

Jane Marian Luis
College of Tropical Agriculture and Human Resilience
Department of Plant and Environmental Protection Sciences
FTE Distribution: 30% I; 35% R; 35% E

Education

<u>Degree</u>	<u>University</u>	<u>Major</u>
BS	University of the Philippines Los Baños	Agriculture, Plant Pathology
MS	University of Georgia	Plant Pathology
PhD	North Carolina State University	Plant Pathology

Professional Appointments

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Assistant Specialist	University of Hawaii at Manoa	2024 – present
Postdoctoral Research Associate	Purdue University	2023 – 2024
Postdoctoral Scholar	The Ohio State University	2020 – 2023
Laboratory and Research Technician	Virginia Tech	2019 – 2020

Courses Taught

<u>Course ID and name (credits)</u>
PEPS 605 Biology of Plant Pathogens: Fungi and Nematodes (2)

Publications (reverse chronological order)

Conference Proceedings

Luis J.M., Ng S.J., Bergstrom G., Bissonnette K., Bowen K., Bradley C., Byamukama E., Chilvers M., Collins A., Cowger C., Darby H., DeWolf E., Dill Macky R., Esker P., Friskop A., Kleczewski N., Koehler A., Langston D., Madden L., Marshall J., Mehl H., Moraes W., Nagelkirk M., Rawat N., Smith D., Telenko D., Wegulo S., Young-Kelly H., and Paul P. 2020. Fusarium head blight management coordinated project: Uniform fungicide trials 2018–2020. In: Canty S., Hoffstetter A., and Dill-Macky A. (Eds). *Proceedings of the 2020 National Fusarium Head Blight Forum*. East Lansing, MI: U.S. Wheat & Barley Scab Initiative, pp. 44–48.

Luis J.M., Ng S.J., Bergstrom G., Bissonnette K., Bowen K., Bradley C., Byamukama E., Chilvers M., Collins A., Cowger C., Darby H., DeWolf E., Dill Macky R., Esker P., Friskop A., Kleczewski N., Koehler A., Langston D., Madden L., Marshall J., Mehl H., Moraes W., Nagelkirk M., Rawat N., Smith D., Telenko D., Wegulo S., Young-Kelly H., and Paul P. 2020. Fusarium head blight management coordinated project: Integrated management trials 2018–2020. In: Canty S., Hoffstetter A., and Dill-Macky A. (Eds). *Proceedings of the 2020 National Fusarium Head Blight Forum*. East Lansing, MI: U.S. Wheat & Barley Scab Initiative, pp. 38–43.

Refereed Journal Publications

Luis J.M., Jaiswal A., Mengiste T., and Hoagland L. 2025. Deciphering the mechanisms that regulate variability in induced systemic resistance responsiveness by beneficial soil microbe in tomato. *Phytopathology* online version. <https://doi.org/10.1094/PHYTO-07-24-0240-R>

Webster R.W., Nicolli C., Allen T.W., Bish M.D., Bissonnette K., Check J.C., Chilvers M.I., Duffeck M.R., Kleczewski N., Luis J.M., Mueller B.D., Paul P.A., Price P.P., Robertson A.E., Ross T.J., Schmidt C., Schmidt R., Schmidt T., Shim S., Telenko D.E.P., Wise K., and Smith D.L. 2023. Uncovering the environmental conditions required for *Phyllachora maydis* infection and tar spot development on corn in the United States for use as predictive models for future epidemics. *Scientific Reports* 13:17064. <https://doi.org/10.1038/s41598-023-44338-6>

Luis J.M., Mehl H.L., Plewa D.E., and Kleczewski N.M. 2023. Is *Microdochium maydis* associated with necrotic lesions in the tar spot disease complex? A culture-based survey of maize in Mexico and the Midwest United States. *Phytopathology* 113:1890–1897. <https://doi.org/10.1094/PHYTO-04-23-0109-R>

Luis J.M., Carbone I., Mack B.M., Lebar M.D., Cary J.W., Gilbert M.K., Bhatnagar D., Wientjes C.C., Payne G.A., Moore G.G., Ameen Y.O., and Ojiambo P.S. 2022. Female fertility influences metabolomic and transcriptomic profiles during sexual reproduction in *Aspergillus flavus*. *Fungal Biology* 126:187–200. <https://doi.org/10.1016/j.funbio.2022.01.001>

