

SARAH F. ACKLEY, Ph.D.

Department of Epidemiology &
Center for Gerontology & Healthcare Research
School of Public Health
Brown University

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EDUCATION

Ph.D. Epidemiology & Translational Science

Sept. 2013 – Dec. 2018

University of California, San Francisco

San Francisco, CA

- Dissertation: “Mathematical models of vaccine-preventable disease in California”
- Chair: Travis C. Porco, Ph.D.
- Committee: M. Maria Glymour, Sc.D., James Lloyd-Smith, Ph.D.,
& in collaboration with Jennifer Zipprich, Ph.D., Kathleen Harriman, Ph.D., M.P.H., R.N.,
and Erin Murray, Ph.D. at the California Department of Public Health (CDPH)

B.S. Physics

Sept. 2004 – June 2008

Massachusetts Institute of Technology (MIT)

Cambridge, MA

- Thesis: “Construction and characterization of a universally tunable modulator.”
- Advisor: Nergis Malvalvala, Ph.D.

POSTDOCTORAL TRAINING

Postdoctoral Scholar

May 2023 – June 2024

Department of Epidemiology

Boston University

Boston, MA

- Primary Mentor: M. Maria Glymour, Sc.D.
- Secondary Mentors: María Corrada, Ph.D., Rachel Whitmer, Ph.D., Gil Rabinovici, M.D.

Postdoctoral Scholar

Jan. 2019 – Apr. 2023

Department of Epidemiology and Biostatistics

University of California, San Francisco

San Francisco, CA

- Primary Mentor: M. Maria Glymour, Sc.D.
- Secondary Mentors: Maria Corrada, Ph.D., Rachel Whitmer, Ph.D., Gil Rabinovici, M.D.

EMPLOYMENT IN RESEARCH

Assistant Professor Department of Epidemiology Brown University School of Public Health	Jul. 2024 – Present Providence, Rhode Island
Postdoctoral Scholar Department of Epidemiology Boston University	May 2023 – Jun. 2024 Boston, MA
Postdoctoral Scholar Department of Epidemiology and Biostatistics University of California, San Francisco	Jan. 2019 – Apr. 2023 San Francisco, California
Study Coordinator & Graduate Student Researcher Proctor Foundation University of California, San Francisco	Mar. 2012 – Oct. 2018 San Francisco, California
Measles Surveillance Research Associate Immunizations Branch California Department of Public Health	Sept. 2012 – Aug. 2013 Richmond, California
Undergraduate Student Researcher LIGO Research Group (Physics) Mentor: Nergis Mavalvala Massachusetts Institute of Technology	Jan. 2007 – Jun. 2008 Cambridge, Massachusetts
Undergraduate Student Researcher Tokmakoff Research Group (Physical Chemistry) Massachusetts Institute of Technology	Jan. 2005 – Aug. 2007 Cambridge, Massachusetts

PROFESSIONAL MEMBERSHIPS

SER, Society for Epidemiologic Research	2013 – <i>present</i>
ISTAART, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment	2019 – <i>present</i>
MELODEM, Methods in Longitudinal Dementia Research	2019 – <i>present</i>

PUBLICATIONS, PRESENTATIONS, & OTHER ACADEMIC PRODUCTS

18 first-author publications & 2 senior-author publications

Complete List of Published Work in MyBibliography

Google Scholar Profile

[†]denotes mentee serving as first or second author

ACCEPTED MANUSCRIPTS & PREPRINTS

1. **Ackley SF**, La Joie R, Caunca M, Mukherjee S, Choi SE, Trittschuh EH, Crane PK, Hayes-Larson E. Substituting Blood-Based Biomarkers for Imaging Measures in Alzheimer's Disease Studies: Implications for Sample Size and Bias. medRxiv. 2025:2025-11. *Accepted at Journal of Gerontology: Medical Sciences.*
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PEER-REVIEWED JOURNAL ARTICLES

63. Wang J, Ferguson EL, Chen R, **Ackley SF**, La Joie R, Kornak J, Kelly JD, Estiri H, Hsu J, Blacker D, Glymour MM. COVID-19 Related Brain MRI Changes and Anticipated Long-Term Dementia Risk: A Front-Door-Criterion-Inspired Approach. *Annals of Epidemiology*. 2026 Feb 14:110054.
 62. **Ackley SF**, Flanders MD, Murchland A, Chen R, Wang J, Shah SJ, Huey ED, Glymour MM. Evaluation of amyloid change as a surrogate for cognitive decline: demonstration in individual-level data from the A4 study of solanezumab. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*. 2026 Jan;12(1):e70205.
 61. Power MC, Madsen M, Bødkergaard K, Zimmerman SC, **Ackley SF**, Gilsanz P, Glymour MM, Henderson VW, Sørensen HT, Thomsen RW. Early glycemic control and subsequent risk of incident dementia among new metformin users. *The American Journal of Medicine*. 2025 Nov 4.
 60. Zhang J, Soleimani-Meigooni DN, Koeppe R, **Ackley S**, Schonhaut DR, Lin ZE, Maiti P, Yballa C, Rocha S, Shankar R, Amuiri A. Exploring Centiloid Robustness: Impact of Sample Size and Image Resolution on Centiloid Conversion Accuracy. *Journal of Nuclear Medicine*. 2025 Oct 23.
 59. Graff RE, Chen DM, Swinnerton KN, **Ackley SF**, Ospina-Romero M, Zimmerman SC, Wang J, Buto P, Nierenberg JL, Elahi FM, Lu KP, Witte JS, Glymour MM. Evaluation of polygenic risk scores for a possible genetic basis of the inverse association between cancer and cognitive decline. *Alzheimer Dis Assoc Disord*. 2025 Oct 23.
 58. **Ackley SF**, Andrews RM, Seaman C, Flanders M, Chen R, Wang J, Lopes G, Sims KD, Buto P, Ferguson E, Allen IE. Trends in the Distribution of P Values in Epidemiology Journals: A Statistical, P-Curve, and Simulation Study. *American Journal of Epidemiology*. 2025 Aug 21.
 57. **Ackley SF**, Wang J, Chen R, Hill-Jarrett TG, Rojas-Saunero LP, Stokes A, Shah SJ, Glymour MM, Alzheimer's Disease Neuroimaging Initiative. Methods to crosswalk between cognitive test scores using data from the Alzheimer's Disease Neuroimaging Cohort. *Alzheimer's & Dementia*. 2025 Feb;21(2):e14597.
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56. Wang J, **Ackley SF**, Woodworth DC, Sajjadi SA, Decarli CS, Fletcher EF, Glymour MM, Jiang L, Kawas C, Corrada MM. Associations of amyloid burden, white matter hyperintensities, and hippocampal volume with cognitive trajectories in the 90+ Study. *Neurology*. 2024 Aug 13;103(3):e209665.
55. Almeida ML, Pederson AM, Zimmerman SC, Chen R, **Ackley SF**, Riley A, Eng CW, Whitmer RA, George KM, Peterson RL, Mayeda ER. The Association Between Physical Activity and Cognition in a Racially/Ethnically Diverse Cohort of Older Adults: Results From the Kaiser Healthy Aging and Diverse Life Experiences Study. *Alzheimer Disease & Associated Disorders*. 2024 Apr 1;38(2):120-7.
54. Hayes-Larson E, **Ackley SF***, Turney IC, La Joie R, Mayeda ER, Glymour MM, Alzheimer's Disease Neuroimaging Initiative. Considerations for use of blood-based biomarkers in epidemiologic dementia research. *American Journal of Epidemiology*. 2024 Mar;193(3):527-35. **Co-first*.
53. Wang J, Hill-Jarrett T, Buto P, Pederson A, Sims KD, Zimmerman SC, DeVost MA, Ferguson E, Lacar B, Yang Y, Choi M, Glymour MM, La Joie R, Chen R, **Ackley, SF**. Comparison of approaches to control for intracranial volume in research on the association of brain volumes with cognitive outcomes. *Human Brain Mapping*. 2024 Mar;45(4):e26633.
52. **Ackley SF**, Calmasini C, Bouteloup V, Hill-Jarrett TG, Swinnerton KN, Chêne G, Dufouil C, Glymour MM, MEMENTO Cohort Study Group and DPUK. Contribution of Global Amyloid-PET Imaging for Predicting Future Cognition in the MEMENTO Cohort. *Neurology*. 2024 Mar 26;102(6):e208054.
51. Buto PT, Wang J, La Joie R, Zimmerman SC, Glymour MM, **Ackley SF**, Hoffmann TJ, Yaffe K, Zeki Al Hazzouri A, Brenowitz WD. Genetic risk score for Alzheimer's disease predicts brain volume differences in mid and late life in UK biobank participants. *Alzheimer's & Dementia*. 2024 Mar;20(3):1978-87.
50. Wang J, Sims KD, **Ackley SF**, Chen R, Kobayashi LC, Hayes-Larson E, Mayeda ER, Buto P, Zimmerman SC, Graff RE, Glymour MM. Association of cancer history with structural brain aging markers of Alzheimer's disease and related dementias risk. *Alzheimer's & Dementia*. 2024 Feb;20(2):880-9.
49. **Ackley SF**, Wang J, Chen R, Power MC, Allen IE, Glymour MM. Estimated effects of amyloid reduction on cognitive change: A Bayesian update across a range of priors. *Alzheimer's & Dementia*. 2024 Feb;20(2):1149-55.
48. Chen R, Wang J, Pederson AM, Prather AA, Hirst AK, **Ackley SF**, Hokett E, George KM, Mungas D, Mayeda ER, Gilsanz P. Evaluation of racial and ethnic heterogeneity in the associations of sleep quality and sleep apnea risk with cognitive function and cognitive decline. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*. 2024 Jan;10(1):e12441.
47. Zimmerman SC, Ferguson EL, Choudhary V, Ranatunga DK, Oni-Orisan A, Hayes-Larson E, Folle AD, Mayeda ER, Whitmer RA, Gilsanz P, Power MC, Glymour MM, and **Ackley SF**. Metformin Cessation and Dementia Incidence. *JAMA Network Open*. 2023 Oct 2;6(10).

