

RAYMOND HERNANDEZ PARCON

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RESEARCH & TEACHING INTERESTS

- Host-Pathogen Interaction and Plant Disease Resistance
- Molecular Genetics and Genomics
- Active, Blended, and Experiential Learning Pedagogies

EDUCATION

Ph.D. in Plant Pathology **Jan 2022 – May 2027**
Proposed dissertation: “Characterization of *Cercospora sojina*’s Genetic Diversity to Better Understand the Resistance Mechanisms of Frogeye Leaf Spot Disease in Soybean.”
[University of Georgia](https://www.uga.edu)

M.Sc. in Microbiology **Aug 2016 – Feb 2021**
Thesis: “Efficacy of a Microbial Biological Control Agent (MBCA) in Controlling the Growth of Fungal Pathogens of Tomato.”
[University of the Philippines Diliman](https://www.diliman.ph.up.edu.ph)

B.Sc. in Biology **Jun 2010 – Mar 2014**
Thesis: “Diversity of Streptomyces in Las Piñas-Parañaque Critical Habitat and Ecotourism Area, Metro Manila, Philippines: A Pilot Study.”
[Adamson University](https://www.adamson.edu.ph)

TEACHING & MENTORSHIP EXPERIENCE

Guest Lecturer **May 2, 2025**
Institute of Biology, University of the Philippines Diliman, Quezon City, Philippines

- Developed presentation slides and delivered a lecture on “Foliar Plant Pathogens in Soil” in Dr. Jessica Simbahan’s Soil Microbiology 3-unit graduate course.

Student Mentor **Jun 2023 – Jul 2023**
Department of Plant Pathology, University of Georgia, Athens, GA, USA

- Mentored Mr. Kavin Sivasubramanian (UGA CAES Young Scholars Internship Program 2023).
- Mentee won 1st place poster award for Athens campus.

Teaching Assistant **Jan 2023 – Dec 2023**
Department of Plant Pathology, University of Georgia, Athens, GA, USA

- Laboratory teaching assistant for Introductory Plant Pathology for Spring and Fall semesters.
- Assisted Dr. Harald Scherm, Dr. Melissa Mitchum, and Dr. Shavannor Smith in designing experiments, preparing laboratory materials, and shared grading responsibilities.
- Led laboratory sessions and supported active student learning.

Guest Lecturer **Mar 28, 2022**
Institute of Biology, University of the Philippines Diliman, Quezon City, Philippines

- Developed presentation slides and delivered a lecture on “Perspectives on Plant-Microbe Interactions” in Dr. Marie Christine Obusan’s Advanced Microbial Ecology 3-unit graduate course.

Instructor 3**Aug 2021 – Dec 2021***Department of Biochemistry, University of Santo Tomas, Manila City, Philippines*

- Instructor of record for Basic Inorganic and Organic Chemistry laboratory course.
- Applied active and blended learning strategies to enhance student engagement in an online learning environment.
- Faculty Competence Evaluation Score: 22/25 or Very Satisfactory (4-point rating scale)

Instructor 1**Nov 2014 – Mar 2015***Biology Department, Adamson University, Manila, Philippines*

- Instructor of record for Human Biology, Biological Science, Zoology (laboratory), and Human Anatomy and Physiology courses.
- Developed course activities and assessments grounded in active and experiential learning pedagogies.
- Teacher's Behavior Inventory Rating: 95% or Excellent (5-point rating scale)

RESEARCH EXPERIENCE

Graduate Research Assistant**Jan 2022 – Dec 2026***Department of Plant Pathology, University of Georgia, GA, USA*

Studies the genetic diversity of *Cercospora sojina*, the causal agent of frogeye leaf spot in soybeans. Developed a bioinformatics pipeline for SNP discovery from genotyping-by-sequencing data using high performance computing. Analyzes genetic diversity by identifying haplotypes across spatial and temporal collections of the pathogen using R, STRUCTURE, GenALEX, and Geneious software.

Project Consultant**Oct 2021 – Dec 2021***Institute of Biology, University of the Philippines Diliman, Quezon City, Philippines*

Project consultant in the Production and Improvement of Construction Materials Using Bacterial Calcite Precipitation.

University Research Associate 2**Jul 2018 – Dec 2020***Institute of Biology, University of the Philippines Diliman, Quezon City, Philippines*

Conducted research using a polyphasic approach: integrating morphological, physiological, and molecular analyses of a biologically active microorganism, and analyzed qualitative and quantitative data of its inhibitory effects against fungal pathogens of tomato. Additionally, managed administrative tasks related to the project.

University Research Associate 1**Jan 2017 – Jun 2018***Natural Sciences Research Institute, University of the Philippines Diliman, Quezon City, Philippines*

Conducted research on biologically active microorganisms by screening them through various metabolic assays and analyzing qualitative and quantitative physiological data of a potential biologically active enzyme against a collection of fungal plant pathogens. Additionally, managed administrative tasks related to the project.

