Hwanhee Hong, PhD

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Date Prepared: May 26, 2023

DUKE UNIVERSITY MEDICAL CENTER
CURRICULUM VITAE

Education:

Education:	Institution	Date (Year)	Degree
High School	Daeil Foreign Language High School, Seoul, Korea	2004	Major in English
College	Chung-Ang University, Seoul, South Korea	2008	BS in Statistics
Graduate	Harvard University, Boston, MA, USA	2010	MS in Biostatistics
School	University of Minnesota, Minneapolis, MN, USA	2013	PhD in Biostatistics

Professional training and academic career (chronologically, beginning with first postgraduate position):

Institution	Position/Title	Dates
Division of Biostatistics, Univ. of Minnesota	Postdoctoral Associate	2013 – 2014
Dept. of Mental Health, Johns Hopkins Bloomberg School of Public Health	Postdoctoral Fellow	2014 – 2018
Dept. of Biostatistics and Bioinformatics, Duke University	Assistant Professor	2018 – 2023
Dept. of Biostatistics and Bioinformatics, Duke University	Associate Professor	2023 – Present

Publications:

A. Refereed journals: (†author names in alphabetical order; *equal contribution)

A1. Methodological papers

1. **Hong H**, Carlin BP, Shamliyan T, Wyman JF, Ramakrishnan R, Sainfort F, and Kane RL (2013). Comparing Bayesian and frequentist approaches for multiple outcome mixed treatment comparisons. *Medical Decision Making*. 33(5):702-714. PMID: 23549384

2. Ohlssen D, Price KL, Xia HA, **Hong H**, Kerman J, Fu H, Quartey G, Heilmann CR, Ma H, and Carlin BP (2014). Guidance on the implementation and reporting of a drug safety Bayesian network meta-analysis. *Pharmaceutical Statistics*. 13(1):55-70. PMID: 24038897

3. **Hong H**, Fu H, Price KL, and Carlin BP (2015). Incorporation of individual patient data in network meta-analysis for multiple continuous endpoints, with application to diabetes treatment. *Statistics in Medicine*. 34(20):2794-2819. PMID: 25924975

4. Zhang J, Chu H, **Hong H**, Neaton JD, Virnig BA, and Carlin BP (2015). Bayesian hierarchical models for network meta-analysis incorporating nonignorable missingness. *Statistical Methods in Medical Research*. 26(5):2227-2243. PMID: 26220535

5. **Hong H**, Chu H, Zhang J, and Carlin BP (2016). A Bayesian missing data framework for generalized multiple outcome mixed treatment comparisons. **(with discussion and rejoinder)**. *Research Synthesis Methods*. 7(1):6-22. PMID: 26536149

6. **Hong H**, Chu H, Zhang J, and Carlin BP (2016). Rejoinder to the discussion of "a Bayesian missing data framework for generalized multiple outcome mixed treatment comparisons," by S. Dias and A. E. Ades. *Research Synthesis Methods*. 7(1):29-33. PMID: 26220535

7. **Hong H**, Rudolph K, and Stuart EA (2017). Bayesian approach for addressing differential covariate measurement error in propensity score methods. Psychometrika. 82(4):1078-1096. PMID: 27738956

8. **Hong H**, Fu H, and Carlin BP (2018). Power and commensurate priors for synthesizing aggregate and individual patient-level data in network meta-analysis. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*. 67(Part 4):1047-1069.

9. Susukida R, Crum RM, **Hong H**, Stuart EA, and Mojtabai R (2018). Comparing pharmacological treatments for cocaine dependence: Incorporation of methods for enhancing generalizability in meta-analytic studies. *International Journal of Methods in Psychiatric Research*. 27(4):e1609. PMID: 29464791

10. **Hong H**, Aaby DA, Siddique J, and Stuart EA (2019). Propensity score-based estimators with multiple error-prone covariates. *American Journal of Epidemiology*. 188(1):222-230. PMID: 30358801

11. Schmid I, Rudolph KE, Nguyen TQ, **Hong H**, Seamans MJ, Ackerman B, and Stuart EA (2020). Comparing the performance of statistical methods that generalize effect estimates from randomized controlled trials to much larger target populations. *Communications in Statistics - Simulation and Computation*. DOI: 10.1080/03610918.2020.1741621.

12. **Hong H**, Wang C, Rosner GL (2021). Meta-analysis of rare adverse events in randomized clinical trials: Bayesian and frequentist methods. *Clinical Trials*. 18(1):3–16. PMID: 33258698

13. Seamans MJ, **Hong H**, Ackerman B, Schmid I, and Stuart EA (2021). Generalizability of subgroup effects. *Epidemiology*. 32(3):389–92. PMID: 33591050

14. Li F, **Hong H**, and Stuart EA (2021). A note on generalizing causal effects from randomized trials to target populations. *Communications in Statistics-Theory and Methods*. DOI: 10.1080/03610926.2021.2020291

15. Zhang J, **Hong H**, and Chen Y (2022+). Dynamic synthesis of historical information through network-meta-analytic-predictive priors. *Statistics in Medicine*. Forthcoming.

