

Ana Maria Vazquez-Catoni

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Education

The Ohio State University (OSU)

August 2018-Present

Master of Science: Plant Pathology
Expected Graduation Date: May 2020

University of Puerto Rico at Mayagüez Campus (UPRM)

2013-2018

Bachelor of Science in Biology, Magna Cum Laude (3.52/4.0)
Bachelor of Science in Industrial Microbiology, Cum Laude (3.48/4.0)

Research Experience

Identification of bacterial endophyte communities and transmission in tomato seedlings grown in chicken-grazed soils at Dr. M. Soledad Benitez Laboratory, Ohio Agricultural Research and Development Center (OARDC), OSU **August 2018-Present**

- Conducted greenhouse experiment where tomato seedlings grew in soil diversity gradients using chicken grazed soils.
- Bacterial endophytes were isolated from tomato seedlings and identified them by targeting the 16S rRNA gene region.
- Currently working on protocol standardization of metagenomic analysis of tomato seedling plant tissue.

Plant Genomics Research Experience for Undergraduates (REU) Program at Dr. Gregory Bonito's Laboratory, Michigan State University (MSU) **May-August 2017**

- Identified Mortierellomycotina strains obtained from soil and screened for the presence of endobacteria.
- Impacts of fungi cleared of endobacteria on plant growth during severe drought were assessed.
- After exposition to severe drought, photosynthetic efficiency was monitored with a MultispeQ v1.0., above- and below-ground dry biomass was measured, and statistics calculated in R Studio.

Identification of bacterial composition on the phyllosphere of *Coffea arabica* leaves at Tropical Microbial Ecology Laboratory, UPRM **August 2016-May 2018**

- DNA extraction from coffee leaves obtained from Adjuntas Agricultural Experiment Station of the University of Puerto Rico and statistical analysis of coffee leaf area and quantity of cultured microbes from each sample.
- Exposition of coffee leaves to different concentrations of antibiotics and statistical analysis of coffee leaf area and quantity of cultured microbes from each sample.

Eukaryotic genome annotation for the Genomics Education Partnership sponsored by Washington University in St. Louis, the Howard Hughes Medical Institute and the National Science Foundation (NSF), UPRM **January-May 2016**

- Annotated genomic fragments of *Drosophila ficusphila* using the genome of *Drosophila melanogaster* as reference.
- Studied diverse genetic elements and molecular evolution processes.
- Used applications and computerized programs useful in genomic studies.

Characterization of single nucleotide polymorphisms to determine common diseases in Puerto Rican citizens at Population and Evolutionary Genetics Laboratory, UPRM **September-December 2015**

- Extracted DNA from various saliva samples of Puerto Rican citizens.

Characterization of the innate immune genes in the Caribbean black-long spined sea urchin (*Diadema antillarum*) using next generation sequencing at Caribbean Genome Center, UPRM **August-September 2015**

- Briefing on DNA sequencing using previously prepared libraries ran with Ion One Touch Emulsion PCR. Also briefed on machines like, Pippin Prep and Ion Torrent Personal Genome Machine.

Extraction of benthic microfauna from sediment samples of mesophotic coral ecosystems (MCEs) at Marine Invertebrates Laboratory, UPRM **February-May 2015**

- Sorted out marine invertebrates from samples of mesophotic coral ecosystems using a stereoscope and classified them in their respective orders.

Description and comparison of macroinvertebrates associated with forest litter from Susúa State Forest, Sabana Grande, Puerto Rico at Zoology Laboratory, UPRM **September-December 2014**

- Sorted out terrestrial invertebrates from samples of fallen leaves using a stereoscope and classified them in their respective orders.

Poster Presentations

The impact of soil diversity on the tomato seedling microbiome, American Phytopathological Society Annual Meeting Plant Health 2019, Huntington Convention Center of Cleveland, Cleveland, OH **August 6, 2019**

The impact of soil diversity on the tomato seedling microbiome, American Society for Microbiology Microbe 2019, Moscone Center, San Francisco, CA **June 23, 2019**

The impact of soil diversity on the tomato seedling microbiome, The CFAES Annual Research Conference, Nationwide & Ohio Farm Bureau 4-H Center, OSU, Columbus, OH **April 22, 2019**

The impact of soil diversity on the tomato seedling microbiome, Front Range Microbiome Symposium, Canvas Stadium, Colorado State University, Fort Collins, CO **April 19, 2019**

The impact of soil diversity on the tomato seedling microbiome, 2nd Ohio State University Plant Sciences Symposium: “Enhancing Plant Science through Technology, Communication, and Innovation”, Nationwide & Ohio Farm Bureau 4-H Center, OSU, Columbus, OH **March 30, 2019**

Investigations into the diversity and function of *Mortierella* fungi with plants and bacteria, 11th International Mycological Congress (IMC11), Puerto Rico Convention Center, San Juan, PR **July 20, 2018**

Investigations into the diversity and function of *Mortierella* fungi with plants and bacteria, Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix Convention Center, Phoenix, AZ **November 4, 2017**