PUBLICATIONS

Peer-Reviewed Articles

1. **Parcon RH**, Cruz RJB, Rey JD, Dacones LS, Simbahan JF. (2026). *Bacillus amyloliquefaciens* N2B2 and its potential for co-cultivation with chitinolytic bacteria to control the growth of *Agroathelia rolfsii* and other fungal pathogens of tomatoes (*Solanum lycopersicum* L.). *Journal of Biological Control*, 40(1):1-15. <https://doi.org/10.18311/jbc/2026/49421>

- Supnet SJG, Caballero EVM, **Parcon RH**, Simbahan JF. (2020). Marilao-Meycauayan-Obando River System (MMORS) Harbors Multidrug-Resistant Bacteria Indicating High Risk of Antimicrobial Contamination. *Philippine Science Letters*, 13 (Supplement); 198-205. URL: <https://www.philsciletters.net/2020-198/>
- Atole LDC, Isagan MDE, **Parcon RH**, Alcantara VA, Zarate JT, Simbahan JF. (2020). Variations in enzymatic activity and response to abiotic factors of endophytic bacteria isolated from Narra (*Pterocarpus indicus*) growing in a forest environment and urban arboretum. *Philippine Science Letters*, 13 (Supplement); 120-126. URL: <https://www.philsciletters.net/2020-special-issue-12/>
- Parcon RH**, Isagan MDE, Atole LDC, Alcantara VA, Simbahan JF. *Bacillus amyloliquefaciens*, a Narra (*Pterocarpus indicus*) leaf endophyte, possesses antifungal activity against phytopathogenic fungi due to laminarinase activity and production of antimicrobial compounds. (2019). *Philippine Science Letters*, 12 (Supplement); 048-054. URL: <https://philsciletters.net/2019-special-issue-4/>

Contributed Talks

- "Tracking 44 Years of Frog-eye Leaf Spot: Predominant *Cercospora sojina* Genotypes as Priority Targets for Host Resistance." 2026 Annual Meeting of the Georgia Association of Plant Pathologists, Jekyll Island, GA (May 12-13, 2026)
- "Characterization of the genetic diversity and virulence of historical and current isolates of *Cercospora sojina* collected over 42 years." 103rd Annual Meeting of the Southern Division of the American Phytopathological Society, Athens, GA (March 9-10, 2026)

Poster Presentations at Professional Meetings

- Plant Health 2025, Annual Meeting of the American Phytopathological Society, Honolulu, HI (August 2-5, 2025)
- 19th Biennial Conference on Molecular & Cellular Biology of the Soybean, Madison, WI (July 23-26, 2025)

AWARDS & RECOGNITIONS

- 2026 Graduate Domestic Travel Grant, Graduate School, University of Georgia
- 1st Place, Oral Paper Presentation – 2026 Annual Meeting of Georgia Association of Plant Pathologists, Jekyll Island, Georgia
- 1st Place, 2026 Three Minute Thesis (3MT®) – PhD Category, Department of Plant Pathology, University of Georgia
- Finalist Alternate, 2025 Three Minute Thesis (3MT®), Graduate School, University of Georgia
- 2025 Graduate International Travel Grant, Graduate School, University of Georgia
- 2025 Summer Research Grant, Graduate School, University of Georgia
- 2024 Outstanding Teaching Assistant Award, Center for Teaching and Learning, University of Georgia

PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

- GradTeach Certification by the Center for Teaching and Learning, University of Georgia (*in progress*)
- Certified Instructor*, Data, Library, and Software Carpentries by the Carpentries, June 12, 2026
- 2026 Active Learning Summit by University of Georgia, February 11-13, 2026
- Speak to Impress: Elevate Your Research Presentation Skills (and prepare for 3MT!) Workshop by UGA Graduate School Professional Development, August 27, 2025
- Software Carpentry Core Curricula (Unix Shell, Git, and Python) Workshop by Carpentries@UGA, June 16-17, 2022
- Data Carpentry Genomics Curriculum Workshop by Carpentries@UGA, May 18-19, 2022

LEADERSHIP & SERVICE

1. *Moderator*, Graduate Student Research Competition Session in 103rd Annual Meeting of the Southern Division of the American Phytopathological Society, Athens, GA, 2026
2. *Volunteer*, APS Gives Back: Native Roots Experience in Plant Health 2025, Honolulu, HI
3. *Chapter Reviewer*, Mycology in a Changing Planet: Applications and Perspectives from the Southeast Asia (Springer Nature, 2025)
4. *Secretary* of the Society of Aspiring Plant Pathologists, University of Georgia (FY 2022-23)

PROFESSIONAL & HONOR SOCIETY MEMBERSHIPS

1. American Phytopathological Society
2. American Phytopathological Society - Southern Division
3. Society of Aspiring Plant Pathologists, University of Georgia
4. The Honor Society of Phi Kappa Phi, University of the Philippines Diliman