16. Brantner CL, Chang T, Nguyen TQ, **Hong H**, DiStefano L, and Stuart EA (2023+) Methods for Integrating Trials and Non-Experimental Data to Examine Treatment Effect Heterogeneity. *Statistical Science*. Forthcoming.

A2. Collaborative papers

17. Wester WC, Koethe JR, Shepherd BE, Stinnette SE, Rebeiro PF, Kipp AM, **Hong H**, Bussmann H, Gaolathe T, McGowan CC, Sterling TR, and Marlink RG (2011). Non-AIDS-defining events among HIV-1-infected adults receiving combination antiretroviral therapy in resource-replete versus resource-limited urban setting. *AIDS*. 25(12):1471-1479. PMID: 21572309

18. Shippee TP, **Hong H**, Kane RL, and Henning-Smith C (2015). Longitudinal changes in nursing home resident-reported quality of life: The role of facility characteristics. *Research on Aging*. 37(6):555-580. PMID: 25651583

19. Mayo-Wilson E, Hutfless S, Li T, Gresham G, Fusco N, Ehmsen J, Heyward J, Vedula S, Lock D, Haythornthwaite J, Payne JL, Cowley T, Rosman L, Twose C, Stuart EA, **Hong H**, Doshi P, Suarez-Cuervo C, Singh S, and Dickersin K (2015). Integrating multiple data sources (MUDS) for meta-analysis to improve patient-centered outcomes research: a protocol. *Systematic Reviews*. 4(1):1. PMID: 26525044

20. Li T, Lindsey K, Rouse B, **Hong H**, Shi Q, Friedman DS, Wormald R, and Dickersin K (2016). Comparative effectiveness of first-line medications for primary open angle glaucoma - A systematic review and network meta-analysis. *Ophthalmology*. 123(1):129-140. PMID: 26526633

21. Mayo-Wilson E, Fusco N, Li T, **Hong H**, Canner J, Dickersin K, and the MUDS team (2017). Multiple outcomes and analyses in clinical trials create challenges for interpretation and research synthesis. *Journal of Clinical Epidemiology*. 86:39-50. PMID: 28529187

22. Mayo-Wilson E, Li T, Fusco N, Bertizzolo L, Canner J, Cowley T, Doshi P, Ehmsen J, Gresham G, Guo N, Haythornthwaite J, Heyward J, **Hong H**[†], Lock D, Payne J, Rosman L, Stuart EA, Suarez-Cuervo C, Tolbert

E, Twose C, Vedula S, and Dickersin K (2017). Cherry-picking by trialists and meta-analysts can drive conclusions about intervention efficacy. *Journal of Clinical Epidemiology*. 91:95-110. PMID: 28842290

23. Li T, Mayo-Wilson E, Fusco N, **Hong H**, Dickersin K, and the MUDS investigators (2018). Caveat emptor: the combined effects on multiplicity and selective reporting. *Trials*. 19(1):497. PMID: 30223876

24. Siotos C, **Hong H**, Uzosike A, Seal SM, Rosson GD, Cooney CM, and Cooney DS (2019). Keloid excision and adjuvant treatments: a network meta-analysis. *Annals of Plastic Surgery*. 83(2):154-162. PMID: 31232819

25. Lopes RD, **Hong H**, Harskamp RE, Bhatt DL, Mehran R, Cannon CP, Granger CB, Verheugt FWA, Li J, Berg JMt, Sarafoff N, Gibson CM, and Alexander JH (2019). Safety and efficacy of antithrombotic strategies in patients with atrial fibrillation undergoing percutaneous coronary intervention: a network meta-analysis of randomized controlled trials. *Journal of the American Medical Association Cardiology*. 14(8):747-755. PMID: 31215979

26. Mayo-Wilson E, Fusco N, Li T, **Hong H**, Canner JK, Cowley T, Haythornthwaite J, Payne J, Tolbert E, and Dickersin K (2019). Harms are assessed inconsistently and reported inadequately Part 1: Systematic adverse events. *Journal of Clinical Epidemiology*. 113:20-27. PMID: 31055175

27. Mayo-Wilson E, Fusco N, Li T, **Hong H**, Canner JK, Cowley T, Haythornthwaite J, Payne J, Tolbert E, and Dickersin K (2019). Harms are assessed inconsistently and reported inadequately Part 2: Nonsystematic adverse events. *Journal of Clinical Epidemiology*. 113:11-19. PMID: 31055176

