Biyue Dai

(last update: December 22, 2025)

Education

The University of Iowa — Iowa City, IA
Ph.D., Biostatistics — December 2019
M.S., Biostatistics — December 2016

Lawrence University — Appleton, WI
B.A., Mathematics, *magna cum laude* — June 2014

Work Experience

University of Minnesota — Minneapolis, MN
Division of Biostatistics and Health Data Science
Coordinating Centers for Biometric Research
Assistant Professor (Contract) — May 2022 - Present

Eli Lilly and Company, Global Statistical Science — Indianapolis, IN
Research Scientist/Advisor - Statistics, Diabetes/Endocrine — January 2020 - April 2022

Mayo Clinic, Division of Biomedical Statistics and Informatics — Rochester, MN
Biostatistics Intern — Summer 2018

University of Iowa Hospitals and Clinics, Department of Neurology — Iowa City, IA
Graduate Research Assistant — March 2017 - August 2019

Medivation Inc (Part of Pfizer), Department of Biometrics — San Francisco, CA
Biostatistics Intern — Summer 2016

University of Iowa, Center for Public Health Statistics — Iowa City, IA
Graduate Research Assistant — Sept 2014 - May 2017

Lawrence University, Department of Mathematics — Appleton, WI
Undergraduate Research Assistant — Summer 2013

Publications

Peer-Reviewed Journal Articles

27. Tugume L, Cresswell FV, Bahr NC, **Dai B**, Engen N, Meya DB, Boulware DR. (2025). C-reactive protein in TB meningitis: a viable biomarker for individualized care. *Clinical Infectious Diseases*. Epub ahead of print: DOI: 10.1093/cid/ciaf576.

26. Schwartz EL, Nalintya EK, Skipper CP, Nerima P, Fieberg AM, Namakula OL, **Dai B**, Meya DB, Boulware DR, Rajasingham R. (2025). Predictive value of C-reactive protein for hospitalization and mortality among people with advanced HIV disease in Uganda receiving the WHO-recommended package of care. *Clinical Infectious Diseases*. Epub ahead of print: DOI: 10.1093/cid/ciaf560.

25. Rutakingirwa MK, Skipper CP, **Dai B**, Wele A, Namombwe S, Mugabi T, Ndyetukira JF, Sadiq A, Kabahubya M, Chemusto L, Ahimbisibwe C, Nabbale S, Kandole TK, Muyise RCB, Kagimu E, Luggya T, Mulungi J, Jjunju S, Nicol MR, Stott KE, Kwizera R, Meya DB, Boulware DR, McHale TC. (2025). Evaluating the Use of Lower Dose Flucytosine for the Treatment of Cryptococcal Meningitis: A Clinical Trial. *Clinical Infectious Diseases*. Epub ahead of print: DOI: 10.1093/cid/ciaf079

24. Meya DB, Cresswell FV, **Dai B**, Engen N, Naidoo K, Ganiem AR, Imran D, Kabahubya M, Lessells RJ, Yunivita V, Estiasari R, Tugume L, Hlabisa B, Kurniawati MY, Sagita N, Kagimu E, Maharani K, Gakuru J, Gaharu MN, Mugabi T, Kimuda S, Namombwe S, Te Brake L, Aarnoutse R, Svensson EM, Bangdiwala AS, Namanda S, Bahr NC, Musubire AK, Moosa MYS, Hamers RL, Marais S, Boulware DR, van Crevel R, Ruslami R. (2025). Trial of High-Dose Oral Rifampin in Adults with Tuberculous Meningitis. *New England Journal of Medicine, 393*(24), 2434-2446.

23. Adzemovic T, Nalintya E, Fieberg A, Mande E, George K, Yueh S, Namakula O, Nerima P, **Dai B**, Meya DB, Boulware DR, Rajasingham R. (2025). Diagnostic Accuracy of the Novel FujiLAM II Assay to Detect Tuberculosis in Outpatients with Advanced HIV Disease. *Clinical Infectious Diseases, 81*(4), 137-142.

22. Abassi M, Hou C, Fieberg A, **Dai B**, Musubire AK, Robertson J, Tugume L, Ssebambulidde K, Nuwagira E, Muzoora C, Williams DA, Boulware DR, Meya DB. (2025). Cerebral Perfusion Pressures and Implications on Clinical Outcomes and Medical Management in Cryptococcal Meningitis. *Open Forum Infectious Diseases, 12*(8):ofaf451.