46. Wang J, Buto P, **Ackley SF**, Kobayashi LC, Graff RE, Zimmerman SC, Hayes-Larson E, Mayeda ER, Asiimwe SB, Calmasini C, Glymour MM. Association between cancer and dementia risk in the UK Biobank: evidence of diagnostic bias. *European Journal of Epidemiology*. 2023 Oct;38(10):1069-79.
45. Liu KY, Villain N, Ayton S, **Ackley SF**, Planche V, Howard R, Thambisetty M. Key questions for the evaluation of anti-amyloid immunotherapies for Alzheimer's disease. *Brain Communications*. 2023 Jun 2.
44. **Ackley SF**, Zimmerman SC, Flatt JD, Riley AR, Sevelius J, Duchowny KA. Discordance in chromosomal and self-reported sex in the UK Biobank: Implications for transgender-and intersex-inclusive data collection. *Proceedings of the National Academy of Sciences*. 2023 May 2;120(18).
43. Chen R, Calmasini C, Swinnerton K, Wang J, Haneuse S, **Ackley SF**, Hirst AK, Hayes-Larson E, George KM, Peterson R, Soh Y. Pragmatic approaches to handling practice effects in longitudinal cognitive aging research. *Alzheimer's & Dementia*. 2023 May 18.
42. Ospina-Romero M, Brenowitz WD, Glymour MM, Westrick A, Graff RE, Hayes-Larson E, Mayeda ER, **Ackley SF**, Kobayashi LC. Education, incident cancer, and rate of memory decline in a national sample of US adults in mid-to-later-life. *Journal of Geriatric Oncology*. 2023 Jun 1;14(5).
41. Duchowny KA*, **Ackley SF***, Brenowitz WD, Wang J, Zimmerman SC, Caunca MR, Glymour MM. Associations between handgrip strength and dementia risk, cognition, and neuroimaging outcomes in the UK Biobank cohort study. *JAMA Network Open*. 2022 Jun 1;5(6). *Co-first authors.
40. Zimmerman SC, Brenowitz WD, Calmasini C, **Ackley SF**, Graff RE, Asiimwe SB, Staffaroni AM, Hoffmann TJ, Glymour MM. Association of Genetic Variants Linked to Late-Onset Alzheimer Disease With Cognitive Test Performance by Midlife. *JAMA Network Open*. 2022 Apr 1;5(4).
39. Hayes-Larson E, Shaw C, **Ackley SF**, Zimmerman SC, Glymour MM, Graff RE, Witte JS, Kobayashi L, Mayeda ER. The role of dementia diagnostic delay in the inverse cancer-dementia association. *J Gerontol A Biol Sci Med Sci*. 2021 Nov 12;. doi: 10.1093/gerona/glab341. PubMed PMID: 34788817.
38. Dang KV, Rerolle F, **Ackley SF**, Irish AM, Mehta KM, Bailey I, Fair E, Miller C, Bibbins-Domingo K, Wong-Moy E, Glymour MM, Morris MD. A Randomized Study to Assess the Effect of Including the Graduate Record Examinations Results on Reviewer Scores for Underrepresented Minorities. *Am J Epidemiol*. 2021 Sep 1;190(9):1744-1750. doi: 10.1093/aje/kwab075. PubMed PMID: 33738464; PubMed Central PMCID: PMC8408352.
37. Filshtein TJ, Li X, Zimmerman SC, **Ackley SF**, Glymour MM, Power MC. Proof of Concept Example for Use of Simulation to Allow Data Pooling Despite Privacy Restrictions. *Epidemiology*. 2021 Sep 1;32(5):638-647. doi: 10.1097/EDE.0000000000001373. PubMed PMID: 34183527; PubMed Central PMCID: PMC8338788.
36. **Ackley SF**, Lessler J, Glymour MM. Dynamical Modeling as a Tool for Inferring Causation. *Am J Epidemiol*. 2021 Aug 27.