28. Mayo-Wilson E, Fusco N, **Hong H**, Li T, Canner JK, and Dickersin K (2019). Opportunities for selective reporting of harms in randomized clinical trials: Selection criteria for non-systematic adverse events. *Trials*. 20:553. PMID: 31488200

29. Lopes RD, **Hong H**, and Alexander JH (2019). Antithrombotic therapy after acute coronary syndrome and/or percutaneous coronary intervention in atrial fibrillation: finding the sweet spot. *European Heart Journal*. 40(46):3768–3770. PMID: 31774111

30. Lopes RD, **Hong H**, Harskamp RE, Bhatt DL, Mehran R, Cannon CP, Granger CB, Verheugt FWA, Li J, Berg JMt, Sarafoff N, Vranckx P, Goette A, Gibson CM, and Alexander JH (2020). Optimal antithrombotic regimens for patients with atrial fibrillation undergoing percutaneous coronary intervention: an updated network meta-analysis. *Journal of the American Medical Association Cardiology*. 5(5):582–589. PMID: 32101251

31. Congdon M, **Hong H**, Young RR, Cunningham CK, Enane LA, Arscott-Mills T, Banda FM, Chise M, Motlhatlhedi K, Feemster K, Patel SM, Boiditswe S, Leburu T, Shah SS, Steenhoff AP, and Kelly MS (2020). Effect of Haemophilus influenzae type b and 13-valent pneumococcal conjugate vaccines on childhood pneumonia hospitalizations and deaths in Botswana. *Clinical Infectious Diseases*. 73(2):e410–e416. PMID: 32634831

32. Heston S, Young RR, **Hong H**, Akinboyo IC, Tanaka JS, Martin PL, Vinesett R, Jenkins K, McGill LE, Hazen KC, Seed PC, and Kelly MS (2020). Microbiology of bloodstream infections in children after hematopoietic stem cell transplantation: a single-center experience over two decades (1997-2017). *Open Forum Infectious Diseases*. 7(11):ofaa465. PMID: 33209953

33. Wang L, Paller CJ, **Hong H**, De Felice A, Alexander GC, and Brawley O (2021). Comparison of systemic treatments for metastatic castration-sensitive prostate cancer: A systematic review and network meta-analysis. *Journal of the American Medical Association Oncology*. 7(3):412–20. PMID: 33443584

34. Carnicelli AP, **Hong H**, Giugliano RP, Connolly SJ, Eikelboom J, Patel MR, Wallentin L, Morrow DA, Wojdyla D, Hua K, Hohnloser SH, Oldgren J, Ruff CT, Piccini JP, Lopes RD, Alexander JH, Granger CB, on behalf of the COMBINE AF Investigators (2021). Individual patient data from the pivotal randomized

controlled trials of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation (COMBINE AF): design and rationale. *American Heart Journal*. 233:48–58. PMID: 33296688

35. Mayo-Wilson E, Chen X, Qureshi R, Dickinson S, Golzarri-Arroyo L, **Hong H**, Gorg C, and Li T (2021). Restoring invisible and abandoned trials of gabapentin for neuropathic pain: A clinical and methodological investigation (protocol). *BMJ Open*. 11(6):e047785. PMID: 34193496

36. Wang L, **Hong H**, Alexander GC, Brawley O, Paller C, and Ballreich J (2022). Cost-effectiveness of systemic treatments for metastatic castration-sensitive prostate cancer: An economic evaluation based on network meta-analysis. *Value in Health*. 25(5):796-802. PMID: 35500949

37. Wang L, Paller CJ, **Hong H**, Rosman L, Felice AD, Brawley O, and Alexander GC (2022).Comparison of treatments for nonmetastatic castration-resistant prostate cancer: Matching-adjusted indirect comparison and network meta-analysis. *Journal of the National Cancer Institute*. 114(2):191-202. PMID: 33830214

38. Carnicelli AP, **Hong H**, Connolly SJ, Eikelboom J, Giugliano RP, Morrow DA, Patel MR, Wallentin L, Alexander JH, Bahit MC, Benz AP, Bohula EA, Chao T, Dyal L, Ezekowitz M, Fox KA, Gencer B, Halperin J, Hijazi Z, Hohnloser SH, Hua K, Hylek E, Kato ET, Kuder J, Lopes RD, Mahaffey K, Oldgren J, Piccini JP, Ruff C, Steffel J, Wojdyla D, and Granger CB (2022). Direct Oral Anticoagulants versus Warfarin in Patients with Atrial Fibrillation: Patient-Level Network Meta-Analyses of Randomized Clinical Trials with Interaction Testing by Age and Sex. *Circulation*. 145(4):242-255. PMID: 34985309. (**Selected to featured article**)

39. Akenroye A, Lassiter G, Jackson JW, Keet C, Segal J, Alexander CG, and **Hong H** (2022). Comparative efficacy of mepolizumab, benralizumab and dupilumab in individuals with eosinophilic asthma: A systematic review and Bayesian network meta-analysis. *Journal of Allergy and Clinical Immunology*. S0091-6749(22)00846-6. PMID: 35772597

