

# Carrie Lapaire Harmon

<https://plantpath.ifas.ufl.edu/people/faculty-pages/carrie-harmon/>

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## **Educational background:**

- Ph.D., 2013, Plant Pathology, University of Florida
- M.S., 2002, Plant Pathology, Purdue University
- B.S., 2000, Plant and Soil Sciences, University of Massachusetts

## **Employment:**

- 2016-present, Senior Associate-In Extension Scientist, University of Florida, Department of Plant Pathology, UF-IFAS
- 2010-2016, Associate-In Extension Scientist, University of Florida, Department of Plant Pathology, UF-IFAS
- 2003-2010, Assistant-In Extension Scientist, University of Florida, Department of Plant Pathology, UF-IFAS
- 2009-present, Director, Plant Diagnostic Center, UF-IFAS

**Current FTE:** 80% Extension, 20% Research

## **Teaching (2009 - present):**

PLP 6942, Professional Internship in the Plant Disease Clinic, all semesters (current)

PLP 6291, Plant Disease Diagnosis, summer A (current)

PLP 6105, Plant Disease Management (2015-2019)

## **University Service**

PLP Department Chair Search and Screen Committee (2023)

IFAS Shared Services Center Faculty Advisory Group

DPM Plant Pathology comprehensive exam committee member (current)

UF Faculty Senate, member, IFAS Representative 2017-2020

UF Land Use Committee, vice-chair 2020, 2017-2020

## **Mentoring (extension):**

- Craig Frey, Hendry County Extension Director and Multi-County Commercial Horticulture Extension Agent 2022-2024

## **Mentoring (graduate students):**

- Raquel Hill, DPM (Chair)
- Brianna Benitez, DPM (Chair)
- Alec Dunker, DPM (Chair)
- Samantha McCoy, DPM (Chair)
- Kaitlin Waibel, DPM (Chair)
- Lyuyi Chen, DPM (Member)
- Lindsay Mikell, DPM (Member)
- Lynhe Demesyieux, PhD (Member)
- Deanna Bayo, PhD in Plant Pathology (Member)

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- Raquel Hill, MS in Plant Pathology (Chair, graduated Dec 2023)
- Caitlin Sollazzo, DPM (Chair, graduated 2024, employed as IFAS commercial hort agent)
- Julia Rycyna, DPM (Member, graduated May 2023)
- Heather Kalaman, DPM (Member, graduated December 2022)
- Nick Goltz, DPM (Chair; graduated August 2021, employed as lab director at UConn)
- Paulo Pinto de Mello Neto, MS in Plant Pathology (Member; graduated December 2021)
- James Fulton, PhD in Plant Pathology (Member; graduated May 2021, employed at FDACS-DPI)
- Amanda Long, DPM and MS in Environmental Horticulture (Member; graduated 2020, employed in UF-IFAS Extension)
- Lisbeth Espinosa, DPM (Member; graduated December 2017, employed as faculty in ESPOL, Ecuador)
- John Bonkowski, DPM (Member; graduated 2016, employed as a diagnostician in the Purdue University Diagnostic Lab)
- Christopher Kerr, DPM (Member; graduated December 2016, employed as UF-IFAS Extension Agent)
- Rosa Raudales, PhD (Member; graduated 2016 in Env. Hort., employed at UConn as Assoc. Prof.)
- Alicyn Ryan, DPM (Member; graduated 2015, employed at UMaine as diagnostic lab director and Assistant Professor)

**Professional service:**

- Co-editor of Phytofrontiers Focus Issue 2025 <https://apsjournals.apsnet.org/phytofrontiers-focus-issue-diagnostic-assay>
- Deputy Executive Director of the [National Plant Diagnostic Network](#), network operations of more than 70 labs and 200 professionals (term 2024-2026)
- Co-editor of Phytofrontiers Focus Issue 2023 <https://apsjournals.apsnet.org/doi/10.1094/PHYTOFR-02-23-0014-FI>
- Executive Director of the [National Plant Diagnostic Network](#), responsible for overseeing network operations of more than 70 labs and 200 professionals (2019-2022)
- Expert advisor to government agencies, universities, and private industry in 6 countries and 9 US states regarding laboratory design, setup, equipment, staffing, training, and protocols (2005-present)
- Anonymous peer-reviewer of articles submitted to Plant Disease, Plant Health Progress, Phytofrontiers, MDPI – Pathogens section, open-access journal, <https://www.mdpi.com>), and the Global Forum for Rural Advisory Services ([www.g-fras.org](http://www.g-fras.org))
- Member of the American Phytopathological Society (2002-present) Caribbean and Southern Divisions