21. Ellis J, **Dai B**, Kabahubya M, Hale G, Mande E, Katende G, Kagimu E, Gakuru J, Ndyetukira JF, Tukundane A, Adzemovic T, Nsangi LJ, Jarvis JN, Bahr NC, Cresswell FV, Meya DB, Boulware DR. (2025). Diagnostic accuracy of the re-engineered urinary FujiLAM2 assay amongst hospitalized adults with advanced HIV disease. *AIDS, 39*(10), 1334-1343.

20. Mugabi T, Namombwe S, **Dai B**, Nalintya E, Nsangi LJ, Kabahubya M, Najjuka SM, Okurut S, Namuju OC, Kigozi E, Kabbale KD, Wilber B. Jjunju S, Muzoora C, Tugume L, Louine M, Wilson MR, Bahr NC, Cresswell FV, Meya DB, Ellis J, Boulware DR, Rajasingham R. (2025). Etiology and Outcomes of Meningitis among Adults in Three Ugandan Referral Hospitals from 2018-2023: a Prospective Cohort Study in a High HIV Endemic Setting. *American Journal of Tropical Medicine and Hygiene, 112*(6), 1273-1279.

19. Gakuru J, Kagimu E, **Dai B**, Okurut S, Nsangi L, Bahr NC, Okirwoth M, Namuju OC, Jarvis JN, Lawrence DS, Ahimbisibwe C, Ellis J, Tadeo KK, Boulware DR, Meya DB, Tugume L. (2025). Implementation of Single High-dose Liposomal Amphotericin B Based Induction Therapy for Treatment of HIV-associated Cryptococcal Meningitis in Uganda: A Comparative Prospective Cohort Study. *Clinical Infectious Diseases, 80* (2), 417-424.

18. Meya DB, Nalintya E, Skipper CP, Kirumira P, Ayebare P, Naluyima R, Namuli T, Turya F, Walukaga S, Engen N, Hullsiek KH, Wele A, **Dai B**, Boulware DR, Rajasingham R. (2025). Adjunctive Single-Dose Liposomal Amphotericin to Prevent Cryptococcal Meningitis in People with HIV-Associated Cryptococcal Antigenemia and Low Plasma Cryptococcal Antigen Titers. *Clinical Infectious Diseases, 80*(1), 129-136.

17. Kimuda S, Kwizera R, **Dai B**, Kigozi E, Kasozi D, Rutakingirwa MK, Tukundane A, Shifah N, Luggya T, Luswata A, Ndyetukira JF, Yueh SL, Mulwana S, Wele A, Bahr NC, Meya DB, Boulware DR, Skipper CP. (2025). Comparison of Early Fungicidal Activity and Mortality Between Daily Liposomal Amphotericin B and Daily Amphotericin B Deoxycholate for Cryptococcal Meningitis. *Clinical Infectious Diseases, 80*(1), 153-159.

16. Nsangi L, Hullsiek KH, **Dai B**, Namudde A, Menya G, Ssebambulidde K, Tugume L, Nuwagira E, Rhein J, Williams DA, Musubire AK, Boulware DR, Meya DB, Abassi M. (2025). Neurocognitive Impairment Among Cryptococcal Meningitis Survivors in Uganda, A Prospective Cohort Study. *Open Forum Infectious Diseases, 12*(2), ofaf054.

15. Nalintya E, Sekar P, Namakula OL, Tadeo KK, Kwizera R, Apeduno L, Naluyima DR, Nanano R., Mujungu L, Lehman A, Adzemovic T, Amperiize M, Kavuma P, Kasone V, Fieberg A, Nerima

P, **Dai B**, Meya DB, Boulware DR, Rajasingham R. (2024). The Diagnostic Performance of the Visitect Advanced Disease Point-of-Care CD4 Platform: a Pragmatic Mixed-Methods Multisite Validation, Costing, and Qualitative Analysis. *Journal of Acquired Immune Deficiency Syndromes, 97*(4), 387-396.