40. Halabi S, Zhou J*, He Y*, Bressler L, Hernandez A, Turner N, and **Hong H** (2022). Landscape of Coronavirus disease 2019 (COVID-19) clinical trials: new frontiers and challenges. *Clinical Trials*. DOI: 10.1177/17407745221105106. PMID: 35786000

41. Qureshi R, Chen X, Gorg C, Mayo-Wilson E, Dickinson S, Golzarri-Arroyo L, **Hong H**, Phillips R, Cornelius V, DeMarco MM, Guallar E, and Li T (2022+). Comparing the value of data visualization methods for communicating harms in clinical trials. *Epidemiologic Reviews*. Forthcoming.

42. Moorthy G, Young R, Smith MJ, White MJ, **Hong H**, Kelly MS (2023+). Racial inequities in sepsis mortality among children in the United States. *The Pediatric Infectious Disease Journal*. Forthcoming.

43. Campbell JC, Lee JW, Leadbetter L, Wick CC, Riska K, Cunningham CD, Russomando AC, Truong T, **Hong H**, Kuchibhatila M, Kaylie DM (2023+). Systematic review and meta-analysis for surgery versus stereotactic radiosurgery for jugular paragangliomas. *Otology & Neurotology.* Forthcoming.

44. Nopsopon T, Lassiter G, Chen M, Alexander CG, Keet C, **Hong H** and Akenroye A (2023+). Comparative efficacy of tezepelumab, mepolizumab, benralizumab, and dupilumab in eosinophilic asthma: a Bayesian network meta-analysis. *The Journal of Allergy and Clinical Immunology.* Forthcoming.

45. Liu Z, Amer FMA, Xiao M, Xu C, Furuya-Kanamori L, **Hong H**, Siegel L, Lin L (2023+). The normality assumption on between-study random effects was questionable in a considerable number of Cochrane meta-analyses. *BMC Medicine.* Forthcoming.

46. Brantner C, Chang T, Nguyen TQ, **Hong H**, Stefano LD, Stuart EA (2023+). Methods for Integrating Trials and Non-Experimental Data to Examine Treatment Effect Heterogeneity. *Statistical Science*. Forthcoming.

47. Harrington J, Carnicelli A, Hua K, Wallentin L, Patel MR, Hohnloser SH, Giugliano RP, Fox KA, Hijazi Z, Lopes RD, Pokorney SD, **Hong H**, Granger CB (2023+). Direct Oral Anticoagulants versus Warfarin Across the Spectrum of Kidney Function: Patient-Level Network Meta-Analyses From COMBINE AF. *Circulation*. Forthcoming.

48. Nelson AJ, Lopes RD, **Hong H**, Hua K, Slovin S, Tan S, Nilsson J, Bhatt DL, Goodman SG, Evans CP, Clarke NW, Shore ND, Margel D, Klotz LH, Tombal B, Leong DP, Alexander JH, Higano CS (2023+).

Cardiovascular effects of GnRH antagonists compared with agonists in prostate cancer: a systematic review. *JACC: CardioOncology.* Forthcoming.

B. Book Chapters:

49. Carlin BP, **Hong H**. Bayesian network meta-analysis for safety evaluation (2014). *Quantitative Evaluation of Safety in Drug Development: Design, Analysis and Reporting*, eds. Jiang Q and Xia HA, Boca Raton, FL: CRC Press. 2014. p. 223–35.

50. **Hong H**, Price KL, Fu H, Carlin BP (2017). Bayesian network meta-analysis for multiple endpoints. *Methods in Comparative Effectiveness Research*, eds. Morton S and Gatsonis C, Boca Raton, FL: CRC Press 2017. p. 385–407.

Consultant appointments:
2014 – 2015	School of Medicine, Johns Hopkins University
2015 – 2016	Division of Interventional Cardiology, University of Utah Health Sciences Center
2015 – 2016	School of Social Work, University of Maryland
2019	Bloomberg School of Public Health, Johns Hopkins University
2020 – 2021	Department of Epidemiology and Biostatistics, Indiana University School of Public Health-Bloomington

Professional awards and special recognitions:
2004 – 2007	Scholarship for Excellent Records, Department of Mathematics and Statistics, Chung-Ang University, Seoul, South Korea
2011	Outstanding Teaching Assistant Award, Division of Biostatistics, Univ. of Minnesota
2012	Outstanding Research Assistant Award, Division of Biostatistics, Univ. of Minnesota
2012	Young Investigator Travel Award, International Society for Bayesian Analysis
2012	Student Paper Award, ASA Section on Health Policy Statistics
2013	Jacob E. Bearman Student Achievement Award, Division of Biostatistics, University of Minnesota
2013	Student Paper Award, ASA Section on Health Policy Statistics
2014	Delta Omega, Honorary Society in Public Health, University of Minnesota
2017	Travel Awards for Junior Researchers, Biostatistics in the Modern Computing Era, Medical College of Wisconsin
2019	Career Development Award, Korean International Statistical Society

