Stanford



Edwin Omar Rivera-López

Postdoctoral Scholar, Infectious Diseases

Bio

BIO

Edwin Omar Rivera-López is a Postdoctoral Scholar in the Bollyky Lab at Stanford University. He earned his dual-title Ph.D. in Food Science and Clinical and Translational Sciences from The Pennsylvania State University under the mentorship of Dr. Edward G. Dudley, where he studied bacteriophage–host interactions in Escherichia coli O157 using functional genomics to identify the genetic determinants of phage adsorption and host defense. His current research focuses on developing phage–antibiotic therapies for the treatment of polymicrobial bacterial infections associated with cystic fibrosis.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, The Pennsylvania State University (Penn State) , Food Science, Clinical and Translational Sciences (2026)
- Master of Science, University of Puerto Rico - Mayagüez , Food Science and Technology (2023)
- Bachelor of Science, University of Puerto Rico - Mayagüez , Biology (2018)

STANFORD ADVISORS

- Paul Bollyky, Postdoctoral Faculty Sponsor

LINKS

- ORDIC: https://orcid.org/0000-0001-6118-0816

Publications

PUBLICATIONS

- **Surface architecture of the bacterial envelope determines phage adsorption route in pathogenic Escherichia coli O157:H7**
  Rivera Lopez, E. O., et al
  BioRxiv.
  2026
- **Regulatory Landscape and the Potential of Bacteriophage Applications in the United States' Food Industry.** *Journal of food protection*
  Rivera-Lopez, E. O., Tirko, N. N., Dudley, E. G.
  2025; 88 (6): 100510
- **Metagenomic libraries data sets from the hypersaline benthic microbial mats of the Fraternidad Lagoon, Puerto Rico, using an indirect DNA extraction method.** *Microbiology resource announcements*
  Nieves-Morales, R., Quiles-Pérez, C. J., Rivera-Lopez, E. O., Torres-Zapata, I., Rodriguez-Ramos, J., Rios-Velazquez, C.
  2026; 15 (4): e0150425
- **Prokaryotic communities profile from metagenomic libraries of the brown rock sea cucumber (Holothuria glaberrima) intestinal system.** *Microbiology resource announcements*
  Nieves-Morales, R., Paez-Diaz, J. A., Rivera-Lopez, E. O., Rodríguez-Ramos, J., Rios-Velazquez, C.

2025; 14 (10): e0073125

- **Whole-genome sequence of 19 Listeria monocytogenes, isolated from municipal wastewater in State College, Pennsylvania.** *Microbiology resource announcements*

  Horack, E., Acosta, A., Jones, M., Feng, J., Rivera-Lopez, E. O., M'ikanatha, N. M., Kovac, J., Dudley, E.

  2025; 14 (10): e0052325

- **Characterization of prokaryotic communities in Puerto Rican caves using 16S rDNA amplicon sequencing.** *Microbiology resource announcements*

  Pérez-Santos, N., Borrero-Villabol, S. J., Nieves-Morales, R., Paez-Díaz, J. A., Rivera-Lopez, E. O., Rodríguez-Ramos, J., Nieves-Rivera, A. M., Ríos-Velazquez, C.

  2025; 14 (7): e0035425

- **Intestinal microbiome profile of the brown rock sea cucumber (Holothuria glaberrima) using ITS and 16S rDNA amplicons from direct mechanical, enzymatic, and chemical metagenomic extraction.** *Microbiology resource announcements*

  Nieves-Morales, R., Paez-Diaz, J. A., Rodriguez-Carrio, S. M., Melendez Martinez, G., Rivera-Lopez, E. O., Rodríguez-Ramos, J., García-Arrarás, J. E., Rios-Velazquez, C.

  2025; 14 (7): e0029325

- **Characterization of fungal communities in Puerto Rican caves using internal transcribed spacer sequencing.** *Microbiology resource announcements*

  Nieves-Morales, R., Paez-Diaz, J. A., Rivera-Lopez, E. O., Pérez-Santos, N., Borrero-Villabol, S. J., Rodríguez-Ramos, J., Nieves-Rivera, A. M., Rios-Velazquez, C.

  2025; 14 (6): e0002225

- **Characterization of intestinal fungal communities through ITS amplicon from metagenomic libraries of sea cucumber (Holothuria glaberrima).** *Microbiology resource announcements*

  Paez-Diaz, J. A., Nieves-Morales, R., Melendez-Martinez, G., Rivera-Lopez, E. O., Rodríguez-Ramos, J., Rios-Velazquez, C.

  2025; 14 (3): e0132024

- **Characterization of the microbial communities in paddy soils in Lajas, Puerto Rico using 16S rRNA gene.** *Microbiology resource announcements*

  Rivera-Lopez, E. O., Huertas-Miranda, J., Rios-Velazquez, C.

  2025; 14 (1): e0100824

- **Sea cucumber (Holothuria glaberrima) intestinal microbiome dataset from Puerto Rico, generated by shotgun sequencing.** *Data in brief*

  Rivera-Lopez, E. O., Nieves-Morales, R., Melendez-Martinez, G., Paez-Diaz, J. A., Rodriguez-Carrio, S. M., Rodriguez-Ramos, J., Morales-Valle, L., Rios-Velazquez, C.

  2024; 54: 110421

- **First Report of Salmonella Typhimurium Bacteriophages Infecting Multiple Serovars from a Wastewater Treatment Plant in Puerto Rico** *Caribbean J. of Science*

  Cerezo, M., Rivera-Lopez, E. O., Olivo-Natal, B. K., Ramos-Lugo, C. M., Saldaña-Lopez, D., Rios-Velazquez, C.

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