14. Skipper CP, Kirumira P, **Dai B**, Wele A, Naluyima R, Namuli T, Turya F, Muhumuza P, Kibengo F, Boulware DR, Meya DB, Nalintya E, Rajasingham R. (2024). Baseline C-reactive Protein as a Risk Factor for Cryptococcal Meningitis and Death in HIV-associated Cryptococcal Antigenemia With CrAg Titer as an Effect Modifier. *Open Forum Infectious Diseases*, 11(8), ofad392.

13. **Dai B**, Breheny P. (2024) Cross Validation Approaches for Penalized Cox Regression. *Statistical Methods in Medical Research, 33*(4), 702–715.

12. McHale TC, Akampurira A, Gerlach ES, Mucunguzi A, Nicol MR, Williams DA, Nielsen K, Bicanic T, Fieberg A, **Dai B**, Meya DB, Boulware DR. (2023). 5-Flucytosine Longitudinal Antifungal Susceptibility Testing of Cryptococcus neoformans: A Sub-study of the EnACT Trial Testing Oral Amphotericin. *Open Forum Infectious Diseases, 10*(12), ofad596.

11. Boulware DR, Atukunda M, Kagimu E, Musubire AK, Akampurira A, Tugume L, Ssebambulidde K, Kasibante J, Nsangi L, Mugabi T, Gakuru J, Kimuda S, Kasozi D, Namombwe S, Turyasingura I, Rutakingirwa MK, Mpoza E, Kigozi E, Muzoora C, Ellis J, Skipper CP, Matkovits T, Williamson, PR, Williams DA, Fieberg A, Hullsiek KH, **Dai B**, Meya DB. (2023). Oral Lipid Nanocrystal Amphotericin B for Cryptococcal Meningitis: A Randomized Clinical Trial. *Clinical Infectious Diseases, 77*(12), 1659–1667.

10. Rosenstock J, Vázquez L, Del Prato S, Franco DR, Weerakkody G, **Dai B**, Landó LF, Bergman BK, Rodríguez A. (2023). Achieving Normoglycemia with Tirzepatide: Analysis of SURPASS 1-4 Trials. *Diabetes Care, 46*(11), 1986-1992.

9. Sekar P, Nalintya E, Kwizera R, Mukashyaka C, Niyonzima G, Namakula LO, Nerima P, Fieberg A, **Dai B** , Ellis J, Boulware DR, Meya DB, Bahr NC, Rajasingham R. (2023). Prevalence of Histoplasma Antigenuria among Outpatient Cohort with Advanced HIV in Kampala, Uganda. *Journal of Fungi, 9*(7).

8. Qu Y, **Dai B**. (2022). Return-to-baseline Multiple Imputation for Missing Values in Clinical Trials. *Pharmaceutical Statistics, 21*(3), 641-653.

7. **Dai B**, Polley MC. (2022). Two Stage Adaptive Design for Prognostic Biomarker Signature with a Survival Endpoint. *Statistics in Biopharmaceutical Research, 14*(2), 217-226.

6. Zevallo CB, **Dai B**, Dandapat S, Quispe-Orozco D, Holcombe A, Ansari S, Farooqui M, Derdeyn CP, Samaniego EA, Ortega-Gutierrez S. (2021). Greater Intraprocedural Systolic Blood Pressure and Blood Pressure Variability are Associated with Contrast-Induced Neurotoxicity after Neurointerventional Procedures, *Journal of the Neurological Sciences, 410,* 117209.

5. Holcombe A, Mohr N, Farooqui M, Dandapat S, **Dai B**, Zevallo CB, Quispe-Orozco D, Siddiqui F, Ortega-Gutierrez S. (2020). Patterns of Care and Clinical Outcomes in Patients with Cerebral Sinus Venous Thrombosis. *Journal of Stroke and Cerebrovascular Diseases, 29*(12), 105313.

4. Dandapat S, Kasab SA, Zevallos CB, Farooqui M, **Dai B**, Quispe-Orozco D, Dajles A, Hasan D, Samaniego EA, Derdeyn CP, Ortega-Gutierrez S. (2020). In-House Anesthesia and Interventional Radiology Technologist Support Optimize Mechanical Thrombectomy Workflow after Hours. *Journal of Stroke and Cerebrovascular Diseases, 29*(11), 105246.