Organizations and participation:
A. Professional Committees
2019, 2021	Program Committee, Eastern North American Regional Meeting of the International Biometric Society (ENAR)
2020 – Present	Student Paper Competition Review Committee, ENAR
2021 – Present	Publications, Executive Committee, Health Policy Statistics Section, American Statistical Association (ASA)
2022	Student Paper Competition Reviewer, Health Policy Statistics Section, ASA
2022, 2023	Student Paper Competition Reviewer, Section on Bayesian Statistical Science, ASA
2022 – Present	Student Committee, International Conference on Health Policy Statistics 2023
2022 – Present	Organizing Committee, Duke Industry Statistics Symposium 2023

B. Conference Session Organizer
2015	International Conference on Health Policy Statistics, Providence, RI
2017	Eastern North American Regional Meeting, Washington, DC

2020	Eastern North American Regional Meeting, Virtual Meeting (This session was cancelled due to COVID-19)
2020	Session Organizer, International Society for Bayesian Analysis (This session was cancelled due to COVID-19)

C. Conference Session Chair

2017	Atlantic Causal Inference Conference, Chapel Hill, NC
2018	Eastern North American Regional Meeting, Atlanta, GA
2019	Eastern North American Regional Meeting, Philadelphia, PA
2020	Eastern North American Regional Meeting, Virtual Meeting
2021	Eastern North American Regional Meeting, Virtual Meeting

D. Leadership Positions

2020 – Present	Math Director, National Mathematics and Science Competition, Korean-American Scientists and Engineers Association (NC Chapter)

Participation in academic and administrative activities of the University and Medical Center:

2018 – 2019	MB/PhD Curriculum Review Committee, B&B
2019 – Present	Academic Review Committee, B&B
2022	Faculty Search Committee, B&B
2022 – Present	Organizing Committee, Duke-Industry Statistics Symposium 2023

External support - gifts, grants, and contracts: (*Denotes PI, Co-PI or Site-PI)

A. Past:

National Institute of Mental Health (NIMH, R01MH099010)   07/01/2013 – 06/30/2017
Title: Using propensity scores for causal inference with covariate measurement error
Role: Postdoctoral Fellow, 80% effort, 2014 – 2017 (PI: Stuart, Elizabeth)
$827,461

National Eye Institute (U01EY020522)   05/01/2010 – 04/30/2017
Title: Comparative Effectiveness Research & the Cochrane Eyes & Vision Group
Role: Statistician, 10% effort, 2014 – 2017 (PI: Dickersin, Kay)
$9,725,907

Patient-Centered Outcomes Research Institute (PCORI)   02/01/2015 – 01/31/2016
Title: Integrating Multiple Data Sources for Meta-analysis to Improve PCOR
Role: Statistician, 20% effort, 2015 – 2016 (PI: Dickersin, Kay)

Center of Excellence in Regulatory Science and Innovation, FDA   03/01/2014 – 02/28/2018
Title: Bayesian Approaches for Meta-Analyses of Rare Adverse Events in Randomized Clinical Trials.
Role: Co-Investigator, 7% effort, 2016 – 2017 (PI: Alexander, George Caleb)

National Institute of Health (R01DA036520)   03/01/2014 – 02/28/2018
Title: Generalizing RCT Efficacy Evidence: Application to NIDA Clinical Trials Network.
Role: Statistician, 13% effort, 2016 – 2017 (PI: Mojtabai, Ramin)
$722,925

*National Institute of Mental Health (K99MH111807)   07/01/2017 – 07/31/2018
Title: Estimating Population Effects in Mental Health Research Using Meta-Analysis
Role: Principal Investigator, 100% effort
$117,636

Bristol-Myers Squibb Research Agreement (BMS, DCRI #5911)   01/02/2015 – 05/31/2019
Title: Apixaban AF/ACS Study
Role: Collaborator, 10% effort, 2018 – 2019 (PI: Alexander, John)

*National Institute of Mental Health (R00MH111807)   08/01/2018 – 05/31/2022
Title: Estimating Population Effects in Mental Health Research Using Meta-Analysis
Role: Principal Investigator, 75% effort
$746,998

B. Present:
Bristol-Myers Squibb (Q-11414)   09/19/2019 – 10/30/2022
Synthetic Control Arm for Idiopathic Pulmonary Fibrosis
Role: Statistician, 5% effort (PI: Palmer, Scott)
$351,863

