Mary M. Ryan

Curriculum Vitae

Updated September 2021

Department of Biostatistics

Yale University School of Public Health

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RESEARCH INTERESTS

Clinical trials, group sequential design, epidemiology of Alzheimer's disease, Alzheimer's disease biomarker discovery

EDUCATION

2021	Ph.D., Statistics *Dissertation: Robustness and Efficiency in Modern Biostatistical Studies* *Advisor: Daniel L. Gillen, Professor and Chair of Statistics*	University of California, Irvine
2019	M.S., Statistics	University of California, Irvine
2016	B.A., Statistics; Bachelor of Journalism; Minor, Mathematics	University of Missouri, Columbia

POSITIONS

2021 - present	Postdoctoral Associate, Department of Biostatistics	Yale University

COLLABORATIVE RESEARCH AFFILIATIONS & APPOINTMENTS

2021 - present	Yale Center for Analytical Sciences	Yale University
2017 - present	Gillen/Grill Alzheimer's Disease Research Lab	University of California, Irvine
2017 - 2021	Data Management and Statistics Core, Alzheimer's Disease Research Center	University of California, Irvine

ACADEMIC AWARDS & HONORS

2021	Carl W. Cotman Predoctoral Scholar Award	University of California, Irvine
2020	UC System Nominee to the 70th Lindau Nobel Laureate Meeting	University of California, Irvine
2020	Division of Teaching Excellence & Innovation Summer Fellow	University of California, Irvine
2019 - 2020	UCI Public Impact Fellow	University of California, Irvine

2019	Honorable Mention: JSM Biopharmaceutical Section Contributed Presentation Award	University of California, Irvine
2017 - 2019	MIND Aging Fellow	University of California, Irvine
2016	University Honors	University of Missouri, Columbia
2015	Excellence in Undergraduate Research	MU Undergraduate Research and Creative Achievements Forum
2013 - 2016	Albert Winemiller Scholar	University of Missouri, Columbia

REFEREED JOURNAL PUBLICATIONS

Ryan, M.M., Gillen, D.L., Grill, J.D. (2021) . "Reasons for Undergoing Amyloid Imaging Among Cognitively Unimpaired Older Adults with Elevated and Not Elevated Amyloid." *Annals of Clinical and Translational Neurology.* doi.org/10.1002/acn3.51414.

Ryan, M.M., Cox, C.G., Witbracht, M., Hoang, D., Gillen, D.L., Grill, J.D. (2020). "Using Direct-to-Consumer Genetic Testing Results to Accelerate Alzheimer's Disease Clinical Trial Recruitment." *Alzheimer Disease & Associated Disorders.* doi.org/10.1097/wad.0000000000000421

Cox, C.G., **Ryan, M.M.**, Gillen, D.L., Grill, J.D. (2020). "Is reluctance to share Alzheimer's disease biomarker status with a study partner a barrier to preclinical trial recruitment?" *The Journal of Prevention of Alzheimer's Disease.* dx.doi.org/10.14283/jpad.2020.36

Ryan, M.M., Spotnitz, W.D., Gillen, D.L. (2020). "Variance estimation for the Kappa statistic in the presence of clustered data and heterogeneous observations." *Statistics in Medicine.* doi.org/10.1002/sim.8522

Ryan, M.M., Grill, J.D., Gillen, D.L. (2019). "Participant and Study Partner Prediction and Identification of Cognitive Impairment in Preclinical Alzheimer's Disease: Study Partner vs. Participant Accuracy." *Alzheimer's Research & Therapy.* doi.org/10.1186/s13195-019-0539-3

Cox, C.G., **Ryan, M.M.**, Gillen, D.L., Grill, J.D. (2019). "A preliminary study of clinical trial enrollment decisions among people with Mild Cognitive Impairment and their study partners." *The American Journal of Geriatric Psychiatry.* doi.org/10.1016/j.jagp.2018.10.016

MANUSCRIPTS UNDER REVIEW / IN PROGRESS

Ryan, M.M., Gillen, D.L. "Sequential Sampling in Prospective Observational Studies." (In Revision).