Investigations into the diversity and function of *Mortierella* fungi with plants and bacteria, Mid-Michigan Symposium for Undergraduate Research Experiences, Michigan State University, East Lansing, MI **July 26, 2017**

Oral Presentations

Women In Ag Science Presentation and Q&A, Minorities in STEM and Latinas Unidas: Hispanic Heritage Month Series, The College of Wooster, Wooster, OH **September 26, 2019**

The chicken crossed the pasture... and then what?: A study on the impact of chicken-grazed soils on the bacterial microbiome of tomato plants, Plant Pathology Graduate Student Spring Symposium, OSU, Columbus, OH **May 9, 2019**

Puerto Rico: The Reality of “Paradise”, Cultural Connections: “Where Culture Meets Agriculture” Series, OARDC, OSU, Wooster, OH **November 1, 2018**

Investigations into the diversity and function of *Mortierella* fungi with plants and bacteria, 37th Puerto Rico Interdisciplinary Scientific Meeting sponsored by Puerto Rico Louis Stokes Alliance for Minority Participation, Universidad del Turabo, Gurabo, PR **April 28, 2018**

Research Grant Proposals Submitted

SEEDS: The CFAES Graduate Research Grant Program. “The impact of soil diversity on the tomato seedling microbiome” **December 2018**

Special Courses, Workshops and Seminars

“The Plant Root System: Gateway to Plant-Beneficial Rhizosphere Microbiome Interactions” Drs Betsy Pierson, Linda Kinkel, Larry York and Sandy Pierson. Workshop, Huntington Convention Center of Cleveland, Cleveland, OH (9 contact hours)
August 2019

“Microbe Academy for Professional Development” . Workshop, Moscone Center, San Francisco, CA, USA (14 contact hours)
June 2019

“Intro to R” Michael Sovic. Workshop, OARDC, Wooster, OH, USA (1.5 contact hours) **June 2019**

“Identity, Power, and Privilege” Dr. Leo Taylor. Workshop, OARDC, Wooster, OH, USA (3 contact hours) **May 2019**

“Computing Services to Accelerate Research and Innovation: An introduction to Ohio Supercomputer Center services, hardware, and environment” Kate Cahill. Workshop, OARDC, Wooster, OH, USA (4 contact hours) **April 2019**

“Cultivating an Inclusive Environment: Recognizing and Responding to Implicit Bias” Dr. Leo Taylor. Workshop, OARDC, Wooster, OH, USA (3 contact hours) **April 2019**

“Science Communication” Dr. Joe Palca, Dr. Annie Specht and Courtney Price. Workshop, Agricultural Administration Building, OSU, Columbus, OH, USA (4 contact hours) **March 2019**

- Breakout sessions: “Digital and Online Science Communication” (Dr. Annie Specht), “Portal to the Public: Best Practices for Communicating Science to a General Audience” (Courtney Price) and “Interviewing - Techniques and Equipment” (Dr. Joe Palca)

“Men, Women, and Everyone Else: An Exploration of Sex, Gender, and Gender Identity” Dr. Leo Taylor. Workshop, OARDC, Wooster, OH, USA (3 contact hours) **March 2019**

“Making Your Science Accessible”. Workshop, OSU, Columbus, OH, USA (1.5 contact hours) **March 2019**

“Better Research through Better Mentoring” Dr. Marcela Hernandez, Dr. Noah Weisleder and Jeff Mason. Workshop, OARDC, Wooster, OH, USA (3 contact hours) **March 2019**

“Introduction to Microbiome Analysis” Dr. Maria Soledad Benitez, Fiorella Cisneros, Wirat Pipatpongpinoy and Michael Sovic. Workshop, OARDC, Wooster, OH, USA (12 contact hours) **January 2019**

“Bacterial Fungal Interactions at IMC11” Dr. Gregory Bonito and Dr. Jessie Uehling. Workshop, Puerto Rico Convention Center, San Juan, PR (8 contact hours) **July 2018**

“DNA Barcoding of Plants in Puerto Rico” Sponsored by USDA HSI program, Dr. Dimuth Siritunga and Dr. Ben Van Ee. Workshop, UPRM (14 contact hours) **August 2017**

Basic Excel Workshop, Prof. Wanda Negrón, UPRM (4 contact hours) **November 2016**

“Microbial Mats and Stromatolites: An Early look at life on Earth” Dr. Carlos Ríos Velázquez. Conference and Workshop. UPRM (3 contact hours) **October 2016**

“Hands-on Bioinformatics Exercises for the Analysis of Complex Microbiomes” Dr. Kostas T. Konstantinidis, Dr. Natasha DeLeón-Rodríguez, Dr. Arturo Massol Deyá and Lizbeth Dávila. Special course. Casa Pueblo, Adjuntas, PR (15 contact hours) **October 2016**

- Conferences in: Community work and its impact, the use of bioinformatics in complex microbiomes, microorganisms in the atmosphere, coffee leaf microbiome, metagenomics analysis of military impacted lake in Vieques, Puerto Rico.
- Use of different bioinformatics tools to obtain percentage of nucleotide identities and RNA phylogeny.