*Duke Clinical Research Institute Small Projects   09/01/2021 – 08/31/2023
Title: Comparative effectiveness of COVID-19 treatments by multiple outcomes using Bayesian multivariate network meta-analysis
Role: Principal Investigator, 10% effort (Co-PI: Halabi, Susan)
$196,336

*National Institute of Mental Health (R01MH126856-01)   09/01/2021 – 05/31/2025
Subcontract to Johns Hopkins University
Title: Combining data sources to identify effect moderation for personalized mental health treatment
Role: Co-Investigator, Duke Site-PI, 25% effort (PI: Stuart, Elizabeth)
$1,730,235

* Patient-Centered Outcomes Research Institute (ME-2020C3-21145)   11/01/2021 – 10/31/2024
Subcontract to Johns Hopkins University
Title: Advanced computational approaches for integrating data to assess effect heterogeneity
Role: Co-Investigator, Duke Site-PI, 15% effort (PI: Stuart, Elizabeth)
$749,779

National Institute of Health (NIH R01)   07/01/2022 – 06/30/2027
Title: Linguistic, Social, and Cognitive Determinants of Early Word Learning
Role: Co-Investigator, 25% for Years 4-5 (PI: Bergelson, Elika)
Awarded in August 2022
$2,902,428

C. Pending:
National Institute of Allergy and Infectious Diseases (NIAID NOSI R21)   04/01/2022 – 03/31/2023
Title: Secondary Analyses to Support the Rational Design of Clinical Trials in Chronic Lung Allograft Dysfunction
Role: Co-Investigator, 10% (PI: Todd, Jamie L.)
Received initial score of 39. Resubmitted Feb 2022
$442,750

Patient-Centered Outcomes Research Institute   11/01/2023 – 10/31/2030
Title: Trial of Sequential Medications AfteR TNF failure in JIA (SMART-JIA)
Role: Co-Investigator, 7.5% (PIs: Schanberg, Laura E. and Barnhart, Huiman)

Resubmitted in Jan 2023
$8,580,517

National Institute of Mental Health (R01)   7/1/2023 – 6/30/2028

*National Institute of Mental Health (R01)   7/1/2023 – 6/30/2028

Title: Advancing Tailored Treatments for Patients with Mental Disorder Through Network Meta-Analysis
Role: PI, 35% effort (PI: Hong, Hwanhee)
Submitted in Sep 2022
$1,933,039

D. Duke Institutional Funding

2018 – 2019	Department: Department of Pediatrics (Infectious Diseases)
	Role: Faculty Statistician
	Staff: 1 staff statistician
	Support: 5%
2021 – Present	Duke Clinical Research Institute
	Role: T32 Training Faculty
2022 – Present	Department: Department of Pediatrics
	Role: Faculty Statistician
	Staff: 1 staff statistician
	Support: 20%

Mentoring activities:

A. Postdoctoral Fellow
2022 – Present   Qiao Wang, B&B

B. Doctoral Thesis Advisees
2020 – Present   Kaiyuan Hua, B&B (Co-adviser: Xiaofei Wang)

C. Master Project Advisees
2019 – 2020   Chenyang Wang, B&B (with financial support)
                      Position: MS students in data science, University of British Columbia at Vancouver
2019 – 2020   Ziting Yang, B&B (with financial support)
                      Position: Statistical Programmer, Suzhou Zelgen Biopharmaceuticals Co., China
2019 – 2020   Jinyi Zhou, B&B (with financial support)
                      Position: Senior Statistician-Computation, Eli Lilly and Company
2021 – 2022   Mengyi Hu, B&B (with financial support)
                      Position: Biostatistician I, Cytel
2021 – 2022   Blessing Ibe, B&B
                      Position: Senior Statistician-Computation, Eli Lilly and Company
2021 – 2022   Heewon Kim, B&B (with financial support)
                      Position: Senior Statistician-Computation, Eli Lilly and Company
2021 – 2022   Rong Zhao, B&B
                      Position: PhD student in biostatistics, Penn State University

D. Other Advisees
2019   Jianghao Li, B&B, PhD Research Assistant with financial support
2019 – 2020   Tongrong Wang, B&B, PhD Research Assistant with financial support
2019 – 2020   Guangyu Tong, Department of Sociology, PhD Research Assistant
2020 – 2021   Alexander Long, Department of Statistics, NCSU, PhD Research Assistant at DCRI
2022 – 2023   Tengjie Tang, Department of Statistical Science, Duke, MS Research Assistant
2023 – Present   Zhuoran Hou, B&B, PhD Rotation

2021 – Present	Eric Yanchenko, Department of Statistics, NCSU, PhD Research Assistant at DCRI
2020 – Present	Lu Liu, B&B, PhD Research Assistant with financial support
2021 – Present	Elaona Lemoto, B&B, PhD Rotation & Research Assistant
2023 – Present	Yicheng Shen, Department of Statistical Science, Duke, MS Research Assistant
2023 – Present	Kyungeun Jeon, Department of Statistical Science, Duke, MS Research Assistant