35. Ospina-Romero M, Brenowitz WD, Glymour MM, Mayeda ER, Graff RE, Witte JS, **Ackley SF**, Lu KP, Kobayashi LC. The Association Between Cancer and Spousal Rate of Memory Decline: A Negative Control Study to Evaluate (Unmeasured) Social Confounding of the Cancer-memory Relationship. *Alzheimer Dis Assoc Disord*. 2021 Jul-Sep 01;35(3):271-274. doi: 10.1097/WAD.0000000000000398. PubMed PMID: 32568784; PubMed Central PMCID: PMC7749066.
34. **Ackley SF**, Hayes-Larson E, Brenowitz WD, Swinnerton K, Mungas D, Fletcher E, Singh B, Whitmer RA, DeCarli C, Maria Glymour M. Amyloid-PET imaging offers small improvements in predictions of future cognitive trajectories. *Neuroimage Clin*. 2021;31:102713. doi: 10.1016/j.nicl.2021.102713. Epub 2021 Jun 8. PubMed PMID: 34153689; PubMed Central PMCID: PMC8233225.
33. Peterson RL, George KM, Gilsanz P, **Ackley S**, Mayeda ER, Glymour MM, Mungas DM, DeCarli C, Whitmer RA. Racial/Ethnic Disparities in Young Adulthood and Midlife Cardiovascular Risk Factors and Late-life Cognitive Domains: The Kaiser Healthy Aging and Diverse Life Experiences (KHANDLE) Study. *Alzheimer Dis Assoc Disord*. 2021 Apr-Jun 01;35(2):99-105. doi: 10.1097/WAD.0000000000000436. PubMed PMID: 34006727; NIHMSID:NIHMS1742467.
32. **Ackley SF**, Elahi F, Glymour MM. Instrumental variable meta-analysis of aggregated randomized drug trial data for evaluating proposed target mechanisms. *BMJ*. 2021 Feb 25;372:n346. doi: 10.1136/bmj.n346. PubMed PMID: 33632740.
31. **Ackley SF**, Zimmerman SC, Brenowitz WD, Tchetgen Tchetgen EJ, Gold AL, Manly JJ, Mayeda ER, Filshtein TJ, Power MC, Elahi FM, Brickman AM, Glymour MM. Effect of reductions in amyloid levels on cognitive change in randomized trials: instrumental variable meta-analysis. *BMJ*. 2021 Feb 25;372:n156. doi: 10.1136/bmj.n156. PubMed PMID: 33632704; PubMed Central PMCID: PMC7905687.
30. Gold AL, Meza E, **Ackley SF**, Mungas DM, Whitmer RA, Mayeda ER, Miles S, Eng CW, Gilsanz P, Glymour MM. Are adverse childhood experiences associated with late-life cognitive performance across racial/ethnic groups: results from the Kaiser Healthy Aging and Diverse Life Experiences study baseline. *BMJ Open*. 2021 Feb 5;11(2):e042125. doi: 10.1136/bmjopen-2020-042125. PubMed PMID: 33550246; PubMed Central PMCID: PMC7925876.
29. Leng Y, **Ackley SF**, Glymour MM, Yaffe K, Brenowitz WD. Genetic Risk of Alzheimer's Disease and Sleep Duration in Non-Demented Elders. *Ann Neurol*. 2021 Jan;89(1):177-181. doi: 10.1002/ana.25910. Epub 2020 Oct 5. PubMed PMID: 32951248; PubMed Central PMCID: PMC8048405.
28. Hayes-Larson E, **Ackley SF**, Zimmerman SC, Ospina-Romero M, Glymour MM, Graff RE, Witte JS, Kobayashi LC, Mayeda ER. The competing risk of death and selective survival cannot fully explain the inverse cancer-dementia association. *Alzheimers Dement*. 2020 Dec;16(12):1696-1703. doi: 10.1002/alz.12168. Epub 2020 Sep 3. PubMed PMID: 32881307; PubMed Central PMCID: PMC7902336.
27. Ospina-Romero M, Glymour MM, Hayes-Larson E, Mayeda ER, Graff RE, Brenowitz WD, **Ackley SF**, Witte JS, Kobayashi LC. Association Between Alzheimer Disease and Cancer With Evaluation of Study Biases: A Systematic Review and Meta-analysis. *JAMA Netw*

- Open. 2020 Nov 2;3(11):e2025515. doi: 10.1001/jamanetworkopen.2020.25515. PubMed PMID: 33185677; PubMed Central PMCID: PMC7666424.
26. Brenowitz WD, Filshtein TJ, Yaffe K, Walter S, **Ackley SF**, Hoffmann TJ, Jorgenson E, Whitmer RA, Glymour MM. Association of genetic risk for Alzheimer disease and hearing impairment. *Neurology*. 2020 Oct 20;95(16):e2225-e2234. doi: 10.1212/WNL.0000000000010709. Epub 2020 Sep 2. PubMed PMID: 32878991.
 25. **Ackley SF**, Pilewski S, Petrovic VS, Worden L, Murray E, Porco TC. Assessing the utility of a smart thermometer and mobile application as a surveillance tool for influenza and influenza-like illness. *Health Informatics J*. 2020 Sep;26(3):2148-2158. doi: 10.1177/1460458219897152. Epub 2020 Jan 23. PubMed PMID: 31969046.
 24. Peterson RL, Gilsanz P, George KM, **Ackley S**, Glymour MM, Mungas DM, Whitmer RA. Differences in association of leisure time activities and cognition in a racially/ethnically diverse cohort of older adults: Findings from the KHANDLE study. *Alzheimers Dement (N Y)*. 2020;6(1). doi: 10.1002/trc2.12047. eCollection 2020. PubMed PMID: 32607410; PubMed Central PMCID: PMC7317643.
 23. Ospina-Romero M, Brenowitz WD, Glymour MM, Mayeda ER, Graff RE, Witte JS, **Ackley SF**, Lu KP, Kobayashi LC. The Association Between Cancer and Spousal Rate of Memory Decline: A Negative Control Study to Evaluate (Unmeasured) Social Confounding of the Cancer-memory Relationship. *Alzheimer Dis Assoc Disord*. 2020 Jun 19;. doi: 10.1097/WAD.0000000000000398. [Epub ahead of print] PubMed PMID: 32568784.
 22. Worden L, **Ackley SF**, Zipprich J, Harriman K, Enanoria WTA, Wannier R, Porco TC. Measles transmission during a large outbreak in California. *Epidemics*. 2020 Mar;30:100375. doi: 10.1016/j.epidem.2019.100375. Epub 2019 Nov 10. PubMed PMID: 31735584; PubMed Central PMCID: PMC7211428.
 21. Johansson MA, Apfeldorf KM, Dobson S, Devita J, Buczak AL, Baugher B, Moniz LJ, Bagley T, Babin SM, Guven E, Yamana TK, Shaman J, Moschou T, Lothian N, Lane A, Osborne G, Jiang G, Brooks LC, Farrow DC, Hyun S, Tibshirani RJ, Rosenfeld R, Lessler J, Reich NG, Cummings DAT, Lauer SA, Moore SM, Clapham HE, Lowe R, Bailey TC, García-Díez M, Carvalho MS, Rodó X, Sardar T, Paul R, Ray EL, Sakrejda K, Brown AC, Meng X, Osoba O, Vardavas R, Manheim D, Moore M, Rao DM, Porco TC, **Ackley S**, Liu F, Worden L, Convertino M, Liu Y, Reddy A, Ortiz E, Rivero J, Brito H, Juarrero A, Johnson LR, Gramacy RB, Cohen JM, Mordecai EA, Murdock CC, Rohr JR, Ryan SJ, Stewart-Ibarra AM, Weikel DP, Jutla A, Khan R, Poultney M, Colwell RR, Rivera-García B, Barker CM, Bell JE, Biggerstaff M, Sverdlow D, Mier-Y-Teran-Romero L, Forshey BM, Trtanj J, Asher J, Clay M, Margolis HS, Hebbeler AM, George D, Chretien JP. An open challenge to advance probabilistic forecasting for dengue epidemics. *Proc Natl Acad Sci*. 2019 Nov 26;116(48):24268-24274. doi: 10.1073/pnas.1909865116. Epub 2019 Nov 11. PubMed PMID: 31712420; PubMed Central PMCID: PMC6883829.
 20. Deiner MS, Fathy C, Kim J, Niemeyer K, Ramirez D, **Ackley SF**, Liu F, Lietman TM, Porco TC. Facebook and Twitter vaccine sentiment in response to measles outbreaks. *Health Informatics J*. 2019 Sep;25(3):1116-1132. doi: 10.1177/1460458217740723. Epub 2017 Nov 17. PubMed PMID: 29148313; PubMed Central PMCID: PMC5930144.