Training in Giving Talks on Environmental Sustainability, Dr. Sandra L. Cruz-Pol. Workshop. UPRM (8 contact hours) **October 2016**

- Conferences in: Climate change and its consequences, renewable energy, principles in agro-ecology, home-solutions, efficient and low emission transportation, sustainable diet, the importance of reducing and reusing before recycling, eco-friendly cleaning products, carcinogens in everyday products, effects of smoking and how to present effective oral presentations.

Growth Medium Preparation. Workshop. UPRM (2 contact hours)

September 2016

“Sustainable Energy and Climate Change” Dr. Abdul Aziz bin Ali Rashid Al Nuaimi (“Green Sheikh”) Presentation, UPRM (2 contact hours)

September 2016

First Panel Conference of Professionals in Biology and Microbiology. Centro Cultural Baudilio Vega Berrios, Mayagüez, PR (8 contact hours)

April 2016

“Ecologic Complexity and Agroecology” Dr. Ivette Perfecto, Dr. John Vandermeer and Dr. Arturo Massol Deyá. Special course. Casa Pueblo, Adjuntas, PR (15 contact hours)

April 2016

- Conferences in: Special patterns, chaos in ecology, randomness in nature, oscillators connected through trophic interactions, hyperdimensionality and indirect interactions mediated by behavior and other characteristics.

“Advances in Tropical Microbial Ecology” Dr. Larry Forney, Dr. Eva Top and Dr. Arturo Massol Deyá. Special course. Casa Pueblo, Adjuntas, PR (36 contact hours)

March 2016

- Conferences in: Science and society, scientific writing, basics of biology, evolutionary biology of microorganisms, horizontal gene transfer and plasmid host range evolution, scientific method and research significance, ‘omics’ in microbial ecology, community ecology: the human microbiome, ethical frameworks for decision making, among other topics.
- Group work and presentations on: Revising abstracts, developing scientific proposals in biodiversity, agriculture and bioremediation and creating sustainability project for a current problem in Puerto Rico.

“What are GMO’s, How are They Developed, and Other Related Stories” Dr. Jose Rafael Prado (Monsanto), UPRM (2 contact hours)

December 2015

TEDxUPRM, UPRM (8 contact hours)

December 2015

“We Can’t Wait, for Environmental Education” Dr. Jane Goodall Presentation, UPRM (3 contact hours)

April 2015

Future Scientists Seminar, UPRM (6 contact hours)

September 2014

- Participated in workshops on how to do an oral presentation, prepare an abstract, prepare a poster presentation, prepare a personal statement, prepare an effective resumé and ethics in science.

Memberships

- **American Phytopathological Society (APS),** Member **May 2019-Present**
- **Ohio Agricultural Research and Development Center Scholars,** Member **August 2018-Present**
- **Plant Pathology Graduate Students Association (PPGSA),** Member **August 2018-Present**
Student Symposium Committee Chair **August 2019-Present**
- **American Society for Microbiology (ASM),** Member **November 2017-Present**
- **Toastmasters International,** Member **November 2018-Present**
Vice President of Public Relations **February 2019–Present**
- **Mycological Society of America,** Member **November 2017-2018**
- **Campus Verde Students,** Member **January 2016-May 2018**
Vocal **August 2017-May 2018**
Public Relations **August 2016–May 2017**

Awards and Honors

- **APS 2019 Phytobiomes Poster Award by Phytobiomes Journal and Noble Research Institute** **August 2019**
- **2019 Research Capstone Fellowship Award by the ASM** **April 2019-Present**
- **Travel Award for APS Annual Meeting Plant Health 2019 by the PPGSA** **March 2019**
- **Student and Postdoctoral Travel Award by ASM** **March 2019**
- **Graduate Enrichment Fellowship by The Ohio State University Graduate School** **August 2018- August 2019**
- **Mycological Society of America's Undergraduate Poster Award at IMC11** **July 2018**
- **BIOREU Travel Grant by the NSF** **December 2017**
- **Partial Travel Award for the Annual Biomedical Research Conference for Minority Students** **November 2017**
- **Honor Student of the College of Arts and Sciences at UPRM** **April 2016-2018**

Media and Impact

- **Editor in Chief and Co-founder** at Women in Ag Science (WAGS) (www.womeninagscience.org) **2019-Present**

Volunteer work

- **Chair for the Advertisement and Social Media Subcommittee** for The Ohio State University Plant Sciences Symposium 2020 **August 2019-Present**
- **Outreach for WAGS** at Wooster Science Café Open House **September 2019**
- **Tour guide** at Casa EcoSolar, UPRM **April 2016-May 2018**
- **Camp Counselor** at SciGirls Summer Camp at Casa EcoSolar, UPRM **July 2016**

Skills

- Fully bilingual (English & Spanish)
- Results oriented
- Excellent written and oral communication skills
- Leadership and analytical skills
- Proficient with Microsoft Office, Windows and Mac operational systems,
- Capable of working with minimal or no supervision.
- Highly motivated and self-driven
- typing and internet search
- Familiar with R Studio