E. PhD Thesis Committee
2019 – 2021	Lin Wang, PhD, Department of Epidemiology, Johns Hopkins University
2020 – 2022	Ayobami Akenroye, Department of Epidemiology, Johns Hopkins University
2021 – Present	Dongrak Choi, B&B
2022 – Present	Mengying Yan, B&B

F. Master Project Committee
2019 – 2020	Xiyuan Zhang, B&B
2020 – 2022	Jameson Blount, B&B
2021 – 2022	Yi Liu, B&B
2021 – 2022	Huiyue Li, B&B
2022 – Present	Zhen Liu, B&B
2022 – Present	Ziyi Wang, B&B
2022 – Present	Jackson Dial, B&B
2022 – Present	Dezhao Fu, B&B
2022 – Present	Songyun Zhang, B&B

Education / Teaching activities:
A. Teaching
Biostat 719 Generalized Linear Models	Fall 2019* (n=24)
	Fall 2020 (n=25)
	Fall 2021 (n=37)
	Fall 2022 (n=43)

* Co-taught with Dr. Andrzej S. Kosinski

B. Guest Lecture
| 2014 | Seminar on Statistical Methods for Mental Health (330.805), Department of Mental Health, Johns Hopkins Bloomberg School of Public Health
Instructor: Elizabeth A. Stuart, PhD |
| 2016 | Seminar on Statistical Methods for Mental Health (330.805), Department of Mental Health, Johns Hopkins Bloomberg School of Public Health
Instructor: Rashelle J. Musci, PhD |
| 2019 | Current Problems in Biostatistics (BIOS900), Department of Biostatistics and Bioinformatics, Duke University
Instructor: Huiman Xie Barnhart, PhD |
| 2019 | Applied Analytic Methods for Population Health Sciences I (DPHS701), Department of Population Health Sciences, Duke Univeristy
Instructor: Emily O'Brien, PhD and Brad Hammill, DrPH |
| 2022 | Integrating multiple data for comparative effectiveness research: Meta-analysis. Summer Institute in Biostatistics. |

Invited Lectures and Presentations: (†: session organizer; *: invited talk)

A. Visiting Professorships

1. *A Bayesian missing data framework for multiple outcome mixed treatment comparisons. Research Center for Data Science: The 3rd International Conference, Chung-Ang University, Seoul, South Korea. July 2012.

2. *Hierarchical Bayesian methods for multiple outcomes in network meta-analysis. Department of Biostatistics, University of Pittsburgh, Pittsburgh, PA. January 2014.

3. *Hierarchical Bayesian methods for multiple outcomes in network meta-analysis. Survival, Longitudinal and Multivariate Data Working Group, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD. October 2014.

4. *Hierarchical Bayesian methods for multiple outcomes in network meta-analysis. Department of Mathematics and Statistics, University of Maryland, Baltimore County, Baltimore, MD. October 2014.

5. *Integrating Data for Comparative Effectiveness Research. Department of Biostatistics, Georgia Southern University, Statesboro, GA. January 2017.

6. *Integrating Data for Comparative Effectiveness Research. Department of Statistics, Florida State University, Tallahassee, FL. January 2017.

7. *Integrating Data for Comparative Effectiveness Research. Department of Biostatistics and Computational Biology, University of Rochester Medical Center, Rochester, NY. January 2017.

8. *Meta-Analysis of Rare Adverse Events in Randomized Controlled Trials: Bayesian and Frequentist Methods. Informal Biostatistics Meetings, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University, Baltimore, MD. February 2017.

9. *Integrating Data for Comparative Effectiveness Research. Department of Biostatistics and Bioinformatics, Duke Clinical Research Institute, Duke University School of Medicine, Durham, NC. February 2017.

10. *Integrating Data for Comparative Effectiveness Research. Department of Biostatistics, Indiana University, Indianapolis, IN. February 2017.

11. *Integrating Data for Comparative Effectiveness Research. Department of Epidemiology and Biostatistics, Drexel University, Philadelphia, PA. February 2017.

12. *Integrating Data for Comparative Effectiveness Research. Division of Biostatistics, Department of Public Health Sciences, University of California, Davis, Davis, CA. March 2017.

13. *Power and Commensurate Priors for Synthesizing Aggregate and Individual Patient-Level Data in Network Meta-Analysis. Biostatistics in Psychiatry Seminar, Department of Psychiatry, Columbia University, New York, NY. April 2017.

14. *Power and Commensurate Priors for Synthesizing Aggregate and Individual Patient-Level Data in Network Meta-Analysis. Center for Data Science, Chung-Ang University, Seoul, South Korea. November 2017

15. *A Bayesian approach for handling covariate measurement error when estimating population treatment effects. Korean International Statistical Society, Monthly Webinar, July 2022

B. International Meetings
1. [†]Bayesian network meta-analysis for estimating drug class effects and temporal effects, with ap- plications to primary open angle glaucoma. International Conference on Health Policy Statistics, Providence, RI. October 2015.

