Matthew A. Psioda

Collaborative Studies Coordinating Center
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EDUCATION

2011 - 2016	PhD, Biostatistics University of North Carolina at Chapel Hill, Chapel Hill, NC
2004 - 2006	MS, Mathematics University of North Carolina at Wilmington, Wilmington, NC
2000 - 2004	BS, Mathematics University of North Carolina at Wilmington, Wilmington, NC

PROFESSIONAL AND RESEARCH EXPERIENCE

08/2016 - Current	**Research Assistant Professor**, Department of Biostatistics, University of North Carolina at Chapel Hill, Chapel Hill, NC
03/2018 - Current	**Advisor on Bayesian Clinical Trial Design**, Center for Drug Evaluation and Research, US Food and Drug Administration, Silver Spring, MD
08/2015 - 10/2017	**ORISE Research Fellow**, Center for Drug Evaluation and Research, US Food and Drug Administration, Silver Spring, MD
08/2012 - 12/2014	**Trainee in Genomics and Cancer**, Department of Biostatistics, UNC-Chapel Hill, Chapel Hill, NC
08/2006 - 08/2012	**Biostatistician**, INC Research, Raleigh, NC (now Syneos Health)

HONORS AND AWARDS

2016	Barry H. Margolin Dissertation Award
2015-2017	FDA ORISE Research Fellow
2012-2014	Genomics and Cancer Training Grant recipient

PROFESSIONAL MEMBERSHIPS

American Statistical Association

Eastern North American Region of the International Biometric Society

PUBLICATIONS

Note: † indicates doctoral student or GRA

Statistical Methodology

1. M. A. Psioda, M. Soukup, and J. G. Ibrahim. A Practical Bayesian Adaptive Design Incorporating Data from Historical Controls. *Statistics in Medicine*, 37(27):4054–4070, 2018

2. M. A. Psioda and J. G. Ibrahim. Bayesian design of a survival trial with a cured fraction using historical data. *Statistics in Medicine*, 37(26):3814–3831, 2018

3. M. A. Psioda and J. G. Ibrahim. Bayesian clinical trial design using historical data that inform the treatment effect. *Biostatistics*, 20(3):400–415, 2019

4. M. A. Psioda, J. Xu†, Q. Jiang, C. Ke, Z. Yang, and J. G. Ibrahim. Bayesian Adaptive Basket Trial Design Using Model Averaging. *Biostatistics*, available online

5. M. A. Psioda, K. Hu, Y. Zhang, J. Pan, and J. G. Ibrahim. Bayesian Design of Biosimilars Clinical Programs Involving Multiple Therapeutic Indications. *Biometrics*, available online

Manuscripts Under Review

R1. J. Xu†, M. A. Psioda, and J. G. Ibrahim. Bayesian Design of Clinical Trials for Joint Models of Longitudinal and Time-to-event Data. *Biostatistics*, invited revision

R2. M. A. Psioda, X. Jiang, H. A. Xia, J. Xu†, and J. G. Ibrahim. Bayesian Adaptive Design for Concurrent Trials Involving Biologically-Related Diseases. *Biometrics*, under review

R3. M. A. Psioda and X. Xue. Bayesian Sequential Monitoring for Single-Arm Pediatric Trials Using Adult Data. *Statistics in Biopharmaceutical Research*, under review

Manuscripts In Preparation

P1. E. Kwiatkowski†, E. Andraca-Carrera, M. Soukup, and M. A. Psioda. A Structured Framework for Bayesian Sequential Monitoring in Clinical Trials. *In Preparation for 2020 Submission*

P2. B. Nifong†, M. A. Psioda, and J. G. Ibrahim. The Scale Transformed Power Prior with Applications to Studies with Different Endpoints. *In Preparation for 2020 Submission*

P3. N. Bean†, M. A. Psioda, and J. G. Ibrahim. Bayesian Design of Multi-Regional Clinical Trials Using Model Averaging. *In Preparation for 2020 Submission*