Luis J.M., Carbone I., Mack B.M., Lebar M.D., Cary J.W., Gilbert M.K., Bhatnagar D., Wientjes C.C., Payne G.A., Moore G.G., Ameen Y.O., and Ojiambo P.S. 2022. Dataset for transcriptomic profiles associated with development of sexual structures in *Aspergillus flavus*. *Data in Brief* 42:108033. <https://doi.org/10.1016/j.dib.2022.108033>

Luis J.M., Carbone I., Payne G.A., Bhatnagar D., Cary J.W., Moore G.G., Lebar M.D., Wei Q., Mack B., and Ojiambo P.S. 2020. Morphological changes within stromata during sexual reproduction in *Aspergillus flavus*. *Mycologia* 112:908–920. <https://doi.org/10.1080/00275514.2020.1800361>

Lewis M.H., Carbone I., Luis J.M., Payne G.A., Bowen K.L., Hagan A.K., Kemerait R.C., Heiniger R., and Ojiambo P.S. 2019. Biocontrol strains differentially shift the genetic structure of indigenous soil populations of *Aspergillus flavus*. *Frontiers in Microbiology* 10:1738. <https://doi.org/10.3389/fmicb.2019.01738>

Luis J.M., Ozias-Akins P., Holbrook C.C., Kemerait R.C. Jr, Snider J.L., and Liakos V. 2016. Phenotyping peanut genotypes for drought tolerance. *Peanut Science* 43:36–48. <https://doi.org/10.3146/0095-3679-43.1.36>

Luis J.M., and Kemerait R.C. 2015. Assessment of the sensitivity and accuracy of immuno-chromatographic test strips in the qualitative detection of aflatoxin contamination in peanuts. *Peanut Science* 42:49–55. <https://doi.org/10.3146/0095-3679-42.1.49>

Extension Publications

Webster R.W., Nicolli C., Allen T.W., Bish M.D., Bissonnette K., Check J.C., Chilvers M.I., Duffeck M.R., Kleczewski N., Luis J.M., Mueller B.D., Paul P.A., Price P.P., Robertson A.E., Ross T.J., Schmidt C., Schmidt R., Schmidt T., Shim S., Telenko D.E.P., Wise K., and Smith D.L. 2023. Tar spot prediction in corn: The weather matters. *Crop Protection Network* 5012. <https://doi.org/10.31274/cpn-20231220-1>

Paul P.A., Moraes W.B., and Luis M. 2021. Low vomitoxin levels in corn but rain and delayed harvest could change this picture. *Crop Observation and Recommendation Network Newsletter* 2021-37. <https://agcrops.osu.edu/newsletter/corn-newsletter/2021-37/low-vomitoxin-levels-corn-rain-and-delayed-harvest-could-change>

Paul P., Badertscher M., and Luis M. 2021. Tar spot more widespread across the state of Ohio in 2021. *Crop Observation and Recommendation Network Newsletter* 2021-30. <https://agcrops.osu.edu/newsletter/corn-newsletter/2021-30/tar-spot-more-widespread-cross-state-ohio-2021>

Paul P., Luis M., and Duffeck M. 2021. Wheat disease risk and fungicide application programs. *Crop Observation and Recommendation Network Newsletter* 2021-14. <https://agcrops.osu.edu/newsletter/corn-newsletter/14-2021/wheat-disease-risk-and-fungicide-application-programs>

Paul P., Duffeck M., and Luis M. 2021. Wheat between Feekes 8 and 10 and disease concerns. *Crop Observation and Recommendation Network Newsletter* 2021-12. <https://agcrops.osu.edu/newsletter/corn-newsletter/12-2021/wheat-between-feekes-8-and-10-and-disease-concerns>

Leadership Roles (Committees, Boards, Advisory, etc.)

Search committee member, PEPS tenure-track Assistant Professor for Plant Virology. 2025.