19. **Ackley SF**, Lee RS, Worden L, Zwick E, Porco TC, Behr MA, Pepperell CS. Multiple exposures, reinfection and risk of progression to active tuberculosis. *R Soc Open Sci.* 2019 Mar;6(3):180999. doi: 10.1098/rsos.180999. eCollection 2019 Mar. PubMed PMID: 31031990; PubMed Central PMCID: PMC6458392.
18. Kelly JD, Worden L, Wannier SR, Hoff NA, Mukadi P, Sinai C, **Ackley S**, Chen X, Gao D, Selo B, Mossoko M, Okitolonda-Wemakoy E, Richardson ET, Rutherford GW, Lietman TM, Muyembe-Tamfum JJ, Rimoin AW, Porco TC. Projections of Ebola outbreak size and duration with and without vaccine use in Équateur, Democratic Republic of Congo, as of May 27, 2018. *PLoS One.* 2019;14(3):e0213190. doi: 10.1371/journal.pone.0213190. eCollection 2019. PubMed PMID: 30845236; PubMed Central PMCID: PMC6405095.
17. **Ackley SF**, Hacker JK, Enanoria WTA, Worden L, Blumberg S, Porco TC, Zipprich J. Genotype-Specific Measles Transmissibility: A Branching Process Analysis. *Clin Infect Dis.* 2018 Apr 3;66(8):1270-1275. doi: 10.1093/cid/cix974. PubMed PMID: 29228134; PubMed Central PMCID: PMC5889020.
16. Grantz KH, Chabaari W, Samuel RK, Gershon B, Blum L, Worden L, **Ackley S**, Liu F, Lietman TM, Galvani AP, Prajna L, Porco TC. Spatial distribution of leprosy in India: an ecological study. *Infect Dis Poverty.* 2018 Mar 27;7(1):20. doi: 10.1186/s40249-018-0402-y. PubMed PMID: 29580296; PubMed Central PMCID: PMC5870368.
15. **Ackley SF**, Mayeda ER, Worden L, Enanoria WTA, Glymour MM, Porco TC. Compartmental Model Diagrams as Causal Representations in Relation to DAGs. *Epidemiol Methods.* 2017 Dec;6(1). doi: 10.1515/em-2016-0007. Epub 2017 May 5. PubMed PMID: 30555771; PubMed Central PMCID: PMC6294476.
14. **Ackley SF**, Hargrove JW. A dynamic model for estimating adult female mortality from ovarian dissection data for the tsetse fly *Glossina pallidipes* Austen sampled in Zimbabwe. *PLoS Negl Trop Dis.* 2017 Aug;11(8):e0005813. doi: 10.1371/journal.pntd.0005813. eCollection 2017 Aug. PubMed PMID: 28854189; PubMed Central PMCID: PMC5576662.
13. Worden L, Schwartz IB, Bianco S, **Ackley SF**, Lietman TM, Porco TC. Hamiltonian Analysis of Subcritical Stochastic Epidemic Dynamics. *Comput Math Methods Med.* 2017;2017:4253167. doi: 10.1155/2017/4253167. Epub 2017 Aug 28. PubMed PMID: 28932256; PubMed Central PMCID: PMC5592420.
12. Deiner MS, Worden L, Rittel A, **Ackley SF**, Liu F, Blum L, Scott JC, Lietman TM, Porco TC. Short-term leprosy forecasting from an expert opinion survey. *PLoS One.* 2017;12(8):e0182245. doi: 10.1371/journal.pone.0182245. eCollection 2017. PubMed PMID: 28813531; PubMed Central PMCID: PMC5558979.
11. Ali FS, Stein JD, Blachley TS, **Ackley S**, Stewart JM. Incidence of and Risk Factors for Developing Idiopathic Macular Hole Among a Diverse Group of Patients Throughout the United States. *JAMA Ophthalmol.* 2017 Apr 1;135(4):299-305. doi: 10.1001/jamaophthalmol.2016.5870. PubMed PMID: 28208188; PubMed Central PMCID: PMC5470400.
10. Enanoria WT, Liu F, Zipprich J, Harriman K, **Ackley S**, Blumberg S, Worden L, Porco TC. The Effect of Contact Investigations and Public Health Interventions in the Control and Prevention of Measles Transmission: A Simulation Study. *PLoS One.* 2016;11(12):e0167160.

doi: 10.1371/journal.pone.0167160. eCollection 2016. PubMed PMID: 27941976; PubMed Central PMCID: PMC5152814.

9. Enanoria WT, Worden L, Liu F, Gao D, **Ackley S**, Scott J, Deiner M, Mwebaze E, Ip W, Lietman TM, Porco TC. Evaluating Subcriticality during the Ebola Epidemic in West Africa. PLoS One. 2015;10(10):e0140651. doi: 10.1371/journal.pone.0140651. eCollection 2015. PubMed PMID: 26484544; PubMed Central PMCID: PMC4618845.
8. **Ackley SF**, Liu F, Porco TC, Pepperell CS. Modeling historical tuberculosis epidemics among Canadian First Nations: effects of malnutrition and genetic variation. PeerJ. 2015;3:e1237. doi: 10.7717/peerj.1237. eCollection 2015. PubMed PMID: 26421237; PubMed Central PMCID: PMC4586807.
7. Yam W, Davis E, **Ackley S**, Evans M, Mavalvala N. Continuously tunable modulation scheme for precision control of optical cavities with variable detuning. Opt Lett. 2015 Aug 1;40(15):3675-8. doi: 10.1364/OL.40.003675. PubMed PMID: 26258386.
6. Hargrove JW, **Ackley SF**. Mortality estimates from ovarian age distributions of the tsetse fly *Glossina pallidipes* Austen sampled in Zimbabwe suggest the need for new analytical approaches. Bull Entomol Res. 2015 Jun;105(3):294-304. doi: 10.1017/S0007485315000073. Epub 2015 Mar 25. PubMed PMID: 25804211; PubMed Central PMCID: PMC4838657.
5. Blumberg S, Worden L, Enanoria W, **Ackley S**, Deiner M, Liu F, Gao D, Lietman T, Porco T. Assessing Measles Transmission in the United States Following a Large Outbreak in California. PLoS Curr. 2015 May 7;7. doi: 10.1371/currents.outbreaks.b497624d7043b1aecfbfd3dfda3e344a. PubMed PMID: 26052471; PubMed Central PMCID: PMC4455058.
4. Liu F, Enanoria WT, Zipprich J, Blumberg S, Harriman K, **Ackley SF**, Wheaton WD, Allpress JL, Porco TC. The role of vaccination coverage, individual behaviors, and the public health response in the control of measles epidemics: an agent-based simulation for California. BMC Public Health. 2015 May 1;15:447. doi: 10.1186/s12889-015-1766-6. PubMed PMID: 25928152; PubMed Central PMCID: PMC4438575.
3. Gao D, Amza A, Nassirou B, Kadri B, Sippl-Swezey N, Liu F, **Ackley SF**, Lietman TM, Porco TC. Optimal seasonal timing of oral azithromycin for malaria. Am J Trop Med Hyg. 2014 Nov;91(5):936-942. doi: 10.4269/ajtmh.13-0474. Epub 2014 Sep 15. PubMed PMID: 25223942; PubMed Central PMCID: PMC4228890.
2. O'Brien KS, Blumberg S, Enanoria WT, **Ackley S**, Sippl-Swezey N, Lietman TM. Antibiotic use as a tragedy of the commons: a cross-sectional survey. Comput Math Methods Med. 2014;2014:837929. doi: 10.1155/2014/837929. Epub 2014 Jan 22. PubMed PMID: 24587818; PubMed Central PMCID: PMC3920666.
1. DeFlores LP, Ganim Z, **Ackley SF**, Chung HS, Tokmakoff A. The anharmonic vibrational potential and relaxation pathways of the amide I and II modes of N-methylacetamide. J Phys Chem B. 2006 Sep 28;110(38):18973-80. doi: 10.1021/jp0603334. PubMed PMID: 16986892.

