Frederick J, Wang Y, **Kong M**, El-Baz AS, Tasman A, Casanova MF. Event-related potential (ERP) study of facial expression processing deficits in autism. Journal of Communications Research. 2015 Nov 1;7(4): 391-412.

37. Ugiliweneza B, **Kong M**, Nosova K, Huang KT, Babu R, Lad SP, Boakye M (2014). Spinal surgery: variations in healthcare costs and implications for episode-based bundled payments. *Spine* 39(15):1235-1242. [PMID: 24831503]

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39. Bavle A, Raj A, **Kong M**, Bertolone S (2014). Impact of long-term erythrocytapheresis on growth and peak height velocity of children with sickle cell disease. *Pediatric Blood & Cancer* 61(11), 2024-30. [PMID: 25111886]

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76. Xu C, **Kong M** (1998). A stable solution method for large sparse matrix linear equations (Chinese). *Gongcheng Shuxue xuebao* 15(4), 28-34. [doi: cnki:ISSN:1005-3085.0.1998-04-004]

77. Xu C, Ma X, and **Kong M** (1996). A class of factorized quasi-Newton methods for nonlinear least squares problems. *J. Comput. Math*. 14(2), 143-158.

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 (lb645). 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 (lb650). 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]
5. Lee JJ, **Kong M** (2011). Rebuttal to the Response of Chou. *Cancer Research* 71, 2798-2800. [PMID: 21447741]

Published Abstracts

1. Smith M, **Kong M**, Cambon A, Woods C (2010). Effectiveness of antimicrobial guidelines for pneumonia in children. *The 48th Infectious Diseases Society of America Annual Meeting*. Vancouver, BC.
2. Rogers W, Meyer J, Rosthschild 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.
3. 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.
4. 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. Wu Y, Datta S, Little B, **Kong M** (2019). Causal analysis of dietary information and physical activity in type 2 diabetes by gender in white, African American and Mexican American: National Health and Nutrition Examination Surveys 2011-2014. (Submitted: Diabetes Care)
2. Wu Y, Little B, Datta S, Kong M (2019). Investigation of different statistical methods for estimating treatment effects when outcome variable is ordinal and confounding exists. (to be submitted Statistics in Medicine)
3. Reecea EK, Wallis A, Kong M, Marcus M, and Taylor KC (2019). The effect of caffeinated beverages on fecundability: differences in coffee, tea, and cola consumption. Submitted to *Fertility and Sterility.*
4. Bottinor W, Kelsey N, Riley EC, Craycroft J, **Kong M**, Lenneman CG (2019). Detecting temporal trend of subclinical cardiotoxicity in breast cancer patients treated with anthracyclines and her2+ antagonist: is there a window to intervene? (*Submitted: American Journal of Cardiology*).
5. Myers J, Feygin Y, Duncan S, Creel L, **Kong M**. Is there an end in sight? the rate of neonatal abstinence syndrome plateaus in Kentucky. (*Submitted: JAMA Pediatrics*)

6. Ghosal S, **Kong M** (2019). Assess treatment effects for multiple treatment groups when outcome is ordinal and confounding exists (under preparation).
7. Yan X., Zheng Q., **Kong M**. Estimation of treatment effect for time-to-event outcomes. (Under preparation)
8. Yan X., Zheng Q., **Kong M**. Weighted χ^2 and F test for multiple group comparisons in observational studies. (Under Review)
9. Sun J, Pal S, Duncan S, Kong M. Directed acyclic graph assisted methods for estimating average treatment effect (Under preparation)
10. Dekhil O, Shalaby A, Soliman A, Mahmoud A, **Kong M**, Barnes G, Elmaghraby A, El-Baz A (2020). Identifying brain areas correlated with ADOS raw scores by studying altered dynamic functional connectivity patterns. *Medical Image Analysis (Under review).*
11. Molecular Markers Predict Aggressive Potential of Indolent Prostate Cancer
12. Saran U, Chandrasekaran B, Kolluru V, Tyagi V, Nguyen K, Valadon C, Shaheen SP, **Kong M**, Poddar T, Ankem MK, Damodaran C (2020). Molecular markers predict aggressive potential of indolent prostate cancer. International Journal of Molecular Sciences.

