

Yolanda Rivera-Cuevas

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Current Status

PhD candidate in the Department of Microbiology and Immunology at the University of Michigan, Ann Arbor

Education

- **September 2016** Graduate Student at the University of Michigan in Ann Arbor
- **2015-2016** Post-baccalaureate Research Education Program (PREP) fellow at the University of Michigan in Ann Arbor
- **2012-2015** BS, *magna cum laude*, Molecular Cell Biology, University of Puerto Rico in Rio Piedras
- **2010-2012** AS, *magna cum laude*, Natural Sciences, University of Puerto Rico in Utuado

Research Interest

Infectious diseases, neglected tropical diseases, parasitology, eukaryotic pathogens, host-pathogen interactions, environmental microbiology, water borne pathogens, aquatic bacteria, bacteriophages, biofilms, symbiosis

Research Experience

- **Graduate Student at University of Michigan, Department of Microbiology and Immunology**

PhD student

May 2017-present

Faculty Research Mentor: Dr. Vern Carruthers

Microbiology Lab at Medical Science II building at University of Michigan, Ann Arbor

Research: Uncover the molecular mechanisms by which *T. gondii* acquires host-derived cytosolic proteins by manipulating host cell machinery.

- **PREP Scholar**

Biomedical Research Fellow

July 2015-June 2016

Faculty Research Mentor: Dr. Michele Swanson

Microbiology Lab at Medical Science II building at University of Michigan, Ann Arbor

Research: Study resilience of *Legionella* species in water and their resistance to environmental stressors.

- **Research Initiative for Scientific Enhancement (RISE)**

Undergraduate Research Assistantship Scholar

August 2014-May 2015

Faculty Research Mentor: Dr. Gary Toranzos

Microbial Ecology Lab at Julio Garcia Diaz building at the University of Puerto Rico in Rio Piedras

Research: Isolation of *Enterococcus* bacteria from the sand of a tropical beach in the capitol of Puerto Rico to study the prevalence of bacteriophages.

- **REU Summer Program**

Undergraduate researcher

May 2014-July 2014

Faculty Research Mentor: Dr. Brian D. Ackley

Neurosciences Lab at University of Kansas in Lawrence

Research: Understand how three proteins involved during synapsis development, LAR-like protein-tyrosine phosphatase (PTP-3), the calmyrin ortholog (CALM-1) and the receptor for activated protein-C kinase (RACK-1) interact at a functional and structural level. Model organism: *C.elegans*

▪ **Research Assistant**

Undergraduate researcher

January 2014-May 2014

Faculty Research Mentor: Dr. Gary Toranzos

Microbial Ecology Lab at Julio Garcia Diaz building at the University of Puerto Rico in Rio Piedras

Research: Study the prevalence of enterococci bacteria in sand after periods of rain events

Professional Development

June- August 2018, Biology of Parasitism: Modern Approaches. Marine Biological Laboratories, University of Chicago, Woods Hole, MA.

Honors, Fellowships and Awards

2018, Helmsley Charitable Trust- Biology of Parasitism, Marine Biological Laboratories

2018, Burroughs Wellcome Fund- Biology of Parasitism Course, Marine Biological Laboratories

2017- present, Molecular Mechanism in Microbial Pathogenesis (MMMP) Training Program, University of Michigan

2016- present, Rackham Merit Fellowship (RMF) from Rackham Graduate School, University of Michigan

2015-2016, Biomedical Research Fellow for Post-baccalaureate Research Education Program (PREP) fellow at University of Michigan in Ann Arbor

2014-2015, Undergraduate Biomedical Research Fellow for the Research Initiative for Scientific Enhancement (RISE) Program at University of Puerto Rico in Rio Piedras

2014, Summer Undergraduate Research Fellow for the REU Program at University of Kansas in Lawrence

2010-2015, Dean's List

Leadership and Services

2018-present, Departmental Diversity Equity and Inclusion (DEI) committee, University of Michigan in Ann Arbor