2. Estimating population treatment effects in meta-analysis. International Conference on Health Policy Statistics, Charleston, SC, USA. January 2018

3. [†,*]Bayesian network meta-analysis for estimating population treatment effects. International Society for Bayesian Analysis. Kunming, China. June 2020. (This session was cancelled due to COVID-19)

4. Transporting causal inferences from network meta-analysis to a target population. International Conference on Health Policy Statistics, Scottsdale, AZ. January 2023.

C. National Scientific Meetings

1. Hierarchical Bayesian methods for combining efficacy and safety in multiple treatment comparisons. Joint Statistical Meetings, San Diego, CA. July 2012.

2. A Bayesian missing data framework for generalized multiple outcome mixed treatment comparisons. Joint Statistical Meetings, Montreal, Quebec, Canada. August 2013

3. Bayesian approach for addressing differential covariate measurement error in propensity score methods. Joint Statistical Meetings, Seattle, WA. August 2015.

4. Incorporation of individual patient data in network meta-analysis for multiple continuous endpoints, with application to diabetes treatment. Joint Statistical Meetings, Chicago, IL. August 2016.

5. [†,*]Propensity Score-Based Estimators with Multiple Error-Prone Covariates. Eastern North American Regional meeting of the International Biometric Society, Washington, DC. March 2017.

6. Estimating population treatment effects in meta-analysis. Eastern North American Regional meeting of the International Biometric Society, Atlanta, GA. March 2018.

7. A Bayesian approach for handling covariate measurement error when estimating population treatment effect. Eastern North American Regional meeting of the International Biometric Society, Philadelphia, PA. March. 2019

8. A Bayesian approach for handling covariate measurement error when estimating population treatment effect. Joint Statistical Meetings, Denver, CO. August 2019

9. [†,*]Bayesian network meta-analysis for estimating population treatment effects. Eastern North American Regional meeting of the International Biometric Society. Virtual Meeting. March 2020. (This session was cancelled due to the COVID-19 outbreak)

10. [*]Comparing Bayesian methods for creating external controls using multiple historical controls in clinical trials. Duke Industry Statistics Symposium 2023, Virtual. March 2023.

D. Instructional Courses, workshops, symposiums

1. When should antiretroviral treatments be started in Botswana? - Tshepo study. Technical workshop : HIV/AIDS interventions in Botswana, Harvard University, Boston, MA. July 2009.

2. Bayesian approaches for multiple treatment comparisons. Minnesota Evidence-based Practice Center, Minneapolis VA Medical Center, Minneapolis, MN. November 2011.

3. A Bayesian missing data framework for combining multiple outcomes in network meta-analysis. Lilly Research Awards Program Collaboration Seminar, Indianapolis, IN. May 2013.

4. Introduction to indirect comparison and network meta-analysis workshop at AHQR. Agency for Healthcare Research and Quality. Rockville, MD, June 2015. (Taught with Dr. Tianjing Li)

5. Network meta-analysis for behavioral trials: an introduction and overview. Society of Behavioral Medicine Annual Meeting & Scientific Sessions. Washington, DC, March 2016. (Taught with Dr. Tianjing Li)

6. Introduction to meta-analysis and network meta-analysis. BERD Methods Core Applied Seminar, Duke University, Durham, NC. March 2019

7. Bayesian analysis to integrate multiple data for comparative effectiveness research. Duke- Margolis Seminars in Health Policy and Management. Webinar, October 2020.

8. Causal inference in biomedical research: Network meta-analysis and generalizability. Korea Summer Session on Causal Inference. Webinar, July 2021.

9. A Bayesian approach for handling covariate measurement error when estimating population treatment effects. Korea Summer Session on Causal Inference. Webinar, July 2022.

E. Posters

1. Hierarchical Bayesian methods for combining efficacy and safety in multiple treatment comparisons. World Meeting of the International Society for Bayesian Analysis, Kyoto, Japan. June 2012

2. Hierarchical Bayesian methods for combining efficacy and safety in multiple treatment comparisons. Eastern North American Regional meeting of the International Biometric Society, Washington, DC. April 2012

F. Regional presentations and posters

1. Incorporation of individual patient data in network meta-analysis for multiple continuous endpoints, with application to diabetes treatment. G70 conference, Durham, NC. April 2015. (Poster)

2. Propensity score-based estimators with multiple error-prone covariates. Atlantic Causal Inference Conference. New York, NY. May 2016.

3. Power and commensurate priors for synthesizing aggregate and individual patient-level data in network meta-analysis. Biostatistics in the Modern Computing Era, Medical College of Wisconsin, Milwaukee, WI. September 2017.