Stanford



Alyson Singleton

Postdoctoral Scholar, Oceans

Bio

BIO

Aly is a Planetary Health Postdoctoral Fellow in the Center for Human and Planetary Health and Center for Innovation in Global Health, co-advised by Giulio De Leo and Marshall Burke. She is investigating the impact of large-scale global change on infectious disease transmission and broader health dynamics. Based on the concepts of One Health and Planetary Health, she focuses on the design and evaluation of win-win solutions that can synergistically benefit human and environmental health. As we anticipate widening disease disparities under increasing climate and land-use change, her research aims to identify opportunities to prevent and mitigate these compounding harms. She approaches these topics by integrating novel computational methods, field-data collection, and epidemiologic techniques.

Aly received her PhD from the Emmett Interdisciplinary Program in Environment & Resources (E-IPER) at Stanford University, where she was co-advised by Erin Mordecai and Steve Luby. Prior to coming to Stanford, she was a Data Science Fellow at the Centers for Disease Control and Prevention where she developed analytic tools for outbreak detection and triage of multiple pathogens and supported the CDC's Novel Coronavirus (COVID-19) Response. She also worked at the People, Place & Health Collective at the Brown University School of Public Health while earning her undergraduate (BS, Applied Mathematics) and master's degrees (MA, Biostatistics).

HONORS AND AWARDS

- Stanford Interdisciplinary Graduate Fellowship (SIGF), Vice Provost for Graduate Education (VPGE)
- Delta Omega Honorary Society in Public Health, Epsilon Iota Chapter, Brown University School of Public Health
- Honors in Applied Mathematics, Brown University

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Stanford University , ENVRES-PHD (2026)
- MA, Brown University , Biostatistics (2020)
- BS, Brown University , Applied Mathematics (2019)

STANFORD ADVISORS

- Giulio De Leo, Postdoctoral Faculty Sponsor

LINKS

- GitHub: https://github.com/alyson-singleton
- Google Scholar: https://scholar.google.com/citations?user=YVUZhvUAAAAJ&hl=en
- Twitter: https://twitter.com/aly_singleton

Publications

PUBLICATIONS

- **Increased dengue transmission following highway paving in the Peruvian Amazon** *NATURE SUSTAINABILITY*
  Singleton, A. L., Lescano, A. G., Martel, K. S., MacDonald, A. J., Mandle, L., Sipin, T. J., Bautista, A. S. M., Carrera, E. D. R., Choque, G. A., Munayco, C. V., Luby, S. P., Mordecai, E. A.
  2026

- **Assessing schistosomiasis transmission risk based on integrated hydrological and environmental modeling** *ENVIRONMENTAL RESEARCH: HEALTH*
  Anjos, R., Neves, N., Tuan, R., Palasio, R., Anjos, L., Kampel, M., Silva, V., Leo, G., Singleton, A., Glidden, C., Chamberlin, A., Aslan, I., Pinter, et al
  2026; 4 (2)

- **Mapping schistosomiasis risk landscapes and implications for disease control: A case study for low endemic areas in the Middle Paranapanema river basin, São Paulo, Brazil.** *PLoS neglected tropical diseases*
  Ferreira da Silva, V. A., Kampel, M., Silva Dos Anjos, R., Gardini Sanches Palasio, R., Escada, M. I., Tuan, R., Singleton, A., Glidden, C. K., Chamberlin, A., De Leo, G. A., Pinter Dos Santos, A., Vieira Monteiro, A. M.
  2024; 18 (11): e0012582

- **Climate and urbanization drive changes in the habitat suitability of Schistosoma mansoni competent snails in Brazil.** *Nature communications*
  Glidden, C. K., Singleton, A. L., Chamberlin, A., Tuan, R., Palasio, R. G., Caldeira, R. L., Monteiro, A. M., Lwiza, K. M., Liu, P., Silva, V., Athni, T. S., Sokolow, S. H., Mordecai, et al
  2024; 15 (1): 4838

- **Estimates of SARS-CoV-2 Hospitalization and Fatality Rates in the Prevaccination Period, United States.** *Emerging infectious diseases*
  Griffin, I., King, J., Lyons, B. C., Singleton, A. L., Deng, X., Bruce, B. B., Griffin, P. M.
  2024; 30 (6): 1144-1153

- **Species distribution modeling for disease ecology: A multi-scale case study for schistosomiasis host snails in Brazil.** *PLOS global public health*
  Singleton, A. L., Glidden, C. K., Chamberlin, A. J., Tuan, R., Palasio, R. G., Pinter, A., Caldeira, R. L., Mendonca, C. L., Carvalho, O. S., Monteiro, M. V., Athni, T. S., Sokolow, S. H., Mordecai, et al
  2024; 4 (8): e0002224

- **Minority-group incubators and majority-group reservoirs support the diffusion of climate change adaptations.** *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*
  Turner, M. A., Singleton, A. L., Harris, M. J., Harryman, I., Lopez, C. A., Arthur, R. F., Muraida, C., Jones, J. H.
  2023; 378 (1889): 20220401

- **Survey of incidence, lifetime prevalence, and treatment of self-reported vulvovaginal candidiasis, United States, 2020.** *BMC women's health*
  Benedict, K., Singleton, A. L., Jackson, B. R., Molinari, N. A.
  2022; 22 (1): 147

- **Network structure and rapid HIV transmission among people who inject drugs: A simulation-based analysis** *EPIDEMICS*
  Singleton, A. L., Marshall, B. D. L., Bessey, S., Harrison, M. T., Galvani, A. P., Yedinak, J. L., Jacka, B. P., Goodreau, S. M., Goedel, W. C.
  2021; 34: 100426

- **Added Benefits of Pre-Exposure Prophylaxis Use on HIV Incidence with Minimal Changes in Efficiency in the Context of High Treatment Engagement Among Men Who Have Sex with Men** *AIDS PATIENT CARE AND STDS*
  Singleton, A. L., Marshall, B. D. L., Zang, X., Nunn, A. S., Goedel, W. C.
  2020; 34 (12): 506-515

- **Potential effectiveness of long-acting injectable pre-exposure prophylaxis for HIV prevention in men who have sex with men: a modelling study** *LANCET HIV*
  Marshall, B. D. L., Goedel, W. C., King, M. R. F., Singleton, A., Durham, D. P., Chan, P. A., Townsend, J. P., Galvani, A. P.
  2018; 5 (9): E498-E505