**Current extramural funding**

<u>Project Title</u>	<u>PI/CoPI</u>	<u>\$ total amount</u>	<u>Year-year</u>
<i>Phytophthora austrocedrae</i> Program Diagnostic Support for APHIS Survey/Regulatory Incidents	PI	\$140,000	2024-2025

Proofreading and Augmenting NPDN Diagnostic Data to Support Risk Analysis and Accurate Communications (USDA-APHIS PPA7721)	PI	\$76,165	2024-2025
The Southern Plant Diagnostic Network (USDA-NIFA)	PI	\$1,959,821	2022-2026
<i>Phytophthora ramorum</i> Program Diagnostic Support for APHIS Survey/Regulatory Incidents	PI	\$363,564	2022-2025
Diagnostic Assay Validation Network (USDA-AFRI)	Co-PI	\$999,996	2022-2025

### Peer-reviewed Publications (2019 - present):

1. Poudel, M., Sharma, A., Minsavage, G. V., Fullem, K., Huguet-Tapia, J., Norman, D. J., Goss, E. M., Harmon, C. L., & Jones, J. B. **2024**. Genomic insights into two new subspecies of *Herbaspirillum huttiense* strains isolated from diseased foliage in Florida. *International Journal of Systematic and Evolutionary Microbiology*, 74(12), 74:006597.  
<https://doi.org/10.1099/ijsem.0.006597>
2. Paez, C.A.; Smith, J.A.; Nakasone, K.K.; Bec, S., Harmon, C.L.; Urbina, H.; Eickwort, J.M.; and Smith, M.E. **2024**. *Parvodontia relampaga* sp. nov.: Cystostereaceae fungal pathogen that is the causal agent of relámpago blight of woody plants in Florida, USA. *Fun. Bio.*  
<https://doi.org/10.1016/j.funbio.2024.03.002>
3. Benitez, B.; Poudel, M.; Jones, J.B.; and Harmon, C.L. **2023**. First report of *Herbaspirillum huttiense* causing leaf spots on Boston Fern (*Nephrolepis exaltata*) in Florida. *Plant Dis.*  
<https://doi.org/10.1094/PDIS-06-23-1115-PDN>
4. Harmon, C.L.; Castlebury, L.; Boundy-Mills, K.; Broders, K.; Hyten, A.M.; Jacobs, J.L.; Knight-Connoni, V.K.; Mollov, D.; Riojas, M.A.; and Sharma, P. **2023**. Standards of diagnostic validation: Recommendations for reference collections. *Phytofrontiers.*  
<https://apsjournals.apsnet.org/doi/pdf/10.1094/PHYTOFR-05-22-0050-FI>
5. Cardwell, KC; Harmon, CL; Luster, DG; Stack, JP; Hytern, AM; Sharma, P; and Nakhla, MK. **2023**. The need and vision for a diagnostic Assay validation network. *Phytofrontiers.*  
<https://doi.org/10.1094/PHYTOFR-05-22-0056-FI>
6. Adhikari, A.; Beckham, K.; Harmon, C.L.; Dufault, N.S.; Goss, E.; and Harmon, P.F. **2023**. First report of *Bipolaris sorokiniana* leaf spot disease on watermelon (*Citrullus lanatus*) in Florida. *Plant Dis.* <https://doi.org/10.1094/PDIS-09-22-2208-PDN>
7. Parajuli, A., Harmon, C.L., Minsavage, G., Jones, D., Timilsina, S., Parent, M.L., and Jones, J. **2022**. Draft genome sequences of *Pseudomonas amygdali* pv. *loropetali* pathotype strain DSM 105780 PT, isolated from Florida. *Access Microbio.* 2022;4:000423.  
<https://doi.org/10.1099/acmi.0.000423>
8. Iles, L.C.; Fulladolsa, A.C.; Smart, A.; Bonkowski, J.; Creswell, T.; Harmon, C.L.; Hammerschmidt, R.; Hirsch, R.; Rodriguez Salamanca, L. **2021**. Everything Is Faster: How do land-grant university-based plant diagnostic laboratories keep up with a rapidly changing

world? *Ann. Rev. of Phytopath.* 59 (1):333-349. <https://doi.org/10.1146/annurev-phyto-020620-102557>