3. Ortega-Gutierrez S, Holcombe A, Aksan N, **Dai B**, Shaban A, Lazarre L, Zheng-lin B, Sager L, Dandapat S, Siddiqui FM, Mohr NM. (2020). Association of Admission Clinical Predictors and Functional Outcome in Patients with Cerebral Venous and Dural Sinus Thrombosis. *Clinical Neurology and Neurosurgery, 188*, 105563.

2. Limaye K, Bryant A, Bathla G, **Dai B**, Kasab SA, Shaban A, Samaniego EA, Hasan D, Policeni B, Leira E, Derdeyn C, Ortega-Gutierrez S. (2019). Computed tomography angiogram (CTA) derived from computed tomography perfusion (CTP) done with low iodine volume protocol preserves diagnostic yield for middle cerebral artery-M2 occlusions. *Journal of Stroke and Cerebrovascular Diseases, 28*(12), 104458.

1. Samaniego EA, Shaban A, Ortega-Gutierrez S, Roa JA, Hasan DM, Derdeyn C, **Dai B**, Adams H, Leira E.(2019). Stroke Mechanisms and Outcomes of Isolated Symptomatic Basilar Artery Stenosis. *Stroke and Vascular Neurology, 4*(4), 189-197.

Presentations

- **Dai B.**. (invited seminar talk, 12/2024) Data Coordinations and Statistical Analyses for Clinical Research in HIV-associated Meningitis. *Math/Stats Colloquium, Carleton College, Northfield MN*
- **Dai B.**, Polley M. (invited seminar talk, 7/2023) Two Stage Adaptive Design for Prognostic Biomarker Signature with Survival Outcome. *Institute of Medical Biometry and Epidemiology, University Medical Center Hamburg-Eppendorf, Virtual*
- **Dai B.**, Polley M. (invited seminar talk, 1/2023) Two Stage Adaptive Design for Prognostic Biomarker Signature with Survival Outcome. *Drug Information Association (DIA), Innovative Designs Scientific Working Group Lecture Series, Virtual*
- **Dai B.**, Qu Y. (contributed talk 8/2021) Return-to-baseline Multiple Imputation for Missing Values in Clinical Trials. *Joint Statistical Meetings 2021, Virtual.*
- Polley M. **Dai B.**, (invited talk, 8/2021) Two Stage Adaptive Design for Prognostic Biomarker Signature with Survival Outcome. *Joint Statistical Meetings 2021, Virtual*
- **Dai B.**, Breheny P. (contributed talk 7/2019) Projection Inference for Penalized Regression Estimators. *Joint Statistical Meetings 2019, Denver, CO.*
- **Dai B.**, Polley, M (invited talk, 6/2019) Two Stage Adaptive Design for Prognostic Biomarker Signature with Survival Outcome. *ICSA Applied Statistics Symposium, Raleigh, NC.*
- **Dai B.**, Breheny P. (contributed talk 3/2019) Projection Inference for Penalized Regression Estimators. *ENAR 2019 Spring Meeting, Philadelphia, PA.*
- **Dai B.**, Breheny P. (contributed talk, 8/2017) Comparing Cross Validation Methods for Penalized Cox Regression. *Joint Statistical Meetings, Baltimore, MD.*
- **Dai B.**, Demirhan E. (contributed talk, 12/2016) Selection Criteria for Stratification Factors in Phase III Oncology Trials. *ICSA International Conference, Shanghai, China.*

Grant Support

Current Support

- Project: Histoplasmosis Induction and Consolidation Therapy Factorial Randomized Clinical Trial (HISTO-FACT); PI: Nate Bahr; Type: R01; Project Period: 2025 - 2032
  Source: National Institute of Allergy and Infectious Diseases
  Role: Biostatistician; Current Effort: 5%