Judge, graduate student poster competition. CTAHR Showcase and Research Symposium. 2025.

Co-organizer, Plant Health pre-meeting field trip. Tour of tropical crop production in Hawaii. Honolulu, HI. 2025.

Co-member, board of directors. University of the Philippines Alumni Association of Hawaii. 2025 – 2027.

Exhibitor, Tropical Plant Pathology booth. Discover UH Manoa open house. 2024.

Judge, graduate student poster competition. Department of Horticulture and Landscape Architecture, Purdue University. 2023.

Reviewer, Plant Health graduate student travel awards. 2020.

Reviewer, ACS Agricultural Science & Technology, International Journal of Phytopathology, International Research Journal of Medicine and Medical Sciences, Mycotoxin Research, Peanut Science, Philippine-American Academy of Science and Engineering, Plant Disease Notes, Plant Pathology, PLOS One. 2016 – present

Graduate Students

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master's Committees	2	0
Chair of PhD Committees	0	0
Member of Master's Committees	1	0
Member of PhD Committees	0	0

Grant Support

Title of Grant: Characterization of *Aspergillus* populations in macadamia nuts in Hawaii

Source of Grant: Faculty Mentoring Grants for Summer Undergraduate Research Opportunities Program (UROP), University of Hawaii at Manoa

Total Dollar Value (Your share of the grant value): \$5,000

Dates of Grant: 04/14/25 – 08/31/2025

Role: PI

Title of Grant: Management of fungal diseases affecting important crops in Hawaii

Source of Grant: USDA NIFA Hatch

Total Dollar Value (Your share of the grant value): N/A

Dates of Grant: 02/14/2025 – 09/30/2029

Role: PI

Title of Grant: Management of fungal plant diseases in Hawaii

Source of Grant: Extension Plan of Work

Total Dollar Value (Your share of the grant value): \$7,000

Dates of Grant: 10/01/2024 – 09/30/2025

Role: PI

Title of Grant: A‘o e nānā: Training to observe – pest surveillance skills for the community

Source of Grant: CARES Centers as Hubs of Innovation and Community Prosperity

Total Dollar Value (Your share of the grant value): \$64,900

Dates of Grant: 09/01/2024 – 06/30/2025

Role: Co-PI

Title of Grant: TOMI3: Bringing our insights to the farm to co-create more effective methods of disease control in organic tomato crops

Source of Grant: USDA NIFA – Organic Agriculture Research and Extension Initiative

Total Dollar Value (Your share of the grant value): \$3,500,000

Dates of Grant: 09/01/2024 – 08/31/2028

Role: Co-PI (approved while working as postdoctoral research associate at Purdue University)

Presentations at Conferences

Title: A‘o e nānā: Training to observe

Authors (put an asterisk on the presenter): *Sipes B., *Hanakawa C., *Wang K.H., *Cheng Z., *Luis M., and *Tay J.W.

Name of Conference: CTAHR Conference

Location: University of Hawaii at Manoa, Honolulu, HI

Date of Presentation: April 11, 2025

Title: Screening *Acacia koa* germplasms for resistance against koa wilt

Authors (put an asterisk on the presenter): *Ojo O., Dudley N., Adams K., Lidua J., and Luis J.M.

Name of Conference: CTAHR Showcase and Research Symposium

Location: University of Hawaii at Manoa, Honolulu, HI

Date of Presentation: April 4, 2025

Title: Survey of foliar and seed-borne fungi impacting tomato genotypes in Hawaii

Authors (put an asterisk on the presenter): *Caligayahan S.E., and Luis J.M.

Name of Conference: CTAHR Showcase and Research Symposium

Location: University of Hawaii at Manoa, Honolulu, HI

Date of Presentation: April 4, 2025

Title: Rapid ohia death and other fungal diseases – spread by wind?

Authors (put an asterisk on the presenter): *Nishikawa T.L. Mentor: Luis J.M.

Name of Conference: The 68th Hawaii State Science and Engineering Fair

Location: Neal Blaisdell Exhibition Hall, Honolulu, HI

Date of Presentation: March 31 – April 2, 2025

Title: Rapid ohia death and other fungal diseases – spread by wind?