NON-PEER-REVIEWED PUBLICATIONS

3. **Ackley SF** Glymour MM. Comment on “Effect of reduction in brain amyloid levels on change in cognitive and functional decline in randomized clinical trials: An updated instrumental variable meta-analysis.” *Alzheimer’s & Dementia: The Journal of the Alzheimer’s Association*. 2022 Nov 16.
 2. Winter K, Klein NP, **Ackley S**, Cherry JD. Comment on “The impact of past vaccination coverage and immunity on pertussis resurgence.” *Sci Transl Med*. 2018 Dec 19;10(472). doi: 10.1126/scitranslmed.aau0548. PubMed PMID: 30567926.
 1. **Ackley, S.F.** “Construction and characterization of a universally tunable modulator.” Massachusetts Institute of Technology, 2008.
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INVITED ACADEMIC PRESENTATIONS

8. **S. F. Ackley**. *Title TBD*. Methods in Longitudinal Dementia Research Seminar. May 2026.
 7. **S. F. Ackley**. *Drug Repurposing for Dementia: Diabetes Drugs*. Kaiser Permanente of Northern California, Postdoctoral Group. January 20, 2026.
 6. **S. F. Ackley**. *Trends in the Distribution of P-Values in Epidemiology Journals in Elevating Epidemiologic Research Standards: Methods and Innovations in Meta-Research*. SER 2026 Virtual Mid-Year Meeting, February 11, 2026.
 5. **S. F. Ackley**. *The Baddest Bias Debate: Researcher Degrees of Freedom*. Gerontological Society of America, November 2025.
 4. **S. F. Ackley**. *Amyloid Removal as a Surrogate for Cognitive Decline: Does Amyloid Removal Reflect Meaningful Cognitive Improvement?* Rhode Island Alzheimer’s Disease Symposium. December 11, 2025.
 3. **S. F. Ackley**. *Amyloid-Targeting Drugs and Drug Repurposing for Dementia*. Brown Center for Alzheimer’s Disease Flash Talks. December 12, 2024.
 2. **S. F. Ackley**. *Does amyloid-beta reduction improve cognitive outcomes? Integrated evidence from randomized trials of amyloid targeting therapies*. Society for Epidemiologic Research. December 2020. & Applied Biomath Conference. April 2021.
 1. **S. F. Ackley**. *Development of a Novel Method to Estimate Tsetse Fly Mortality*. National University of Science and Technology, Bulawayo, Zimbabwe, Biology Seminar Series. August, 2014. & South African Centre for Epidemiologic Analysis, Seminar Series. July 2014.
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SELECTED CONFERENCE & OTHER TALKS

11. **S. F. Ackley**. *Evaluating the Presence of a Physiologic Ceiling in Amyloid Trajectories: Insights from the Sampled Iterative Local Approximation (SILA) Algorithm and Simulations*. Alzheimer’s Imaging Consortium, Alzheimer’s Association International Conference. July 2025.

10. **S. F. Ackley.** *Reanalysis of the A4 Study to Formally Evaluate Amyloid Removal as a Surrogate for Cognitive Decline.* Methods in Longitudinal Dementia Research Annual Meeting. June 2025.
9. **S. F. Ackley.** *Contextualizing Results from Trials Anti-Amyloid Antibody Drugs: A Data- and Simulation-Based Crosswalk from Cognitive Change to Dementia Hazard Ratios.* Methods in Longitudinal Dementia Research Annual Meeting. June 2023.
8. **S. F. Ackley.** *Evidence Triangulation & Drug Repurposing for Dementia: Metformin Cessation and Dementia Incidence in People with Type 2 Diabetes.* Society for Epidemiologic Research Annual Meeting. June 2023.
7. **S. F. Ackley.** *Instrumental variable meta-analysis of the effect of systolic blood pressure reduction on cognitive change: Evidence from randomized trials antihypertensive therapies.* Alzheimer's Association International Conference. July 2021.
6. **S. F. Ackley.** *Does amyloid-beta reduction improve cognitive outcomes? Integrated evidence from randomized trials of amyloid targeting therapies.* Society for Epidemiologic Research Annual Meeting. December 2020.
5. **S. F. Ackley.** *Does amyloid-beta reduction improve cognitive outcomes? Integrated evidence from randomized trials of amyloid targeting therapies.* Methods in Longitudinal Dementia Research Annual Meeting. June 2019.
4. **S. F. Ackley.** *Assessing the Utility of a Smart Thermometer and Mobile Application as a Surveillance Tool for Influenza and Influenza-Like Illness.* NIH NIGMS MIDAS Meeting. May 2018.
3. **S. F. Ackley.** *Comparing Exponential, Powerlaw, and Lognormal Distributions for Predicting Vaccine-Preventable Disease Incidence Pre- and Post-Control.* Society for Epidemiologic Research Annual Meeting. June 2017.
2. **S. F. Ackley.** *A Branching Process Analysis of Measles in California: Strain Specific Differences and Lessons from the Disneyland Outbreak.* NIH NIGMS MIDAS Meeting. May 2016.
1. **S. F. Ackley.** *Causal Diagramming with Compartmental Model Diagrams: Illustrating a Parametric Alternative to DAGs.* Society for Epidemiologic Research Annual Meeting. June 2015.

ABSTRACTS

Society for Epidemiologic Research

24. **Ackley, S. F.,** Wang, J., Hayes, K., Zullo, A., Choi, M., Buto, P., Stokes, A., Glymour, M. *Unmeasured Confounding in Studies on GLP-1 Receptor Agonist Initiation and Incident Dementia.* 2025. Abstract 0042.
23. Jenson, T. E., Gause, E. L., Wang, J., **Ackley, S. F.,** Manly, J., Fletcher, E., Gilsanz, P., Whitmer, R., Glymour, M. M., Pescador Jimenez, M. *Depressive Symptoms and Neuroimaging Markers of Brain Aging in a Racially Diverse Sample: A Bayesian Analysis.* 2025. Abstract 1004-S/P.

22. **Ackley, S. F.**, Chen, R., Wang, J., Lopes, G., Buto, P., Sims, K. D., Allen, I. E., Glymour, M. M. *P-Hacking and Publication Bias in Epidemiology Research: Trends in Derived P-Values from the American Journal of Epidemiology from 2000–2022*. 2024. Abstract 0703-S/P.
21. Zimmerman, S. C., Wang, J., Pacca, L., Kim, H., Gilsanz, P., **Ackley, S. F.**, Wells, W., Vable, A. M., Power, M. C., Whitmer, R., Schaefer, C., Glymour, M. M. *Evolution of Type 2 Diabetes Over 20 Years and Subsequent Dementia Incidence*. 2024. Abstract 0323.
20. Chen, R., Raquib, R., Wang, J., **Ackley, S. F.**, Weuve, J., Glymour, M. M., Stokes, A. C. *Applying a Causal Decomposition Approach to Quantify the Role of Education in Cohort Differences in Dementia Prevalence in the US*. 2024. Abstract 0015.
19. Power, M., Bødkergaard, K., Svane, H., Zimmerman, S. C., **Ackley, S. F.**, Gilsanz, P., Glymour, M. M., Henderson, V. W., Thomsen, R. W., Sørensen, H. T. *Associations of Early Glycemic Control and Magnitude of HbA1c Reduction Among New Metformin Users with Subsequent Risk of Incident Dementia*. 2023. Abstract 0961.
18. DeVost, M. A., Chen, Y. H., Chen, R., Charpignon, M. L., Riley, A. R., Kiang, M. V., Khadka, A., Zimmerman, S., Wells, W., Wang, J., Ferguson, E., Sims, K. D., **Ackley, S. F.**, Glymour, M. M. *Racial Differences in Nursing Home Mortality Before and During the COVID-19 Pandemic*. 2023. Abstract 0388-S/P.
17. Pederson, A., Almeida, M. L., Zimmerman, S. C., Chen, R., **Ackley, S. F.**, Riley, A., Eng, C. W., Whitmer, R., George, K. M., Peterson, R. L., Mayeda, E. R., Gilsanz, P., Mungas, D., Glymour, M. M. *A Quantile Regression Analysis of Physical Activity and Cognition in a Racially/Ethnically Diverse Sample of Older Adults*. 2023. Abstract 0106.
16. **Ackley, S. F.**, Wang, J., Hill-Jarrett, T., Glymour, M. M. *A Data- and Simulation-Based Crosswalk from Cognitive Change to Dementia Hazard Ratios: Contextualizing Results from Trials of Anti-Amyloid Antibody Drugs*. 2023. Abstract 0031-S/P.
15. Wang, J., Hill-Jarrett, T., Buto, P., Zimmerman, S. C., Ferguson, E., Yang, Y., Pederson, A., Lacar, B., Sims, K. D., Choi, M., DeVost, M. A., Caunca, M. R., Chen, R., **Ackley, S. F.**, Glymour, M. M. *Correcting MRI Measures for Intracranial Volume: Do Alternative Correction Approaches Modify Associations Between Regional MRI Measures and Cognitive Function?*. 2023. Abstract 0026-S/P.
14. Bennett, E. E., Wei, J., Liu, C., Stapp, E. K., Gianattasio, K. Z., Zimmerman, S. C., **Ackley, S. F.**, Griswold, M. E., Fitzpatrick, A. L., Gottesman, R. F., Launer, L. J., Windham, B. G., Levine, D. A., Fohner, A. E., Robins, J., Glymour, M. M., Power, M. C. *Methodological Considerations in Target Trial Emulation Using Cohort Studies*. 2023. Abstract 0878.
13. Chen, R., Wang, J., Buto, P., Caunca, M., Lee, L., Slopen, N., Kubzansky, L. D., **Ackley, S. F.**, Glymour, M. M. *Associations of Childhood Trauma with Dementia Risk and Neuroimaging Markers in the UK Biobank Study*. 2023. Abstract 0014.
12. Wang, J., **Ackley, S. F.**, Kim, M. H., Zimmerman, S. C., Calmasini, C., Asimwe, S., Kobayashi, L. C., Glymour, M. M. *Association of Healthcare Utilization with Incident Dementia Diagnosis: Results from the UK Biobank*. 2022. Abstract 0026-S/P.