- Project: Improving Diagnostics and Neurocognitive Outcomes in HIV/AIDS-related Meningitis
  PI: David Boulware; Type: R01; Project Period: 2024 - 2029 (Renewed in 2024)
  Source: National Institute of Neurological Disorders and Stroke
  Role: Co-Investigator; Current Effort: 20%
- Project: High Dose Oral Rifampicin to Improve Survival from Adult Tuberculous Meningitis: a Pharmacokinetic Substudy (HARVEST-PK)
  PI: Lindsey Te Brake (Radboud University); Type: R01; Project Period: Jan 2024 - Dec 2028
  Source: National Institute of Allergy and Infectious Diseases
  Role: Subcontract Site PI; Current Effort: 5%
- Project: Enhanced Antifungal Therapy to Improve Survival in Early Disseminated Cryptococcal Infection
  PI: Radha Rajasingham; Type: U01; Project Period: 2023 - 2028 (Renewed in 2023)
  Source: National Institute of Allergy and Infectious Diseases
  Role: Biostatistician; Current Effort: 15%
- Project: Determining the performance and accuracy of SILVAMP TB LAM and cost effectiveness of diagnostic testing for TB meningitis
  PI: Nate Bahr; Type: R01; Project Period: 2022 - 2027
  Source: National Institute of Allergy and Infectious Disease
  Role: Biostatistician; Current Effort: 20%
- Project: An Enhanced Package of Care to Reduce Mortality in Persons with Advanced HIV Disease
  PI: Radha Rajasingham; Type: R01; Project Period: 2021 - 2026
  Source: National Institute of Allergy and Infectious Disease;
  Role: Biostatistician; Current Effort: 10%
- Project: TB Meningitis: Evaluating CSF Immunology to Discover Hidden Disease and Potential Immunomodulatory
  PI: David Boulware, David Meya; Type: R01; Project Period: 2021 - 2026
  Source: National Institute of Allergy and Infectious Disease; Type: R01
  Role: Biostatistician; Current Effort: 15%

Past

- Project: Redefining Tuberculosis Meningitis with Metagenomics and Host Transcriptomics
  PI: Michael Wilson, David Boulware (Site PI)
  Source: National Institute of Allergy and Infectious Disease; Type: R01
  Role: Biostatistician
- Project: Endogenous Opioid Dysfunction, Stress, and Risk for Smoking Relapse
  PI: Mustafa Al'Absi
  Source: National Institutes of Health; Type: R01
  Role: Biostatistician
- Project: Psychopharmacological effects of cannabidiol on responses to stress and nicotine withdrawal
  PI: Mustafa Al'Absi
  Source: National Institute of Drug Abuse; Type: R01
  Role: Biostatistician
- Title: Encochleated Oral Amphotericin for HIV-related Cryptococcal Meningitis Trial: Phase 3 Trial
  PI: David Boulware, David Meya
  Source: National Institute of Neurological Disorders and Stroke; Type: UG3
  Role: Biostatistician

- Title: Encochleated Oral Amphotericin for Cryptococcal Meningitis Trial
  PI: David Boulware, David Meya
  Source: National Institute of Neurological Disorders and Stroke; Type: R01
  Role: Biostatistician

Service

- Journal Review:
  - Brain Network Disorders
  - Biometrics
  - BMC Medical Research Methodology
  - BMC Neurology
  - BMJ Public Health
  - European Journal of Medical Research
  - Health Services and Outcomes Research Methodology
  - International Journal of Infectious Diseases
  - Medical Mycology
  - New England Journal of Medicine
  - npj Precision Oncology
  - PLOS ONE
  - Scientific Report
  - Statistical Methods in Medical Research
  - The Lancet Infectious Disease
  - The Lancet Regional Health - Europe
- Data and Safety Monitoring Board Member:
  - October 2024 - Present: Effect of Empagliflozin on Left Atrial Function in Adults at Risk for Heart Failure; Sponsored by NIH/NHLBI
  - October 2024 - Present: Vibrotactile Stimulation of the Larynx for Refractory Chronic Cough; Sponsored by NIH/NHLBI
  - April 2023 - December 2024: Initial Vancomycin Taper for the Prevention of Recurrent Clostridium difficile Infection; Sponsored by Research Institute of the McGill University Health Centre
  - September 2022 - Present: Lipid Anti-Inflammatory Mediators in Asthma to Reduce Hyperresponsiveness in Obese Asthmatics; Sponsored by NIH/NHLBI
- Service to Professional Societies:
  - 2024 - Present: Membership Committee, Society for Clinical Trials
  - 2023 - Present: Representation, Inclusion, Support & Engagement (RISE) Committee, Society for Clinical Trials
  - 2023: ICSA Applied Statistics Symposium, Student Paper Competition Committee
- Departmental Service (University of Minnesota):
  - 2022 - Present: Research Committee
  - 2022 - Present: Student Award Committee