Abstract Submitted

1. Davis DW, Jawad K, Feygin Y, Creel L, **Kong M**, Sun J, Lohr WD, Williams PG, Jones VF, Pasquenza N, and Liu GC (2019). Disparities in rates of ADHD diagnosis and treatment by race/ethnicity in youth receiving Kentucky Medicaid in 2017. *Pediatric Academic Societies 2019 Meeting.*
2. Eastep K, Anderson B, Stevenson M, Feygin Y, Yan X, **Kong M**, Jawad K, Meyers J, Wattles B, Sheehan K, Seaman C (2019). Most common indications for an opioid prescription among children enrolled in Kentucky Medicaid: a review of a recent cohort. *Pediatric Academic Societies 2019 Meeting.*
3. Eastep K, Anderson B, Stevenson M, Feygin Y, Yan X, **Kong M**, Jawad K, Meyers J, Wattles B, Sheehan K, Seaman C (2019). Geographic patterns in prescription opioids and opioid abuse in the pediatric population: a review of a recent Kentucky cohort. *Pediatric Academic Societies 2019 Meeting.*
4. Myers J, Feygin Y, Jawad K, **Kong M** (2019). Legalizing Recreation Cannabis Use is Linked to Increased Parental Neglect and Abuse. *Pediatric Academic Societies 2019 Meeting*.
5. Rydzewska M, Sun J, **Kong M**, Feygin Y, Duncan S (2019). The role of foster care in healthcare utilization of the infants with Neonatal Abstinence Syndrome within seven days post NICU discharge. *Pediatric Academic Societies 2019 Meeting*.
6. Rydzewska M, Sun J, **Kong M**, Feygin Y, Duncan S (2019). Rates and risk factors for the healthcare utilization of the Neonatal Intensive Care Unit graduates within seven days post discharge*. Pediatric Academic Societies 2019 Meeting*.
7. Smith M, Sun J, **Kong M**, Feygin Y (2019). Outpatient antibiotic prescribing in a cohort of children with 5 years continuous enrollment in Kentucky Medicaid. *Pediatric Academic Societies 2019 Meeting.*
8. Vatsalya V, Vadhanam MV, Kong M, Barve SS, McClain CJ, Gobejishvili L (2018). Serum soluble ST2 levels as a biomarker for the severity of acute alcoholic hepatitis. 41st Annual RSA Scientific Meeting, June 16-20, 2018

9. Myers J, Jawad K, Feygin Y, Creel L, Espinosa C, Kong M, Duncan S (2018). Stopping a Tidal Wave: One State's Neonatal Abstinence Syndrome Rate Plateaus.
10. Myers J, Jawad K, Feygin Y, Creel L, Espinosa C, Kong M, Duncan S (2018). Social Inequality's Impact on the Rate of Neonatal Abstinence Syndrome among Low-Income Children.
11. Myers J, Jawad K, Feygin Y, Creel L, Espinosa C, Kong M, Duncan S (2018). The Burden of Neonatal Abstinence Syndrome: Propensity Score Matching
12. Deel M, **Kong M**, Bertolone S (2012). Absolute lymphocyte counts are useful as predictors of persistent or chronic ITP in children. The American Society of Pediatric Hematology/ Oncology meeting 2012.
13. Bavle A, Raj A, **Kong M**, Bertolone S (2012). Impact of long-term erythrocytapheresis on growth and peak height velocity of children with sickle cell disease. The American Society of Pediatric Hematology/ Oncology meeting 2012.
14. Conklin DJ, **Kong M** (2012). Effects of diesel engine emissions on systemic inflammation in rodents. HEI 2012.

PROFESSIONAL ACTIVITIES

Invited Talks

1. "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
2. "Monotonic single index models with application to assessing drug interactions", 2015 ICSA China Statistics Conference, July 6-7, 2015, Shanghai, China
3. "GEE type inference for clustered zero-inflated negative binomial regression with application to dental caries." Department of Bioinformatics and Biostatistics, UofL, Oct. 31, 2014.
4. "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.
5. "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.
6. "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.
7. "Modeling and testing treated tumor growth using cubic smoothing splines". University of Texas M.D. Anderson Cancer Center, Houston, Texas, May 4, 2011.
8. "Modeling and testing treated tumor growth using cubic smoothing splines". Indiana University-Purdue University Indianapolis, April 13, 2011.
9. "Application of smoothing splines to assessing tumor growth and antitumor activity in xenograft models". Department of Statistics, Purdue University, Indiana, Oct. 29, 2010.

10. "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.
11. “New perspectives for models involving bioassay components”, The 1st Joint Biostatistics Symposium 2010, Beijing, China, July 17-18, 2010.
12. "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.
13. “Nonparametric approach for assessing multiple drug interaction in combination drug discovery.” Mid-West Biopharmaceuticals Statistics Workshop, Muncie, Indiana, May 22-24, 2010.
14. “Splines, mixed models, and their applications”. Statistics colloquium, the University of Arizona, April 3, 2009.
15. “Application of mixed models in drug combinations”. The Joint Statistical Meeting 2008, Denver, Colorado, August 3-7, 2008.
16. “A semiparametric approach and bootstrap method for assessing drug interaction”. The Joint Statistical Meeting, Salt Lake City, Utah, July 29-Aug 2, 2007.
17. “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 4th 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. 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, Nashville, TN, March 22-25, 2020.
2. Sun S*, **Kong M**, Duncan SD and Pal S. “Directed Acyclic Graph Assisted Methods for Estimating Average Treatment Effect”. ENAR 2020, Nashville, TN, March 22-25, 2020.
3. 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.
4. 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.
5. 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.

6. 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.
7. 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
8. Comparing Power of Various Propensity Score Methods, Craycroft J, **Kong M**. KY-ASA Spring Meeting, Louisville, KY, April 21, 2017
9. 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.
10. 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.
11. 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.
12. Profilng 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).
13. 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

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.

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