Authors (put an asterisk on the presenter): *Nishikawa T.L. Mentor: Luis J.M.

Name of Conference: Windward District Science and Engineering Fair

Location: Kaneohe, HI

Date of Presentation: February 4 – 5, 2025

Title: 10 years of TOMI – what we’ve learned that can help reduce foliar diseases in tomato
Authors (put an asterisk on the presenter): *Hoagland L., Blevins M., Bloomquist M., Carvallo A., Coffey P., Colley M., Davis J., Davis J., Dawson J., Dubey S., Egel D., Feiler H., Formiga A., Gu S., Hickey T., Jaiswal A., Landgraver E., Learn K., Luis M., McCluskey C., Mengiste T., Myers J., Nix M., Peery J., Qu L., Raturi A., Salinas C., Selman L., and Zystro J.
Name of Conference: ASA, CSSA, SSSA International Annual Meeting
Location: San Antonio, TX
Date of Presentation: November 10 – 13, 2024

Title: Heterogeneity of DON contamination of maize grain at multiple spatial scales
Authors: *Valle Torres J., Moraes W., Luis J.M., Duffeck M., and Paul P.
Name of Conference: Plant Health 2024 Annual Meeting
Location: Memphis, TN
Date of Presentation: Jul 27 – 30, 2024

Title: Agreement in deoxynivalenol contamination of maize grain between sampling methods
Authors (put an asterisk on the presenter): *Valle Torres J., Moraes W., Duffeck M., Luis J.M., and Paul P.
Name of Conference: Plant Health 2024 Annual Meeting
Location: Memphis, TN
Date of Presentation: Jul 27 – 30, 2024

Title: Assessing the effect of essential oil nanoemulsions against tomato gray mold using multispectral imaging
Authors (put an asterisk on the presenter): *Luis J.M., Vega-Vazquez P., Wei X., Johnson L., Jin J., Ristroph K., and Hoagland L.
Name of Conference: North American Plant Phenotyping Network
Location: West Lafayette, IN
Date of Presentation: February 13 – 15, 2024

Title: Use of essential oil nanoemulsions to suppress gray mold in tomato
Authors (put an asterisk on the presenter): *Luis J.M., Vega-Vasquez P., Ristroph K., Johnson L.D., and Hoagland L.A.
Name of Conference: 37th Annual Tomato Disease Workshop
Location: West Lafayette, IN
Date of Presentation: October 30 – November 1, 2023

Title: Comparison of the presence and density of inoculum of wheat and corn pathogens between spore samplers placed at different heights
Authors (put an asterisk on the presenter): *Duffeck M.R., Luis J.M., O’Neil M., Moraes W.B., and Paul P.A.
Name of Conference: Plant Health 2023 Annual Meeting
Location: Denver, CO
Date of Presentation: August 12 – 16, 2023

Title: Elucidating genetic and microbial mechanisms to improve ISR in tomato varieties
Authors (put an asterisk on the presenter): *Villamizar E., Hoagland L., Salinas C., Cortez E., Berry L., and Luis J.M.
Name of Conference: Department of Horticulture and Landscape Architecture Symposium
Location: Purdue University, West Lafayette, IN
Date of Presentation: May 11, 2023

Title: Exploring soil management across Indiana's urban farms

Authors (put an asterisk on the presenter): *Berry L., Zapf K., Salinas-Castillo C.A., Luis J.M., and Hoagland L.

Name of Conference: Department of Horticulture and Landscape Architecture Symposium

Location: Purdue University, West Lafayette, IN

Date of Presentation: May 11, 2023

Title: Validating maize gray leaf spot risk assessment models

Authors (put an asterisk on the presenter): Luis J.M., Duffeck M.R., Robertson A.E., Smith D.L., Nicolli C.P., Allen T., Bissonnette K., Sjarpe D., Check J.C., Chilvers M.C., Price P., Telenko D.E.P., Wise K.A., and *Paul P.A.

