

Edwin D. Navarro Monserrat

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| [Edwin Navarro Monserrat \(bento.me\)](http://bento.me)

Education:

Ph.D. Plant Pathology – The Ohio State University (2019 – Present)

MS. Plant Pathology – The Ohio State University (2019 – 2023)

BS Cellular and Molecular Biology – Universidad de Puerto Rico, Rio Piedras (2013 – 2019)

Experience:

Graduate Research Associate – The Ohio State University Department of Plant Pathology

Dr. Taylor Lab - Root-Biotic Interactions Lab (2019 – Present)

- Screened a collection of *Pseudomonas* spp. for biocontrol activity against *Pythium* for control of root rot in hydroponically grown leafy greens using in-lab/in vitro testing and greenhouse/hydroponic trials.
- Employed bioinformatic approaches to identify various potential modes of action, including putative secondary metabolites, secretion system-related effectors, and volatiles.
- Wrote and successfully secured grants to support research projects.
- Presented research outcomes at various conferences and meetings.

Research Assistant – The Ohio State University Department of Plant Pathology

I-CORPS@Ohio, Entrepreneur Lead (April 2019 - May 2019)

- Market research of business model centered around commercialization of university-owned microbes and/or natural products.
- Conducted interviews with over 100 relevant stakeholders across universities, the biotechnological industry, and organizations that also work towards commercialization of university material.

Undergraduate Research Assistant – Universidad de Puerto Rico, Rio Piedras

Dr. Bayman Lab, Department of Biology (Aug 2016 - Aug 2018)

- Performed DNA extractions on a substantial collection of *Pseudocercospora griseola* isolates.
- Executed PCR amplification of four conserved genes, utilizing multi-locus sequencing analysis for genetic characterization.
- Contributed to pathogenicity trials, playing a key role in assessing the virulence of isolates against differential bean lines to determine their races.

Dr. Tinoco Lab, Department of Chemistry (Aug 2014 – May 2014)

- Troubleshooted various methods for protein crystallization of Titanium (IV) bound serum-transferrin. Specifically vapor diffusion and microdialysis methods were tested and optimized.

Summer Research Opportunities Scholar – The Ohio State University

Dr. Ujor Lab, Department of Animal Science (May 2016 – Aug 2016)

- Assessed the viability of novel strains of *Clostridium beijerinckii* through ribonuclease P-mediated knockdown of a targeted gene.
- Conducted extensive anaerobic fermentation studies and utilized gas chromatography for quantification of butanol production.

Dr. Taylor Lab, Department of Plant Pathology (May 2015 – Aug 2015)

- Performed in vitro and in planta assays to determine the efficacy of *Pseudomonas* spp. strains as biocontrol agents against *Agrobacterium rhizogenes*.

Professional Development and Leadership Roles:

- Served as the Plant Pathology representative for the CFAES Graduate Student Advisory Committee (GSAC).
- Led several committees as part of the Plant Pathology Graduate Student Association (PPGSA) at Ohio State and served as President from 2020-2021.
- Led the implementation of a buddy system for incoming graduate students and organized academic events such as symposiums, retreats, and workshops.
- Served in various departmental committees as a student representative including search committees for potential hires.

Teaching and Outreach:

- [CienciaPR: Aplicando la rama de la bioinformática en escenarios agrícolas](#) (Sep. 26, 2023)
- 2023 PPGSA Spring: Mentoring-Up Discussion Workshop (May 18, 2023)
- 2023 PPGSA Spring Symposium Organizer (May 18, 2023)
- Sociedad Estudiantil de Microbiología Industrial- UPRM: Seminar talk (February 9, 2023)
- [CienciaPR: El uso de microorganismos beneficiosos en la agricultura](#) (November 2022)
- Master Gardeners Training: Introduction to Plant Pathology Lecture (March 2022)
- Phytobacteriology Lab Teaching Assistant (Aug 2021- Oct 2021)

Awards and academic achievements:

- OSU-IDI Trainee Transformative Research Grant Award-Co applicant (2,000\$)
- CFAES Internal Grants Program (4,891.00\$)
- PPGSA Patricia Ngwira Travel Award (266.00\$)
- Patrick S. Osmer Fellowship, OSU
- [Given five oral presentations and nine poster presentations](#) (See full CV for more details)
- [Co-author in three peer-reviewed articles \(2 research, 1 review\)](#)

Skills and abilities:

- Advanced knowledge in R and various bioinformatic packages (Bioconductor).
- Experience working in Unix/Linux and HPC environments.
- Experience in comparative genomics, phylogenetics and whole-genome sequencing analysis.
- Problem-solving skills & strong foundation in experimental design and statistical analysis.
- Strong data visualization skills (ggplot, and RShiny).
- Experience in bacterial transformation methods, standard molecular biology techniques and experience working with bacteria, fungi, and oomycetes.
- Experience in greenhouse assays
- Knowledgeable in application, usage, and commercialization of beneficial microbes.
- Strong communication skills for technical and broader audiences.
- Bilingual (Spanish and English)

References available upon request