9. Smart, A.; Byrne, J.; Hammerschmidt, R.; Snover-Clift, K.; Stack, J.; Brenes-Arguedas, T.; Jones, J.B.; Harmon, C.L. **2021**. Evolving plant diagnostics during a pandemic. *Plant Health Prog.* <https://doi.org/10.1094/PHP-08-20-0074-MR>
10. Dale, A.; Harlow, E.; Harmon, C.L.; and Marble, C. **2021**. Galling damage to woody ornamentals: diagnosis and potential causes. IFAS EDIS ENY-2055/IN1310. <https://doi.org/10.32473/edis-in1310-2021>
11. Klingeman, W.E.; Chong, J-C.; Harmon, C.L., Ames, L.; LeBude, A.V.; and Chandran, P. **2020**. Scale insect records from ornamental plants help to prioritize plant health resource development. *Plant Health Prog.* 21:278-287. <https://doi.org/10.1094/PHP-05-20-0045-S>
12. Fulton, J.C.; Klein-Gordon, J.; Bec, S.; Fayette, J.; Jones, J.B.; Garrett, K.A.; Harmon, C.L. **2020**. Draft genome sequences of plant pathogenic *Klebsiella variicola* isolated from plantain in Haiti. *Microbiology Resource Announcements.* <https://doi.org/10.1128/mra.00336-20>
13. Fulton, J.C.; Bec, S.; Fayette, J.; Ploetz, R.C.; Garrett, K.A.; Harmon, C.L. **2020**. First report of plantain soft rot caused by *Klebsiella variicola* in Haiti. *Plant Disease.* <https://doi.org/10.1094/PDIS-10-19-2105-PDN>
14. Fayette, J.; Bec, S.; Loubeau, S.; Fulton, J.C.; Garrett, K.A.; Harmon, C.L. **2019**. First report of *Lasiodiplodia hormozganensis* causing fruit rot of eggplant in Haiti. *Plant Disease.* <https://doi.org/10.1094/PDIS-05-19-1093-PDN>

#### **Industry/extension publications and products:**

1. Greenhouse Product News Desktop Diagnosis **2023** industry publication for greenhouse and protected ag: <https://gpnmag.com/article/desktop-diagnostics>
2. Dale, A.; Harlow, E.; Harmon, C.L.; and Marble, C. **2021**. Galling damage to woody ornamentals: diagnosis and potential causes. IFAS EDIS ENY-2055/IN1310. <https://doi.org/10.32473/edis-in1310-2021>
3. Disease diagnosis and management for Pest Management University, 6 training sessions per year, approximately 250 contacts <https://pestmanagementuniversity.org>
4. Field Diagnosis of Plant Diseases certificate course, Greenhouse Training Online <https://hort.ifas.ufl.edu/training>, approximately 150 students each year (international, English and Spanish) <https://hort.ifas.ufl.edu/media/hortifasufledu/images/fisher/greenhouse-training-online-courses/pdfs/2024-pdfs/E-FieldDiagnosisofPlantDiseases2024L.pdf>
5. Practical Disease Management certificate course, Greenhouse Training Online <https://hort.ifas.ufl.edu/training>, approximately 150 students each year (international, English and Spanish) <https://hort.ifas.ufl.edu/media/hortifasufledu/images/fisher/greenhouse-training-online-courses/pdfs/2024-pdfs/I-PracticalDiseaseManagement2024L.pdf>

### Books/Book Chapters:

1. Harmon, C.L.; Akey, B.L., Ochoa-Corona, F.M.; Ramachandran, A.; and Sharma, P. Training, Tests, and Tech: Deployment of Diagnostic Tools for Biosecurity *In* Cardwell, K. F., and Bailey, K. L., eds. Tactical Sciences for Biosecurity in Animal and Plant Systems. Hershey, PA: IGI Global, **2022**. <http://doi:10.4018/978-1-7998-7935-0>
2. Schubert, T., Jeyaprakash, A., and Harmon, C.L. **2018**. Fundamentals and Advances in Plant Problem Diagnostics; Chapter in Handbook of Florists' Crops Diseases and Handbook of Plant Disease Management. McGovern, R.J. and Elmer, W.H. (Eds.) Springer International Publishing. Hardcover ISBN 978-3-319-39668-2. DOI 10.1007/978-3-319-32374-9\_1-1.
3. vanBruggen, A., Sharma, K., Merritt, J., Ali, G., Dickstein, E., Harmon, C.L. **2014**. Pests and diseases in ornamental greenhouse crops: International trade, diagnosis and management, and audit-based certification systems. Department of Plant Pathology, Gainesville.
4. Miller, S.A, Harmon, C.L. and Beed, F. **2009**. Plant Disease Diagnostic Capabilities and Networks. *Annu. Rev. Phytopathol.* 47:15-38.