P4. D. Pritchard† and M. A. Psioda. A Bayesian Approach for Improved Estimation of Day-Specific Probability Conception Models. *In Preparation for 2020 Submission*

P5. E. Alt†, M. A. Psioda, and J. G. Ibrahim. Multivariate Bayesian probability of success for continuous endpoints using historical data. *In Preparation for 2020 Submission*

P6. E. Alt†, M. A. Psioda, and J. G. Ibrahim. Multivariate Bayesian probability of success with mixed response types using historical data. *In Preparation for 2020 Submission*

Collaborative Research

6. J. Halladay, C. Bushnell, M. A. Psioda, S. Jones, S. Lycan, C. Condon, J. Xenakis†, and J. Prvu-Bettger. Patient Factors Associated with Attendance at a Comprehensive Post-Acute Stroke Visit, Insight from the Vanguard Site. *Archives of Rehabilitation Research and Clinical Translation*, 2(1), 2020

7. S. B. Gesell, C. D. Bushnell, S. B. Jones, S. W. Coleman, S. M. Levy[†], J. G. Xenakis[†], B. J. Lutz, J. P. Bettger, J. Freburger, J. R. Halladay, A. M. Johnson, A. M. Kucharska-Newton, L. H. Mettam, A. M. Pastva, M. A. Psioda, M. D. Radman, W. D. Rosamond, M. E. Sissine, J. Halls, and P. W. Duncan. Implementation of a Billable Transitional Care Model for Stroke Patients: The COMPASS Study. *BMC Health Services Research*, 19, 2019

8. J. M. Sales, C. Escoffery, S. A. Hussen, L. B. Haddad, A. Phillips, T. Filipowicz, M. Sanchez, M. McCumber, B. Rupp, E. Kwiatkowski, M. A. Psioda, and A. N. Sheth. Integrating PrEP into Family Planning Services at Title X Clinics in the Southeastern US – Phase 1 (ATN 155) (Preprint). *JMIR Research Protocols*, 8(6):e12774, 2019

9. H. P. Santos, A. Bhattacharya, E. M. Martin, K. Addo, M. A. Psioda, L. Smeester, R. M. Joseph, S. R. Hooper, J. A. Frazier, K. C. Kuban, T. O'Shea, and R. C. Fry. Epigenome-Wide DNA Methylation in Placentas from Preterm Infants: Association with Maternal Socioeconomic Status. *Epigenetics*, 14(8):751–765, 2019

10. J. T. Bangma, E. Kwiatkowski[†], M. A. Psioda, H. P. Santos Jr., S. R. Hooper, L. Douglass, R. M. Joseph, J. A. Frazier, K. C. K. Kuban, T. M. O'Shea, and R. C. Fry. Early life antecedents of positive child health among 10-year-old children born extremely preterm. *Pediatric Research*, 2019, available online

11. J. T. Bangma, E. Kwiatkowski[†], M. A. Psioda, H. P. Santos Jr., S. R. Hooper, L. Douglass, R. M. Joseph, J. A. Frazier, K. C. K. Kuban, T. M. O'Shea, and R. C. Fry. Understanding positive child health. *Pediatric Research*, 2019, available online

12. J. H. Brice, M. A. Psioda, R. Johnson, A. Oakley, J. M. Cyr, C. S. Cowden, and R. Uribe. Effect of Dial-Out Prefix Change on 9-1-1 Calls at a Large State University. *Prehospital Emergency Care*, 22(6):1–5, 2018

13. A. Lockhart, M. A. Psioda, J. Ting, S. Campbell, N. Mugo, J. Kwatampora, M. Chitwa, J. Kimani, A. Gakure, and J. S. Smith. Prospective Evaluation of Cervicovaginal Self- and Cervical Physician Collection for the Detection of Chlamydia trachomatis, Neisseria gonorrhoeae, Trichomonas vaginalis, and Mycoplasma genitalium Infections. *Sexually Transmitted Diseases*, 45(7), 2018