Name of Conference: National Predictive Modeling Tool Initiative Annual Meeting

Location: Beltsville, MD

Date of Presentation: February 21 – 22, 2023

Title: Vertical gradient of maize gray leaf spot from in-field inoculum

Authors (put an asterisk on the presenter): Luis J.M., Moraes W.B., Duffeck M.R., Frey T.S., Robertson A.E., Smith D.L., Nicolli C.P., Allen T., Bissonnette K., Chilvers M.C., Check J.C., Price P., Telenko D.E.P., Wise K.A., and *Paul P.A.

Name of Conference: National Predictive Modeling Tool Initiative Annual Meeting

Location: Beltsville, MD

Date of Presentation: February 21 – 22, 2023

Title: Validation of binary logistic regression models for assessing the risk for gray leaf spot of maize prior to planting

Authors (put an asterisk on the presenter): *Luis J.M., Nicolli C.P., Duffeck M.R., Robertson A.E., Smith D.L., Allen T., Bissonnette K., Sjarpe D., Check J.C., Chilvers M.C., Price P., Telenko D.E.P., Wise K.A. and Paul P.A.

Name of Conference: Plant Health 2022 Annual Meeting

Location: Pittsburgh, PA

Date of Presentation: August 6 – 10, 2022

Title: Vertical progress of gray leaf spot of maize from an in-field source of inoculum as influenced by environment and hybrid resistance

Authors (put an asterisk on the presenter): *Luis J.M., Duffeck M.R., Frey T.S., Nicolli C.P., Robertson A.E., Smith D.L., Allen T., Bissonnette K., Chilvers M.C., Check J.C., Price P., Telenko D.E.P., Wise K.A. and Paul P.A.

Name of Conference: Plant Health 2022 Annual Meeting

Location: Pittsburgh, PA

Date of Presentation: August 6 – 10, 2022

Title: Natural occurrence of Septoria tritici blotch in winter wheat in Ohio and its association with weather variable

Authors (put an asterisk on the presenter): *Duffeck M.R., Luis J.M., Monclova-Santana C., Byamukama E., De Wolf E.D., Owen E., Andersen K.F., Burrows M.E., Ali S., Murray T.D., McKelvy U., and Paul P.A.

Name of Conference: Plant Health 2022 Annual Meeting

Location: Pittsburgh, PA

Date of Presentation: August 6 – 10, 2022

Title: Using epidemiology to build an informed management program for tar spot of field corn
Authors (put an asterisk on the presenter): *Nicolli C.P., Robertson A.E., Mueller B., Groves C.L., Telenko D.E.P., Bissonnette K., Wise K.A., Luis J.M., Check J.C., Roggenkamp E., Byrne A., Chilvers M., Paul P.A., Price P., Pedrozo R., Allen T., Widdicombe W., and Smith D.L.
Name of Conference: Plant Health 2022 Annual Meeting
Location: Pittsburgh, PA
Date of Presentation: August 6 – 10, 2022

Title: Integrated management of diseases and mycotoxins in soft red winter wheat
Authors (put an asterisk on the presenter): *Luis J.M., and *Duffeck M.R. (invited speakers)
Name of Conference: Indiana Certified Crop Advisers Conference
Location: Indianapolis, IN
Date of Presentation: December 13, 2022

Title: Tar spot of corn: Identification and management
Authors (put an asterisk on the presenter): *Luis J.M., and *Duffeck M.R.
Name of Conference: Agronomy 101 Field Day
Location: Darke County, OH
Date of Presentation: July 27, 2022

Title: Population structure and trichothecene chemotype of *Fusarium* species associated with maize kernels in Ohio
Authors (put an asterisk on the presenter): *Luis J.M., Dalla Lana F., Duffeck M.R., Madden L., and Paul P.A.
Name of Conference: Plant Health 2021 Annual Meeting
Location: Online
Date of Presentation: August 2 – 6, 2021

Title: Diversity of *Fusarium* associated with fisheye lesions caused by tar spot disease in corn
Authors (put an asterisk on the presenter): *Luis J.M., Mehl H.L., Plewa D.E., Loladze A., Opoku J., Lo T., and Kleczewski N.M.
Name of Conference: Plant Health 2020 Annual Meeting
Location: Online
Date of Presentation: August 8 – 12, 2020