11. Zimmerman, S. C., **Ackley, S. F.**, Oni-Orisan, A., Choudhary, V., Hayes-Larson, E., Folle, A. D., Swinnerton, K., Mayeda, E. R., Schaefer, C., Glymour, M. M. *Effect of Cessation of Metformin Oral Hypoglycemic Therapy on Dementia Incidence Among Adults with Type 2 Diabetes*. 2022. Abstract 0015.
10. Duchowny, K. A., **Ackley, S. F.**, Zimmerman, S. C., Brenowitz, W. D., Glymour, M. M. *Handgrip Strength Is Associated with Dementia Risk: Results from the UK Biobank*. 2021. Abstract 0009-S/P.
9. Zimmerman, S., Power, M., Filshtein, T., **Ackley, S. F.**, Mehrotra, M., Gianattasio, K., Wei, J., Gold, A., Glymour, M. M. *A Simulator to Inform Alzheimer's Disease and Dementia Trial Design*. 2020. Abstract 0606.
8. Hayes-Larson, E., **Ackley, S. F.**, Zimmerman, S., Graff, R. E., Witte, J. S., Ospina-Romero, M., Kobayashi, L. C., Glymour, M. M., Mayeda, E. R. *Can the Competing Risk of Death or Selective Survival Explain the Inverse Association Between Cancer and Dementia? A Simulation Study*. 2020. Abstract 0004.
7. **Ackley, S. F.**, Zimmerman, S. C., Brenowitz, W. D., Gold, A., Tchetgen Tchetgen, E. J., Manly, J. J., Mayeda, E. R., Filshtein, T., Power, M. C., Elahi, F., Brickman, A. M., Glymour, M. M. *Does Amyloid-Beta Reduction Improve Cognitive Outcomes? Integrated Evidence from Randomized Trials of Amyloid Targeting Therapies*. 2020. Abstract 0002.
6. Brenowitz, W. D., **Ackley, S. F.**, Zimmerman, S. C., Walter, S., Jorgenson, E., Hoffmann, T. J., Yaffe, K., Whitmer, R. A., Glymour, M. M. *Beyond Mendelian Randomization: Using Genetic Information to Identify Earliest Manifestations of Alzheimer's Disease*. 2020. Abstract 0251.
5. Meza, E., Gold, A., **Ackley, S. F.**, Mungas, D. M., Whitmer, R., Mayeda, E. R., Miles, S., Eng, C., Gilsanz, P., Glymour, M. M. *Adverse Childhood Experiences and Late Life Cognitive Performance Across Racial/Ethnic Groups: Results from the KHANDLE Cohort*. 2020. Abstract 0009.
4. **Ackley, S. F.**, Filshtein, T., DeCarli, C., Fletcher, E., Singh, B., Whitmer, R., Glymour, M. M. *Amyloid Burden as a Predictor of Future Decline in Memory and Executive Function Measures*. 2019. Abstract 0507-S/P.
3. **Ackley, S. F.**, Worden, L., Moe, C., Porco, T. C. *Comparing Exponential, Power-Law, and Lognormal Distributions for Predicting Vaccine-Preventable Disease Incidence Pre- and Post-Control*. 2017. Abstract 0811.
2. **Ackley, S. F.** *A Dynamical Modeling Technique for Estimating Adult Female Mortality from Ovarian Dissection Data for the Tsetse Fly *G. pallidipes* Austen Sampled in Zimbabwe*. 2016. Abstract 0821-S/P.
1. **Ackley, S. F.**, Mayeda, E. R., Enanoria, W. T. A., Glymour, M. M., Porco, T. C. *Causal Diagramming with Compartmental Model Diagrams: Illustrating a Parametric Alternative to DAGs*. 2015. Abstract 370-S/P.

Alzheimer's Association International Conference

18. **Ackley, S.F.**, Gantenberg, J.R., Heston, M.B., and La Joie, R. *Evaluating the Presence of a Physiologic Ceiling in Amyloid Trajectories: Insights from the Sampled Iterative Local Approximation (SILA) Algorithm and Simulations*. 2025. No. e109719. https://doi.org/10.1002/alz70862_109719
17. **Ackley, S.F.**, Flanders, M., Chen, R., Wang, J., and Shah, S.J. *Reanalysis of the A4 Study to Formally Evaluate Amyloid Removal as a Surrogate for Cognitive Decline*. 2025. No. e106785. https://doi.org/10.1002/alz70859_106785
16. **Ackley, S.F.**, Wang, J., DeCarli, C., Fletcher, E., La Joie, R., Corrada, M.M.M., and Glymour, M.M. *Association between Tau and Cognition as a Function of Age*. 2024. No. e094100. <https://doi.org/10.1002/alz.094100>
15. Wang, J., Chen, R., Hayes-Larson, E., Mayeda, E.R., Choi, M., **Ackley, S.F.**, and Glymour, M.M. *Comparison of Dementia Incidence and Risk Factor Associations in All of Us Against the Nationally Representative Health and Retirement Study*. 2024. No. e091815. <https://doi.org/10.1002/alz.091815>
14. La Joie, R., Mundada, N., Iaccarino, L., Soleimani-Meigooni, D.N., Zeltzer, E., Windon, C., Tanner, J.A., Heath, C.L., Shankar, R., Amuiri, A., Cho, H., **Ackley, S.F.**, Blazhenets, G., Aisen, P.S., Eloyan, A., Koeppe, R.A., Carrillo, M.C., Dickerson, B.C., Apostolova, L.G., and Rabinovici, G.D. *Amyloid-PET, Tau-PET, and Their Association in Sporadic Early-Onset Alzheimer's Disease: Cross-Sectional and Longitudinal Data from the LEADS Study*. 2023. No. e078003. <https://doi.org/10.1002/alz.078003>
13. Wang, J., La Joie, R., Kelly, J.D., Kornak, J., Chen, R., **Ackley, S.F.**, and Glymour, M.M. *Will Changes in the COVID-19 Brain MRI Signature Region Affect Subsequent Dementia Outcomes? Linking Pre-Pandemic Brain MRIs to Long-Term Dementia Incidence in UK Biobank Participants*. 2023. No. e079469. <https://doi.org/10.1002/alz.079469>
12. Wang, J., Chen, R., **Ackley, S.F.**, Zimmerman, S.C., Sims, K.D., Hayes-Larson, E., Mayeda, E.R., and Glymour, M.M. *Analytical Choices of Timescale in the Presence of Practice and Cohort Effects in Longitudinal Cognitive Aging Research: A Simulation Study Using Linear Mixed-Effects Models*. 2023. No. e079384. <https://doi.org/10.1002/alz.079384>
11. **Ackley, S.F.**, Calmasini, C., Swinnerton, K.N., Bouteloup, V., Chêne, G., Dufouil, C., and Glymour, M.M. *The Added Value of Global Amyloid Burden in Predicting Cognition in the MEMENTO Cohort*. 2022. No. e063459. <https://doi.org/10.1002/alz.063459>
10. Buto, P., Swinnerton, K.N., La Joie, R., Zimmerman, S.C., Glymour, M.M., **Ackley, S.F.**, and Brenowitz, W.D. *Genetic Risk Score for Alzheimer's Disease Predicts Brain Volume Differences in Mid- and Late-Life in UK Biobank Participants*. 2022. No. e066409. <https://doi.org/10.1002/alz.066409>
9. Wang, J., **Ackley, S.F.**, Woodworth, D.C., Sajjadi, S.A., Fletcher, E., DeCarli, C.S., Glymour, M.M., Kawas, C.H., and Corrada, M.M. *Associations of Amyloid, White Matter Hyperintensities, and Hippocampal Volume with Cognitive Trajectories in the Oldest-Old: The 90+ Study*. 2022. No. e062067. <https://doi.org/10.1002/alz.062067>