Advising/Mentoring

- Master Thesis Committee Chair (Master thesis/Plan B Projects advised by me)
  - Chelsea Reed — Fall 2025

    Evaluate the Desirability of Outcome Ranking (DOOR) Endpoint in Cryptococcal Meninigitis Clinical trials
  - Hanyin Zhou — Fall 2025

    Applying Propensity Scores Methods in Cryptococcal Meninigitis Trials Involving Historical Controls
  - Yiheng Liu — Spring 2025

    Comparing Estimators for Intra-Class Correlation and its Confidence Intervals for Cluster Randomized Trials with a Binary Outcome
  - Allison (Boya) Shi — Spring 2024

    Advancing the Analysis of Neurocognitive Functions in Cryptococcal Meningitis Survivors
  - Monica Iram — Spring 2023

    Assessing Statistical Methods for Estimating the Cerebrospinal Fluid Early Fungicidal Activity as an Endpoint for Cryptococcal Meningitis Clinical Trials: A Systematic Review and Simulation Study
- Thesis Exam Committee Member:
  - Taylor Lanz — Public Health Data Science MPH, Spring 2025
  - Kim-Thao Le — Public Health Data Science MPH, Spring 2025
  - Jack Wolf — Biostatistics PhD, Spring 2025
  - Jiayi Hu — Biostatistics MS, Spring 2024
  - Maria Godinez — Biostatistics MS, Spring 2023
- Graduate Research/Teaching Assistant:
  - Michala Charleton — Spring 2024
  - Can Zhang — 2023 - 2024
  - Maria Godinez — 2022 - 2023
- Academic Advisee:
  - Hanyin Zhou, Biostatistics MS — 2025 - Present
  - Chelsea Reed, Biostatistics MS — 2025 - Present
  - Jenna Bernier, Public Health Data Science MPH — 2025 - Present
  - Lana Hantzsch, Public Health Data Science MPH — 2024 - Present
  - Yanqing Kong, Biostatistics MS — 2024 - 2025
  - Yuanlin Feng, Biostatistics MS — 2024 - 2025
  - Jonanthan Barnes, Public Health Data Science MPH — 2023 - Present
  - Ellery Island, Biostatistics PhD — 2023 - 2024
  - Jiayi Hu, Biostatistics MS — 2022 - 2024

Teaching

University of Minnesota, Department of Biostatistics and Health Data Science
Co-Instructor, PUBH 7462 Advanced Programming and Data Analysis in R — Spring 2024
Panelist for International Collaborations, PUBH 8403 Research Skills — Fall 2022, 2023, 2024

University of Iowa, Department of Biostatistics
Lab Instructor, Biostatistics Methods I — Summer 2019
Substitue Lecturer, Biostatistics Methods II — Feb 2018

Lawrence University, Center for Teaching and Learning
Content Tutor — Sept 2011 - June 2014

Lawrence University, Department of Mathematics
Teaching Assistant — Sept 2012 - June 2014

Honors and Awards

- Academy for Excellence in Team Science, University of Minnesota 2025
- Milford E. Barnes Award, Department of Biostatistics, University of Iowa 2020
- Leon F. Burmeister Graduate Student Service Award, Department of Biostatistics, University of Iowa 2019
- Ballard and Seashore Dissertation Fellowship, University of Iowa 2019
- Dr. Eunice Beam Travel Grants for Women in Science and Engineering, University of Iowa 2019
- Dr. Carol S. Gleich Development Award, College of Public Health, University of Iowa 2019
- Research Week Poster Award, College of Public Health, University of Iowa 2018
- Sahs Symposium Best Poster Award, Department of Neurology, University of Iowa 2017
- Graduate Student Senate Travel Funds Award, University of Iowa 2017, 2019
- Phi Beta Kappa, Lawrence University 2014
- Dean's List, Lawrence University 2010 - 2014
- SAMSI Undergraduate Workshop Travel Award, SAMSI 2013
- White Prize for Mathematics, Lawrence University 2012

Professional Membership

- Society for Clinical Trials (SCT)
- American Statistical Association (ASA)
- International Chinese Statistical Association (ICSA)