

# Stanford

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## Jessica Grembi

Postdoctoral Scholar, Infectious Diseases

### Bio

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#### BIO

Environmental enteric dysfunction (EED) affects 50-90% of children in low-income countries and is likely an important factor in child stunting as it impedes efficient nutrient uptake in the small intestine. EED is suspected to be the result of persistent exposure to enteric pathogens, although it has not been correlated with any specific pathogen. My research explores the interplay of gut microbiota, including enteric pathogens, and the host immune system with a focus on understanding EED so we can rationally design treatments and preventive measures.

#### INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

#### HONORS AND AWARDS

- NIH NRSA Ruth L. Kirschstein F32 Individual Postdoctoral Fellowship, NIH/ NIDDK (2022-2025)
- Dr. George Rosenkranz Prize, Freeman Spogli Institute for International Studies and Stanford Health Policy (2021)
- School of Medicine Dean's Postdoctoral Fellowship, Stanford University (2021)
- Stanford Interdisciplinary Graduate Fellowship, Stanford University (2015-2018)
- Graduate Research Fellowship, National Science Foundation (2011-2015)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Global Health Postdoctoral Affiliate, Center for Innovations in Global Health (2022 - present)
- Member, Stanford Military-Affiliated Advisory Committee (2019 - present)
- Member, American Society of Tropical Medicine and Hygiene (2014 - present)
- Member, American Society for Microbiology (2009 - present)

#### PROFESSIONAL EDUCATION

- PhD, Stanford University (2019)
- MS, Penn State University (2011)
- BS, United States Military Academy at West Point (2001)

#### STANFORD ADVISORS

- David Relman, Postdoctoral Research Mentor

#### LINKS

- Relman Lab: <http://med.stanford.edu/reلمانlab.html>

- Luby Lab: <https://lubylib.sites.stanford.edu/>

## Research & Scholarship

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### LAB AFFILIATIONS

- David Relman (10/21/2019)
- Stephen Luby (11/9/2013)
- Alfred Spormann (11/8/2013 - - 8/31/2019)

## Publications

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### PUBLICATIONS

- **Introducing riskCommunicator: An R package to obtain interpretable effect estimates for public health.** *PloS one*  
Grembi, J. A., Rogawski McQuade, E. T.  
2022; 17 (7): e0265368
- **Advantageous microbial community development and improved performance of pilot-scale field systems treating high-risk acid mine drainage with crab shell.** *Journal of hazardous materials*  
Lin, Y., Grembi, J. A., Goots, S. S., Sebastian, A., Albert, I., Brennan, R. A.  
2021; 420: 126665
- **High-throughput low-cost nl-qPCR for enteropathogen detection: A proof-of-concept among hospitalized patients in Bangladesh.** *PloS one*  
Flaherty, K. E., Grembi, J. A., Ramachandran, V. V., Haque, F., Khatun, S., Rahman, M., Maples, S., Becker, T. K., Spormann, A. M., Schoolnik, G. K., Hryckowian, A. J., Nelson, E. J.  
2021; 16 (10): e0257708
- **Effect of water, sanitation, handwashing and nutrition interventions on enteropathogens in children 14 months old: a cluster-randomized controlled trial in rural Bangladesh.** *The Journal of infectious diseases*  
Grembi, J. A., Lin, A., Karim, M. A., Islam, M. O., Miah, R., Arnold, B. F., McQuade, E. T., Ali, S., Rahman, M. Z., Hussain, Z., Shoab, A. K., Famida, S. L., Hossen, et al  
2020
- **Gold-standard cholera diagnostics are tarnished by lytic bacteriophage and antibiotics.** *Journal of clinical microbiology*  
Nelson, E. J., Grembi, J. A., Chao, D. L., Andrews, J. R., Alexandrova, L., Rodriguez, P. H., Ramachandran, V. V., Sayeed, M. A., Wamala, J. F., Debes, A. K., Sack, D. A., Hryckowian, A. J., Haque, et al  
2020
- **Effects of Water, Sanitation, Handwashing, and Nutritional Interventions on Environmental Enteric Dysfunction in Young Children: A Cluster-randomized, Controlled Trial in Rural Bangladesh** *CLINICAL INFECTIOUS DISEASES*  
Lin, A., Ali, S., Arnold, B. F., Rahman, M., Alauddin, M., Grembi, J., Mertens, A. N., Famida, S. L., Akther, S., Hossen, M., Mutsuddi, P., Shoab, A. K., Hussain, et al  
2020; 70 (5): 738–47
- **Gut microbiota plasticity is correlated with sustained weight loss on a low-carb or low-fat dietary intervention** *Scientific Reports*  
Grembi, J. A., Nguyen, L. H., Haggerty, T. D., Gardner, C. D., Holmes, S. P., Parsonnet, J.  
2020; 10
- **High-Throughput Multiparallel Enteropathogen Detection via Nano-Liter qPCR.** *Frontiers in cellular and infection microbiology*  
Grembi, J. A., Mayer-Blackwell, K. n., Luby, S. P., Spormann, A. M.  
2020; 10: 351
- **Shared bacterial communities between soil, stored drinking water, and hands in rural Bangladeshi households.** *Water research X*  
Fuhrmeister, E. R., Ercumen, A. n., Grembi, J. A., Islam, M. n., Pickering, A. J., Nelson, K. L.  
2020; 9: 100056
- **Effects of water, sanitation, handwashing, and nutritional interventions on environmental enteric dysfunction in young children: a cluster-randomized controlled trial in rural Bangladesh.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*

Lin, A., Ali, S., Arnold, B. F., Rahman, M. Z., Alauddin, M., Grembi, J., Mertens, A. N., Famida, S. L., Akther, S., Hossen, M. S., Mutsuddi, P., Shoab, A. K., Hussain, et al

2019

- **Identification of widespread antibiotic exposure in cholera patients correlates with clinically relevant microbiota changes.** *The Journal of infectious diseases*

Alexandrova, L. n., Haque, F. n., Rodriguez, P. n., Marrazzo, A. C., Grembi, J. A., Ramachandran, V. n., Hryckowian, A. J., Adams, C. M., Siddique, M. S., Khan, A. I., Qadri, F. n., Andrews, J. R., Rahman, et al

2019

- **Effects of lipid-based nutrient supplements and infant and young child feeding counseling with or without improved water, sanitation, and hygiene (WASH) on anemia and micronutrient status: results from 2 cluster-randomized trials in Kenya and Bangladesh** *AMERICAN JOURNAL OF CLINICAL NUTRITION*

Stewart, C. P., Dewey, K. G., Lin, A., Pickering, A. J., Byrd, K. A., Jannat, K., Ali, S., Rao, G., Dentz, H. N., Kiprotich, M., Arnold, C. D., Arnold, B. F., Allen, et al

2019; 109 (1): 148–64

- **Remediation of High-Strength Mine-Impacted Water with Mixed Organic Substrates Containing Crab Shell and Spent Mushroom Compost** *JOURNAL OF ENVIRONMENTAL ENGINEERING*

Grembi, J. A., Sick, B. A., Brennan, R. A.

2016; 142 (2)