14. J. T. Bangma, E. Kwiatkowski[†], M. A. Psioda, H. P. Santos Jr, S. R. Hooper, L. Douglass, R. M. Joseph, J. A. Frazier, K. C. K. Kuban, T. M. O'Shea, and R. C. Fry. Assessing Positive Child Health among Individuals Born Extremely Preterm. *The Journal of Pediatrics*, 202:44–49.e4, 2018

15. P. W. Duncan, R. M. Abbott, S. Rushing, A. M. Johnson, C. N. Condon, S. L. Lycan, B. J. Lutz, D. M. Cummings, A. M. Pastva, R. B. D'Agostino, J. M. Stafford, R. M. Amoroso, S. B. Jones Berkeley, M. A. Psioda, S. B. Gesell, W. D. Rosamond, J. Prvu-Bettger, M. E. Sissine, D. Boynton Mark, and C. D. Bushnell. COMPASS-CP: An Electronic Application to Capture Patient-Reported Outcomes to Develop Actionable Stroke and Transient Ischemic Attack Care Plans. *Circulation: Cardiovascular Quality and Outcomes*, 11(8):e004444, 2018

16. M. McCumber, D. Cain, S. LeGrand, K. H. Mayer, D. A. Murphy, M. A. Psioda, A. C. Seña, T. J. Starks, and M. Hudgens. Adolescent Medicine Trials Network for HIV/AIDS Interventions Data Harmonization: Rationale and Development of Guidelines. *JMIR Res Protoc*, 7(12):e11207, 2018

17. J. H. Brice, F. S. Shofer, C. Cowden, E. B. Lerner, M. A. Psioda, M. Arasaratanam, N. C. Mann, A. R. Fernandez, A. Waller, C. Moss, and M. Mian. Evaluation of the Implementation of the Trauma Triage and Destination Plan on the Field Triage of Injured Patients in North Carolina. *Prehospital Emergency Care*, 21(5):591–604, 2017

18. J. J. Bower, L. D. Vance, M. A. Psioda, S. L. Smith-Roe, D. A. Simpson, J. G. Ibrahim, K. A. Hoadley, C. M. Perou, and W. K. Kaufmann. Patterns of cell cycle checkpoint deregulation associated with intrinsic molecular subtypes of human breast cancer cells. *npj Breast Cancer*, 3(1):9, 2017

19. J. A. Cribb, L. D. Osborne, K. Beicker, M. Psioda, J. Chen, E. T. O'Brien, R. M. Taylor II, L. Vicci, J. P.-L. Hsiao, C. Shao, M. Falvo, J. G. Ibrahim, K. C. Wood, G. C. Blobe, and R. Superfine. An Automated High-throughput Array Microscope for Cancer Cell Mechanics. *Scientific Reports*, 6:27371, 2016

ORAL PRESENTATIONS

* indicates invited presentation

2020*	M. A. Psioda. Bayesian Sequential Monitoring of Clinical Trials. ENAR. 2020. Virtual Conference (ENAR Top Ranked Invited Proposal)
2020*	M. A. Psioda. Bayesian Sequential Monitoring of Clinical Trials Using SAS. SAS Global Forum. 2020. Virtual Conference
2020*	M. A. Psioda. An Introduction to Bayesian Methods for Clinical Trials: Applications Ranging from Simple to Complex. US Food and Drug Administration. 2020. Silver Spring, MD.
2019*	M. A. Psioda. Bayesian Sequential Monitoring for Pediatric Clinical Trials. ASA Regulatory-Industry Statistics Workshop. 2019. Washington, DC.
2019*	M. A. Psioda, M. Soukup, J. G. Ibrahim. A Practical Bayesian Adaptive Design with Application to Cardiovascular Outcomes Trials. ASA Regulatory-Industry Statistics Workshop. 2019. Washington, DC
2019*	M. A. Psioda, Q. Jiang, C. Ke, Y. Zhao, J. G. Ibrahim. Bayesian Adaptive Basket Trial Design Using Model Averaging. Duke Industry Statistics Symposium. 2019. Durham, NC.
2019	M. A. Psioda, T. Jiang, A. Xia, J. Xu, J. G. Ibrahim. A Bayesian Adaptive Design for Concurrent Trials Involving Biologically-Related Diseases. ENAR. 2019. Philadelphia, PA.
2018*	M. A. Psioda. An Introduction to Bayesian Sequential Monitoring of Clinical Trials. US Food and Drug Administration. 2018. Silver Spring, MD.
2018*	M. A. Psioda, S. B. Jones. Methodological Challenges & Strategies in the Comprehensive Post-Acute Stroke Services (COMPASS) Study. PCORI Transitional Care Evidence to Action Network Meeting. 2018. Washington, DC.