2018-present, Organization of Microbiology and Immunology Students (OMIS) Social Chair, University of Michigan in Ann Arbor

Memberships

2016-present, Student affiliate Organization of Microbiology and Immunology Students (OMIS) University of Michigan in Ann Arbor

2014-2016, Student affiliate American Society for Microbiology (ASM)

2014- 2015, Student affiliate Puerto Rico Society of Microbiologists- ASM Puerto Rico Branch (SMPR)

2014- 2015, Student affiliate Microbiology Student Chapter University of Puerto Rico in Rio Piedras (CEM UPRRP)

Techniques/Skills

Tissue culture, western blots, immunofluorescence, microscopy, environmental isolation of bacteria, membrane filtration, tissue culture, protein purification, gel electrophoresis, SDS-page gel, PCR, double layer plaque assay, bacteriophage induction.

National Meetings

2017, Midwest Neglected Infectious Diseases Meeting. University of Notre Dame, IN

2017, Molecular Pathogenesis: Mechanisms of Infectious Diseases (FASEB Meeting). Snowmass Village, CO

2016, American Society of Microbiology (ASM) Microbe Meeting. Boston, MA

2015, Annual Biochemical Research Conference for Minority Students (ABRCMS). Seattle, WA

2015, American Society of Microbiology (ASM) 115th General Meeting. New Orleans, LA

2014, Puerto Rico Society of Microbiologists- ASM Puerto Rico Branch (SMPR): Third Microbiology Student Research Symposium: Passing the Torch of Ethics and Research to the Next Generation. Mayaguez, PR

2014, Annual Biomedical Research Conference for Minority Students (ABRCMS). San Antonio, TX

Publications

McGovern, O. L., Rivera-Cuevas, Y., Kannan, G., Narwold, A. and Carruthers, V. B. (2018), Intersection of Endocytic and Exocytic Systems in *Toxoplasma gondii*. Traffic. Accepted Author Manuscript. doi:[10.1111/tra.12556](https://doi.org/10.1111/tra.12556)

Poster Presentations

Rivera-Cuevas, Y., McGovern, O.L., Lawrence, A.L., Carruthers, V.B. *Mechanisms underlying Toxoplasma gondii* endocytosis of host-cytosolic proteins. Biology of Parasitisms: Modern Approaches Course. Marine Biological Laboratory, Woods Hole, MA, June 16, 2018

Rivera-Cuevas, Y., McGovern, O.L., Dou, Z., Carruthers, V.B. *Sorting for Survival: Merged Endocytic and Exocytic Trafficking in Toxoplasma gondii*. Midwest Neglected Infectious Diseases Meeting. University of Notre Dame, IN, August 27-August 28, 2017

Rivera-Cuevas, Y., McGovern, O.L., Dou, Z., Carruthers, V.B. *Sorting for Survival: Merged Endocytic and Exocytic Trafficking in Toxoplasma gondii*. Molecular Pathogenesis: Mechanisms of Infectious Diseases (FASEB Meeting), Snowmass Village, CO, July 9- July 14, 2017

Byrne, B., Rivera, Y., Huges, E., Swanson, M. *Resilience of Legionella pneumophila is Enhanced in Water*, Conference of the American Society of Microbiology, ASM Microbe, New Orleans, LA, June 1-5, 2017

Swanson, M. S., B. G. Byrne, Y. Rivera, E. Hughes. *Resilience of Legionella pneumophila in nutrient-poor environments*, Gordon Research Conference, "Microbial Toxins and Pathogenesis," Waterville Valley, NH, July 10-15, 2016.

Rivera-Cuevas, Y., Rodriguez, R., Montes, L., Carrasquillo, E., Nieves S., Toranzos, G. *The Ecology of Enterococcus-infecting phages and their host in tropical beach sand*, Conference of the American Society of Microbiology, "115th General Meeting" New Orleans, LA, May 30-June 2, 2015.