8. **Ackley, S.F.**, Zimmerman, S.C., Pamula, M., Peterson, R.L., George, K.M., Whitmer, R.A., Corrada, M.M., Hughes, T.M., and Glymour, M.M. *Instrumental Variable Meta-Analysis of the Effect of Systolic Blood Pressure Reduction on Cognitive Change: Evidence from Randomized Trials of Antihypertensive Therapies*. 2021. No. e056602. <https://doi.org/10.1002/alz.056602>
7. **Ackley, S.F.**, Rist, P.M., Brenowitz, W.D., Graff, R.E., and Glymour, M.M. *The Association Between Migraine Genetic Risk and Dementia: A Mendelian Randomization Study*. 2020. No. e045405. <https://doi.org/10.1002/alz.045405>
6. Brenowitz, W.D., Filshtein, T.J., Yaffe, K., Walter, S., **Ackley, S.F.**, Hoffmann, T., Jorgenson, E., Whitmer, R.A., and Glymour, M.M. *Functional Hearing Loss as a Marker for Early Alzheimer's Disease and Dementia: Exploring the Potential for Reverse Causation*. 2020. No. e042881. <https://doi.org/10.1002/alz.042881>
5. Leng, Y., **Ackley, S.F.**, Glymour, M.M., Yaffe, K., and Brenowitz, W.D. *Genetic Risk of Alzheimer's Disease Is Linked to Short Sleep Duration*. 2020. No. e042459. <https://doi.org/10.1002/alz.042459>
4. Graff, R.E., **Ackley, S.F.**, Romero, M.O., Zimmerman, S.C., Elahi, F.M., Lu, K.P., Witte, J.S., and Glymour, M.M. *Evaluation of Polygenic Risk Scores for 17 Cancer Types in Relation to Cognitive Decline in the UK Biobank*. 2020. No. e041625. <https://doi.org/10.1002/alz.041625>
3. Zimmerman, S.C., **Ackley, S.F.**, Brenowitz, W.D., Graff, R.E., and Glymour, M.M. *Phenome-Wide Associations with an Alzheimer's Disease Genetic Risk Score in UK Biobank: Identifying Early Indicators of Disease*. 2020. No. e040114. <https://doi.org/10.1002/alz.040114>
2. Hayes-Larson, E., **Ackley, S.F.**, Zimmerman, S.C., et al. *The Competing Risk of Death and Selective Survival Cannot Fully Explain the Inverse Cancer-Dementia Association*. 2020. Pp. 1696–1703. <https://doi.org/10.1002/alz.12168>
1. **Ackley, S.F.**, Filshtein, T.J., Power, M.C., Brenowitz, W.D., Gianattasio, K.Z., Li, X., and Glymour, M.M. *Comparing Machine Learning to Estimate Propensity Scores and Conventional Approaches for Addressing Confounding in Cognitive Aging Research: An Example with Diabetes and Cognition in the UK Biobank*. 2019. No. P1-555. <https://doi.org/10.1016/j.jalz.2019.06.1160>

American Causal Inference Conference

1. **Ackley, S. F.**, Zimmerman, S. C., Oni-Orisan, A., Choudhary, V., Hayes-Larson, E., Folle, A. D., Swinnerton, K., Mayeda, E. R., Schaefer, C., Glymour, M. M. *Effect of Cessation of Metformin Oral Hypoglycemic Therapy on Dementia Incidence Among Adults with Type 2 Diabetes*. 2022.

Joint Statistical Meetings

1. **Ackley, S.** “Compartmental Model Diagrams as Causal Representations in Relation to DAGs.” 2016. Abstract No. 375-34. *Session: Contributed Poster (Section on Statistics in Epidemiology)*.

Epidemics

1. Ackley, S. F..

SOFTWARE

- Ackley, S. F., & Gantenberg, J. (2025). cogxwalkr: Crosswalk Cognitive Measures (R package version 0.0.0.9000).

PODCAST

- M. C. Caunca and S. F. Ackley. Free Associations Podcast. Guest hosts, September 2021.

RESEARCH GRANTS & AWARDS

CURRENT GRANTS

Title	Role	Mechanism	Period	Total
<i>Mathematical Models of Tau-PET Measures and Cognitive Decline in Alzheimer’s Disease Across the Lifespan</i>	PI	NIH NIA R00	2024–2027	\$762,014
<i>The Sanofi Real-World Evidence Fellowship at Brown</i>	PI and Faculty Mentor	Sanofi	2024–present	\$68,760/semester

COMPLETED GRANTS

Title	Role	Mechanism	Period	Total
<i>Mathematical Models of Tau-PET Measures and Cognitive Decline in Alzheimer’s Disease Across the Lifespan</i>	PI	NIH NIA K99	2022–2024	\$250,020
<i>Application of Branching Processes to Measles in California</i>	PI	NIH NIGMS F31	2016–2018	\$74,774

FUNDED PENDING IRB APPROVAL

Title	Role	Mechanism	Period	Total
<i>Genetic Risk and Resilience for Cognitive Decline from Childhood through Later Life: Implications for Alzheimer's Disease and Related Dementias</i>	MPI	Brown Carney Institute Zimmerman Award	2026–2027	\$132,000

UNDER REVIEW

Title	Role	Mechanism	Period	Total
<i>Real-World Effects of GLP-1 Receptor Agonists on Dementia Risk in Older Adults With Type 2 Diabetes</i>	co-I	NIH NIA R01	2026–2031	\$684,821
<i>Evaluating Research Credibility in Alzheimer's Disease to Strengthen Evidence-Based Decision Making</i>	PI	Brown Division of Research	2026–2027	\$50,000
<i>Rhode Island Alzheimer's Disease Research Center</i>	Data Core co-Lead	NIH NIA P30	2026–2027	\$22,316,811

AWARDS

- Achievement Rewards for College Scientists (ARCS) Scholarship, 2016 - 2018
- Training in Clinical Research Program Award for Excellence in Teaching the Methods of Clinical Research, 2016
- Phi Beta Kappa of Northern California Scholarship, 2016
- Research Exchange Scholar, International Clinic on Data, Disease, and Dynamics, 2014
- Phi Beta Kappa, 2008
- Sigma Pi Sigma, Physics Honor Society, 2008
- MIT Eloranta Fellowship, 2008

SERVICE

INTERNATIONAL, NATIONAL, & EXTRAMURAL

- **Master's Thesis Committee Member**, Haile Teshome, University of California, San Francisco, Health Data Science Program, Dec 2025 - *present*.
- **International Experimental Epidemiology Journal Club.**
Organizers: S. F. Ackley, C. Dufouil, M. M. Glymour, L. Grasset, January 2026 - *present*.
A cross-institutional forum for discussing new methods and applications in experimental and quasi-experimental epidemiology. Selected Brown Ph.D., M.P.H., and undergraduate students are invited to participate.
- **BU Research Network on Evidence Triangulation: A Bordeaux, Bristol, Brown, and Boston University Collaboration.**
Faculty Mentors: G. D. Smith, M. M. Glymour, C. Dufouil, S. F. Ackley, and K. Tilling.
Brown University Mentee: Michael D. Flanders
An international research and training network focused on evidence triangulation methods that integrate findings across study designs, data sources, and analytic approaches to improve causal inference in health research.