2018	M. A. Psioda, Q. Jiang, C. Ke, Y. Zhao, J. G. Ibrahim. Bayesian Adaptive Basket Trial Design Using Model Averaging. The Joint Statistical Meetings. 2018. Vancouver, BC.
2017*	M. A. Psioda, M. Soukup, J. G. Ibrahim. A Practical Bayesian Adaptive Design with Application to Cardiovascular Outcomes Trials. US Food and Drug Administration. 2018. Silver Spring, MD.
2017	M. A. Psioda, M. Soukup, J. G. Ibrahim. A Practical Bayesian Adaptive Design with Application to Cardiovascular Outcomes Trials. The Joint Statistical Meetings. 2017. Baltimore, MD.
2016	M. A. Psioda, J. G. Ibrahim. Bayesian Clinical Trial Design for Survival Studies with Historical Data Under a Proportional Hazards Assumption. The Joint Statistical Meetings. 2016. Chicago, IL.
2012	M. A. Psioda. Random Effects Simulation for Sample Size Calculations Using SAS. Proceedings of the Southeast SAS Users Group. 2012. Raleigh, NC.
2010	M. A. Psioda, E. Bakewell. Leveraging CDISC Models to Drive Process Efficiency and Increase Product Quality. North American CDISC Interchange. 2010. Baltimore, MD.

TEACHING EXPERIENCE

Fall 2016-2019	Bios 511: Statistical Computing and Research Data Management
Department of Biostatistics
University of North Carolina at Chapel Hill

DOCTORAL STUDENTS ADVISED

1. Ethan Alt (2019 –), co-advised with Dr. Joseph G. Ibrahim

2. Seoyoon Cho (2019 –), co-advised with Dr. Joseph G. Ibrahim

3. Kimberly Enders (2019 –)

4. Evan Kwiatkowski (2019 –), co-advised with Dr. Lisa LaVange

5. Jiawei Xu (2018 –), co-advised with Dr. Joseph G. Ibrahim

6. Brady Nifong (2018 –), co-advised with Dr. Joseph G. Ibrahim

7. Nathan Bean (2018 –), co-advised with Dr. Joseph G. Ibrahim

8. David Pritchard (2017 – 2020), co-advised with Dr. Yufeng Liu

MASTERS STUDENTS ADVISED

1. Samantha Levy (2018 – 2019)

2. Marcus Spearman (2018 – 2019)

3. Betsy Hensel (2019 – 2020)

DOCTORAL DISSERTATION COMMITTEE

1. Elizabeth Rowley, Department of Biostatistics (2018).
   Advisors: Dr. Chirayath M. Suchindran & Dr. Annie Green Howard

DEPARTMENT SERVICE

2016 – Current	Computing Committee (Chair), Department of Biostatistics
2018 – Current	MPH Data Science Committee (Member), Department of Biostatistics

UNIVERSITY SERVICE

2018 – 2019	Gillings One MPH Steering Committee
	(Representative for Public Health Data Science Concentration)

OTHER SERVICE

2019 –	NIH Back Pain Consortium (BACPAC)
	Executive Committee (Chair)

JOURNAL REFEREEING

Biometrics
Biostatistics
Controlled Clinical Trials
Journal of Biopharmaceutical Statistics
PCORI Methodology Review
Statistics in Biopharmaceutical Research
Statistics in Medicine