SELECTED POSTERS, PRESENTATIONS & SHORT COURSES

April 2021	Variance Estimation for the Kappa Statistic in the Presence of Clustered Data and Heterogeneous Observations	Invited Presentation	ASQ Silicon Valley Section's Statistics & Reliability Discussion Group
January 2021	Variance Estimation for the Kappa Statistic in the Presence of Clustered Data and Heterogeneous Observations	Invited Presentation	ASA BIOP Webinar
November 2020	Variance Estimation for the Kappa Statistic in the Presence of Clustered Data and Heterogeneous Observations	Invited Presentation	2020 Orange County Biostatistics Symposium
November 2020	Perceptions of Amyloid Imaging Among Cognitively Normal Older Adults with Elevated and Not Elevated Amyloid	Poster	Clinical Trials on Alzheimer's Disease
December 2019	Using Direct-to-Consumer Genetic Testing Results in Alzheimer's Disease Clinical Trial Recruitment	Poster	Clinical Trials on Alzheimer's Disease	San Diego, CA
July 2019	An Extension of Cohen's Kappa for Clustered Data and Group Sequential Testing	Speed Talk & Poster	Joint Statistical Meetings	Denver, CO
July 2019	Participant and Study Partner Prediction and Identification of Cognitive Impairment in Preclinical Alzheimer's Disease: Study Partner vs. Participant Accuracy	Poster	Alzheimer's Association International Conference	Los Angeles, CA
June 2019	An Investigation of the Kappa Statistic Under Clustered Data and Group Sequential Testing, with an Application to Surgical Rating	Paper & Presentation	Western North American Region Annual Meeting	Portland, OR
March 2019	R: Models for Clustered and Correlated Data	Short Course	Computer-Assisted Reporting Conference	Newport Beach, CA
March 2018	Scientific Necessity of Study Partners in Preclinical Alzheimer's Disease Trials	Poster	ReMIND Emerging Scientists Symposium	Irvine, CA
March 2018	R: Machine learning and data models	Short Course	Computer-Assisted Reporting Conference	Chicago, IL

TEACHING EXPERIENCE

Summer 2020	Basic Statistics	Instructor of Record	University of California, Irvine
Winter 2020	Introduction to Biological Statistics	Teaching Assistant	University of California, Irvine
Fall 2019	Introduction to Probability & Statistics for Computer Science	Teaching Assistant	University of California, Irvine
Summer 2017	Introduction to Biological Statistics	Instructor of Record	University of California, Irvine
Spring 2016	Advanced Data Journalism	Teaching Assistant	University of Missouri, Columbia

ACADEMIC SERVICE & OUTREACH

2020 - 2021 **Department of Statistics Seminar Committee, Student Representative**
- Help ensure departmental seminars have broad representation of speakers and topics
- Suggest speakers for departmental seminar
- Elicit graduate student input on seminar speakers and topics

2019 - 2021 **DECADE, Department of Statistics Student Representative**
- Collaborate with DECADE faculty mentors to plan and organize events, initiatives, and meetings at the department level that bring faculty and graduate students together
- Serve as a liaison between Department of Statistics, the Office of Inclusive Excellence and Graduate Division

2018 - 2021 **REMIND, Co-Chair**
- Collaborate with other co-chairs to plan and organize annual graduate student and post-doctoral research symposium on neurodegenerative disease research
- Plan, organize, and execute community outreach and education events on neurodegenerative diseases
- Co-design application process and assist in selection of high school applicants for annual summer mentorship and brain research program

2019 - 2021 **Department of Statistics NSF GRFP Application Repository, Organizer**
- Coordinate with past and current UCI Department of Statistics graduate students to collect and redact previously submitted NSF GRFP application materials
- Collaborate with IT department to create password-protected website to host past NSF GRFP application materials

2017 - 2018 **Department of Statistics Student Representative**
- Serve as a liaison between graduate students and faculty members
- Organize student lunches and meetings with faculty job candidates and seminar speakers
- Elicit student feedback about faculty job candidates for search committee
- Plan and organize Department of Statistics prospective PhD student visit day

PROFESSIONAL ORGANIZATIONS

2018 - present   **American Statistical Association, Member**

2019 - 2021   **WNAR, International Biometric Society, Member**

2019 - present   **ISTAART, Alzheimer's Association, Member**

2020 - present   **Caucus for Women in Statistics, Member**

2021 - present   **ENAR, International Biometric Society, Member**

STATISTICAL & PROGRAMMING LANGUAGES

- R
- Python
- SAS
- SQL
- HTML/CSS