Bryce Rowland

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EDUCATION

2017–Present **PhD in Biostatistics**, University of North Carolina at Chapel Hill

2017 **BS in Mathematics** *Summa Cum Laude*, Centre College

AWARDS & HONORS

2019–2022 National Science Foundation - **Graduate Research Fellowship Program**

2017–2018 **Doctoral Merit Assistantship**, University of North Carolina at Chapel Hill

2013–2017 **Brown Fellows Scholarhip**, Centre College

2017 Phi Beta Kappa, Centre College

SKILLS

R with profeciency in tidyverse packages (6 years), bash programming (3 years), SAS (2 years), learning Python: pandas, TensorFlow

RESEARCH EXPERIENCE

2018–Present **Graduate Researcher** - Yun Li Lab

- Developed statistical methods for analysis of bulk Hi-C data.
- Served as lead statistician for a transcriptome-wide association study (TWAS) of blood cell traits in UK Biobank.
- Contributed significantly to in-progress research utilizing a wide range of statistical genetics tools including LD score regression, polygenic risk scores, 3D chromatin modeling, co-localization analyses, and genotype imputation.

2017–2019 **Graduate Researcher** - Collaborative Studies Coordinating Center

- Primary statistician on a manuscript investigating the relationship between diabetes prevalence and segregation in Hispanic communities.
- Research assistant to Jianwen Cai in theoretical statistics research concerning the linear model when the response variable is a ratio.

2016–2017 **Field Research Coordinator** - Harvard University

Successfully led a team of Harvard graduate students to conduct one hundred and five interviews during a three week period in Montserrat.

Independently conducted field research in Montserrat consisting of formal interviews, information gathering, and logistical planning for future research.

PUBLICATIONS

PREPRINTS

2020 Quan Sun, Misa Graff, **Bryce Rowland**, Jia Wen, Le Huang, Moa P. Lee, Christy L. Avery, Nora Franceschini, Kari E. North, Yun Li, Laura Raffield. *Analyses of Biomarker Traits in Diverse UK Biobank Participants Identify Associations Missed by European-centric Analysis Strategies* bioRxiv 2020.09.02.279844; doi: https://doi.org/10.1101/2020.09.02.279844

IN PROGRESS

2020 **Bryce Rowland**, Ruth Huh, Ziyi Zoey Hou, Yun Li. *THUNDER: A reference-free deconvolution method to infer cell type proportions from bulk Hi-C data*

Bryce Rowland, Jia Wen, Jon Rosen, Amanda Tapia, Misa Graff, Guillaume Lettre, Paul Auer, Alexander P. Reiner, Laura Raffield, Yun Li. *Transcriptome-wide association study in UK Biobank Europeans identifies associations with blood cell traits*

Amanda L. Tapia, **Bryce Rowland**, David Couper, Misa Graff, Kari E. North, Kristin Young, Bing Yu, Megan Grove, Alanna Morrison, Santhi Ganesh, Eric Boerwinkle, Jonathan Rosen, Laura Raffield, Alexander P. Reiner, Eric Jorgenson, Yun Li. *Large scale transcriptome-wide association study (TWAS) of ten blood cell phenotypes in Genetic Epidemiology Research on Adult Health and Aging cohort reveals complexities of TWAS fine-mapping*

Jia Wen, Munan Xie, **Bryce Rowland**, Jonathan D. Rosen, Quan Sun, Huijun Qian, Madeline H. Kowalski, Annie Shan, Amanda L. Tapia, Kristin Young, Yongmei Liu, Jerome I. Rotter, Stephen S. Rich, Christy Avery, Chani Hodonsky, Ruth J.F. Loos, Stephanie A. Bien, Charles Kooperberg, Steve Buyske, Kari E. North, Myriam Fornage, Misa Graff, Maria Argos, Jee-Young Moon, Tao Wang, Eric Jorgenson, Hélène Choquet, Alexander P. Reiner, Laura M. Raffield, Yun Li. *Transcriptome-wide association study of blood cell traits in African American and Hispanic/Latino Populations*

Bryce Rowland, Weifang Liu, Jonathan D. Rosen, Jia Wen, Yun Li. *Impact of TOPMed computed LD Scores on heritability and genomic inflation estimation*

TEACHING

2020–Present **Instructor**, Linear Algebra Biostatistics Bootcamp
Two-week short course designed to review linear algebra concepts necessary for PhD theory coursework in linear models. Created and taught online course for Fall 2020.

2020–Present **Teaching Assistant**, BIOS 782: Statistical Methods in Genetic Association Studies

2020–Present **Teaching Assistant**, BCB 725: Introduction to Statistical Genetics

2019 **Teaching Assistant**, BIOS 511: Introduction to Statistical Computing and Data Management
Led weekly office hours and graded homeworks and lab assignments on introductory SAS programming. Taught two lectures on SAS macros.

PRESENTATIONS

2020 **Bryce Rowland**, Jia Wen, Jon Rosen, Amanda Tapia, Misa Graff, Guillaume Lettre, Paul Auer, Alexander P. Reiner, Laura Raffield, Yun Li. *Transcriptome-wide association study in UK Biobank Europeans identifies associations with blood cell traits* Poster, ASHG, 2020, Virtual Conference

2019 **Bryce Rowland**, Ruth Huh, Ziyi Zoey Hou, Yun Li *THUNDER: A reference-free deconvolution method to infer cell type proportions from bulk Hi-C data* Poster, ASHG 2019, Houston, TX, USA.