UNIVERSITY, SCHOOL, AND DEPARTMENTAL

- **Faculty Advisory Committee, Brown University School of Public Health**, at-large representative, Sept. 2025 - *present*.
- **Committee Member**, Epidemiology Department Curriculum Committee, Sept. 2024 - *present*.
- **Dissertation Committee co-Chair**, Tiffany Hsieh, Department of Epidemiology, Brown University, Dec 2025 - *present*.

EDITORIAL

- None

JOURNAL REVIEW: SELECTED LIST

- American Journal of Epidemiology
- JAMA Neurology
- Alzheimer's & Dementia
- Alzheimer's & Dementia: Translational Research and Clinical Interventions
- Nature Communications

GRANT REVIEW

- **Ad Hoc Reviewer**, Special Emphasis Study Section, NIH NIA RFA-AG-25-016
“Multi-Scale Models Bridging Levels of Analysis in Aging and Alzheimer’s Disease (AD) and AD-Related Dementias (ADRD) (R01 Clinical Trial Not Allowed),” November 2024.

TEACHING & MENTORING

COURSES TAUGHT

Session	Course	Class Size	Scheduled Hours	
			Lecture	Lab/Tutorial
Spring 2026	PHP 2190: Computational Epidemiology	6	35	28
Fall 2025	PHP 2490: Methods in Pharmacoepidemiology	4	35	0

GUEST LECTURES

- **Ackley SF**. “Sensitivity and Stability Analyses.” PHP 2490 Methods in Pharmacoepidemiology, Department of Epidemiology, Brown University. Fall 2024.
- **Ackley SF**. “Instrumental-Variable Analyses.” Database Seminar, Department of Epidemiology and Biostatistics, University of California, San Francisco. Fall 2021.
- **Ackley SF**. “Novel Methods in Epidemiology: Mathematical Modeling of Infectious Disease.” Global Health Seminar, Department of Epidemiology and Biostatistics, University of California, San Francisco. Spring 2018.
- **Ackley SF**. “Branching Processes” & “Hidden Markov Models.” Mathematical Modeling of Infectious Disease, Department of Epidemiology and Biostatistics, University of California, San Francisco. Spring 2017 & 2018, respectively.

MENTORING

Current Mentees and Trainees

Trainee Name	Type & Training Period	Project Title	Funding	Role
Robert Dettmann	Epidemiology PhD Student, Brown University (January 2025– <i>present</i>)	Real-World Evidence	Sanofi	Research Advisor

Trainee Name	Type & Training Period	Project Title	Funding	Role
Tiffany Hsieh	Epidemiology PhD Student, Brown University (December 2025– <i>present</i>)	Cancer Outcomes in Medicare: Machine Learning & LLM Methods		Thesis Committee Member
Margaret Dunne	Epidemiology PhD Student, Brown University (January 2025– <i>present</i>)	Long-Term Health Effects of Vaccination		F31 Grant-Writing Advisor
Fang-Wen (Nora) Lu	Epidemiology PhD Student, Brown University (January 2025– <i>present</i>)	Antihypertensives & Dementia		F31 Grant-Writing Advisor
Haile Teshome	Master’s in Health Data Science, UCSF (December 2025– <i>present</i>)	Automated Tools for Meta-Analysis		Committee Member
Evan Hoeffen	Undergraduate in Applied Math, Brown University (September 2025– <i>present</i>)	Mediation Analyses in Amyloid-Targeting Drug Trials		Research Supervisor
Rishi Rai	Undergraduate in Neuroscience, Brown University (March 2025– <i>present</i>)	Effect of Antivirals on Dementia		Research Supervisor
Benjamin Alford	MPH, Brown University (September 2025– <i>present</i>)	COIs in AD Research		Research Supervisor
Eileen Jang	MPH, Brown University (September 2025– <i>present</i>)	Research Credibility in Nasal Insulin for Cognition Trials		Research Supervisor
Sirui (Rita) Zhang	Epidemiology PhD Student, Brown University (September 2025– <i>present</i>)			Academic Advisor
Michael D. Flanders	Senior Analyst, Brown University (October 2024– <i>present</i>)	Multiple	NIH NIA R00-AG073454	Manager

Past Mentees and Trainees

Trainee Name	Type & Training Period	Thesis / Project Title	Funding	Role	Last Known Position
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SELECTED MEDIA

- Spichak, Simon. “GLP-1 Semaglutide Fails to Slow Alzheimer’s Despite Biomarker Changes.” *Being Patient*. December 17, 2025.
- Spichak, Simon. “Shingles Vaccine Linked to Lower Dementia Risk — What to Know.” *Being Patient*. December 12, 2025.
- Mammoser, Gigen. “People With Diabetes Who Stop Taking Metformin Face Increased Dementia Risk.” *Healthline*. October 25, 2023.
- Mann, Denise. “Stopping Diabetes Drug Metformin Early May Raise Risk of Dementia.” *United Press International (UPI)*. October 26, 2023.
- “Discontinuing Metformin Linked With Increased Dementia Risk.” *U.S. Pharmacist*. November 1, 2023.
- “Handgrip Strength, Neurocognitive Measures Linked in UK Biobank Study.” *Medical Xpress*. June 28, 2022.
- Alex, Shanet Susan. “The Association Between Handgrip Strength and Dementia Risk in a UK Population of Middle-Aged Adults.” *News-Medical*. June 27, 2022.
- Godman, Heidi. “Poor handgrip strength in midlife linked to cognitive decline.” *Harvard Health Publishing*. September 1 2022.

RESEARCH SUMMARY

My work has grown out of direct experience grappling with challenges in biomarker evaluation and drug efficacy research. I led two meta-analyses evaluating the effectiveness of amyloid-targeting drugs (BMJ, 2021; Alzheimer’s & Dementia, 2023) and co-first authored a review on the complexities of using blood-based biomarkers in epidemiologic studies (AJE, 2024). I have also authored other work on various metascientific themes. This includes a methodological paper on knowledge representation in epidemiology (Epidemiologic Methods, 2017) and a follow-up commentary advocating for more interdisciplinary approaches to research methods (AJE, 2022). These projects reflect a central goal of my research program: to develop systematic, quantitative approaches that clarify how knowledge is produced, interpreted, and communicated across disciplines. Most recently, I led a study examining p-value distributions in epidemiology journals (AJE, 2025).

I have prioritized the dissemination of my code, including open-source tools for meta-analysis and reproducibility. This includes an R Shiny app to test robustness of pooled estimates with the addition of new trial data as part of my BMJ meta-analysis of amyloid-targeting drugs. I recently developed *cogxwalkr*, an R package for harmonizing cognitive outcomes (GitHub: [jrgant/cogxwalkr](#)). My work also includes LLM-based tools for extracting data and extending

p-curve analyses, with code openly shared (GitHub: [sfackley/PValueAJE](#)). These efforts aim to foster reproducible research.

I have over 60 publications (18 first author; 2 senior author) and I am currently the PI of an NIH-funded R00 grant (R00AG073454) that uses mathematical modeling to evaluate the effects of Alzheimer's disease biomarkers on cognition. While my substantive focus is Alzheimer's disease and dementia research, I am increasingly interested in the development of generalizable, quantitative tools for evaluating and strengthening the credibility of biomedical science. My long-term goal is to help improve policy, funding, and clinical decision making through transparent and evidence-based evaluation.