

# TARRANT OLIVER MCPHERSON

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## EDUCATION

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**Doctor of Philosophy, Biostatistics** August 2022

The University of Alabama at Birmingham, Birmingham, AL

Dissertation Title: "Power And Sample Size Calculations For Linear Mixed Models Of Longitudinal Data Using The Kenward-Roger Adjusted Wald Test"

Advisor: Dr. Lloyd Edwards

**Master of Arts, Applied Economics** May 2013

The University of Alabama, Tuscaloosa, AL

**Bachelor of Arts, Quantitative Economics and Political Science** May 2013

The University of Alabama, Tuscaloosa, AL

## RESEARCH INTERESTS

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Clinical trial conduct and design, power and sample size calculation, longitudinal data analysis, linear mixed models, neuromuscular disorders, autism spectrum disorders, and epilepsy.

## RESEARCH EXPERIENCE

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Research Assistant Professor, Emory University, Dept. of Biostatistics and Bioinformatics 2023-present

Statistician I, The University of Alabama at Birmingham, Dept. of Biostatistics 2013-2022

- Assisted with study and form design, grant writing, electronic data entry system testing, data coordination, safety monitoring, statistical analysis, and reporting of trial results to both regulatory agencies and peer reviewed journals
- Worked closely with government agencies (NIH, FDA) to ensure data quality and to provide open data access to qualified researchers through agency web services
- Provided independent statistical consultation to numerous investigators across campus conducting single site studies

## TEACHING EXPERIENCE

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Spring 2022 – Public Health 250 Biostatistics. Undergraduate, Online. Course description: *Introduction to the statistical approaches most commonly used in public health, medicine, and other health-related fields. The critical role of probability in inference and estimation will be examined, along with key univariate and bivariate statistics (e.g., t-tests, correlation, regression, etc.).*

## GRANTS

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Potential EEG biomarkers and antiepileptogenic strategies for epilepsy in TSC. Completed.

ClinicalTrials.gov Identifier: NCT01767779

Early Biomarkers of Autism in Infants With Tuberous Sclerosis Complex (TSC). Ongoing.

ClinicalTrials.gov Identifier: NCT01780441

Preventing Epilepsy Using Vigabatrin In Infants With Tuberous Sclerosis Complex. Ongoing.

ClinicalTrials.gov Identifier: NCT02849457

Myasthenia Gravis Patient Registry. An online survey of myasthenia gravis patients with more than 4000 participants. Privately funded via the Myasthenia Gravis Foundation of America. Transferred, June 2022.

## **PUBLICATIONS**

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- McPherson, Tarrant, Inmaculada Aban, Petra Duda, Ramin Farzaneh-Far, Gil I. Wolfe, Henry J. Kaminski, Gary Cutter, Ikjae Lee, and MGTX Study Group. "Correlation of quantitative myasthenia gravis and myasthenia gravis activities of daily living scales in the MGTX study." *Muscle & nerve*, 62:2, 2020, 261-266.
- Lindsay M. Niccolai, Kristen L. Triebel, Adam Gerstenecker, Tarrant O. McPherson, Gary R. Cutter, Roy C. Martin & Daniel C. Marson. "Neurocognitive Predictors of Declining Financial Capacity in Persons with Mild Cognitive Impairment." *Clinical Gerontologist*, 40:1, September 2016, 14-23.
- Roy C Martin, Adam Gerstenecker, Kristen L Triebel, Michael Falola, Tarrant McPherson, Gary Cutter, Daniel C Marson. "Declining Financial Capacity in Mild Cognitive Impairment: A Six-Year Longitudinal Study." *Archives of Clinical Neuropsychology*, 34:2, March 2019, 152–161.
- Leslie E. Grayson, Jurriaan M. Peters, Tarrant McPherson, Darcy A. Krueger, Mustafa Sahin, Joyce Y. Wu, Hope A. Northrup et al. "Pilot study of neurodevelopmental impact of early epilepsy surgery in tuberous sclerosis complex." *Pediatric neurology*, 109, 2020, 39-46.
- Ikjae Lee, Henry J. Kaminski, Tarrant McPherson, Michelle Feese, and Gary Cutter. "Gender differences in prednisone adverse effects: Survey result from the MG registry." *Neurology-Neuroimmunology Neuroinflammation*, 5:6, 2020.
- Ikjae Lee, Hui-Chien Kuo, Inmaculada B. Aban, Gary R. Cutter, Tarrant McPherson, Henry J. Kaminski, Jon Sussman et al. "Minimal manifestation status and prednisone withdrawal in the MGTX trial." *Neurology*, 95:6, (2020): e755-e766.
- Ikjae Lee, Justin Leach, Inmaculada Aban, Tarrant McPherson, Petra Duda, and Gary Cutter. "One-Year Follow-up of Disease Burden and Medication Changes in Patients with Myasthenia Gravis: From the Mg Patient Registry." *Muscle & Nerve*, 2022.
- Ikjae Lee, Mohamed Kazamel, Tarrant McPherson, Jeremy McAdam, Marcos Bamman, Amy Amara, Daniel Smith, and Peter King. "Fat Mass Loss Correlates with Faster Disease Progression in Amyotrophic Lateral Sclerosis Patients: Exploring the Utility of Dual-Energy X-Ray Absorptiometry in a Prospective Study." *PLOS ONE* 16, no. 5 (2021).
- Matthew Fifolt, Jeffrey Burrowes, Tarrant McPherson, and Lisa C. McCormick. "Strengthening emergency preparedness in higher education through hazard vulnerability analysis." *College and University*, 91:4, 2016, 61.

## **TECHNICAL SKILLS**

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- 10 years of working experience with Base SAS for both data management and statistical analysis
- Familiarity with common pediatric and geriatric cognitive and functional measures
- Basic experience with R and Python languages for data management and statistical analysis
- Knowledge of common data mining and machine learning techniques and their implementation through SAS Enterprise Miner
- Working knowledge of JMP software for use in data analysis