Mohammad Arif
College of Tropical Agriculture and Human Resources
(Plant and Environmental Protection Sciences)
FTE Distribution: 35% I; 65% R

Education

Degree	University	Major
Bachelors	G. B. Pant University of Agriculture & Technology	Agriculture
Masters	G. B. Pant University of Agriculture & Technology	Molecular Biology & Biotech.
PhD	Jamia Millia Islamia	Biosciences
PG Diploma	Jamia Hamdard	Bioinformatics

Professional Appointments

Title	Employer	Dates Employed
Associate Researcher	University of Hawaii Manoa	Aug 2022
Assistant Researcher	University of Hawaii Manoa	Oct 2016
Post-Doctoral Research Associate	Kansas State University	Oct 2013
Post-Doctoral Research Associate	Washington State University	Sep 2012
Post-Doctoral Research Associate	Oklahoma State University	Feb 2009

Courses Taught

Course Number and Title (credits)
PEPS 606 Biology of Plant Pathogens: Viruses and Bacteria (4; co-teach)
PEPS 615L Diagnosis and Management of Tropical Plant Diseases and Pests (2)
PEPS/MBBE 627 Molecular Diagnostics: Principles and Practices (3)
PEPS 660 Seminar Tropical Plant Pathology (1)
PEPS 691 Special Topic (1-3)

Publications (reverse chronological order)

Book chapter

1. Charkowski A, **Arif M** (2024). *Pectobacterium*. In Laboratory Guide for Identification of Plant Pathogenic Bacteria, 4th ed, American Phytopathological Society. (In Press)

Referred Journal Publications (Last 5 years only)

2025

1. ***Arif M,** Zeng Q, Dobhal S (2025). Editorial: Research in the identification and control methods of rot diseases in plants. *Frontiers in Microbiology,* doi: 10.3389/fmicb.2025.1601422
2. Komal, Dobhal S, Arizala D, Boluk G, Alvarez AM, ***Arif M** (2025). Complete genome sequence of *Dickeya oryzae* strain A5272 isolated during pineapple heart rot outbreak in Hawaii. *Phytofrontiers,* https://doi.org/10.1094/PHYTOFR-01-25-0001-A
3. Arizala D, Dobhal S, Alvarez AM, ***Arif M** (2025). Description of two novel non-pathogenic tomato-associated *Clavibacter* species: *Clavibacter seminis* sp. nov. and *Clavibacter quasicaliforniensis* sp. nov. bioRxiv, doi: 10.1101/2025.03.25.645327.

2024

4. Arizala D, ***Arif M** (2024). Impact of homologous recombination on core genome evolution and host adaptation of *Pectobacterium parmentieri*. *Genome Biology & Evolution,* 16, 1-23. https://doi.org/10.1093/gbe/evae032
5. Chaung SC, Dobhal S, Pal K, Amore TD, Alvarez AM, ***Arif M** (2024). *Xanthomonas* strains isolated from hosts in the Araceae reveal diverse phylogenetic relationships and origins. *Phytopathology.* https://doi.org/10.1094/PHYTO-08-23-0265-R

6. Dobhal S, Hugouvieux-Cotte-Pattat, N, Arizala D, Sari, GB, Chaung SC, Alvarez AM, ***Arif M** (2024). *Dickeya ananae* sp. nov., pectinolytic bacterium isolated from pineapple (*Ananas comosus*). doi.org/10.1101/2024.10.29.620964
7. Chuang S, Dobhal S, Alvarez AM, ***Arif M** (2024). Three new species, *Xanthomonas hawaiiensis* sp. nov., *Stenotrophomonas aracearum* sp. nov., and *Stenotrophomonas oahuensis* sp. nov., isolated from Araceae family. *Frontiers in Microbiology*, doi: 10.3389/fmicb.2024.1356025
8. Dobhal S, Chaung SC, Arizala D, Keith LM, Alvarez AM, ***Arif M** (2024). High-Quality Complete genome sequence of *Xanthomonas phaseoli* pv. *dieffenbachiae* outbreak strain D182: the causative agent of anthurium bacterial blight in Hawai'i. *Phytofrontiers.* https://doi.org/10.1094/PHYTOFR-02-24-0006-A
9. Dobhal S, Santillana G, Stulberg MJ, Arizala D, Alvarez AM, ***Arif M** (2024). Development and validation of genome-informed and multigene-based qPCR and LAMP assays for accurate detection of *Dickeya solani*: a critical quarantine pathogen threatening the potato industry. *Microbiology Spectrum*, 13:e00784-24. https://doi.org/10.1128/spectrum.00784-24
10. Dewberry RJ, Sharma P, Prom JL, Kinscherf NA, Lowe-Power T, Mazloom R, Zang X, **Arif M**, Stulberg M, Heath LS, Eversole K, Beattie GA, Vinatzer B, Allen C (2024). Genotypic and phenotypic analyses show *Ralstonia solanacearum* cool virulence is a quantitative trait not restricted to 'Race 3 biovar 2'. *Phytopathology*, 114, 2468-2480. doi: 10.1094/PHYTO-06-24-0187-R
11. Montesinos S, Tyagi G, Feng Z, Hampson E, Adhikari A, Minaai M, Wong L, Haubner M, Dobhal S, Arizala D, Andreason SA, Mollov D, Ochoa-Corona FM, Bingham JP, Odani J, Jenkins D, Ma LM, Fletcher J, Stack JP, ***Arif M** (2024). Genome-guided, field-deployable loop-mediated isothermal amplification (LAMP) assay for specific detection of *Dickeya dadantii*. doi.org/10.1101/2024.05.04.592507
12. Marabella M, Howard J, Bhandari S, Do S, Montoya-Pimolwatana M, Dou Y, Dobhal S, Arizala D, Montesinos S, Andreason SA, Ochoa-Corona F, Bingham JP, Odani J, Jenkins D, Ma LM, Fletcher J, Stack JP, ***Arif M** (2024). Loop-mediated Isothermal Amplification (LAMP) assay for reliable detection of *Xanthomonas axonopodis* pv. *vasculorum*. doi.org/10.1101/2024.02.07.579270

2023

13. Klair D, Dobhal S, Ahmad A, Hassan ZU, Uyeda J, Silva J, Wang KH, Kim S, Alvarez AM, ***Arif M** (2023). Exploring taxonomic and functional microbiome of Hawaiian stream and spring irrigation water systems using Illumina and Oxford Nanopore sequencing platforms. *Frontiers in Microbiology. doi: 10.3389/fmicb.2023.1039292*
14. *Czajkowski R, ***Arif M**, *Chapman T (2023). Editorial: Genome-wide analyses of *Pectobacterium* and *Dickeya* species, volume II. *Frontiers in Plant Science*. 10.3389/fpls.2023.1224293
15. Paudel S, Dobhal S, Lowe-Power T, Schlub RL, Hu J, Caitilyn A, Alvarez AM, ***Arif M** (2023). "RSSC-Lineage Multiplex PCR" assay detects and differentiates *Ralstonia solanacearum*, *R. pseudosolanacearum, R. syzygii* and the R3bv2 subgroup. *Phytofrontiers.* doi: https://doi.org/10.1094/PHYTOFR-07-23-0087-R
16. Growth-Helms D, Rivera Y, Martin FN, **Arif M**, Sharma P, Castlebury LA (2023). Terminology and guidelines for diagnostic assay development and validation: A proposal for best practices. *Phytofrontiers*. 10.1094/PHYTOFR-05-22-0059-FI
17. Lowe-Power T, Sharma P, Alfenas-Zerbini P, Alvarez B, **Arif M**, Baroukh C, Biosca EG, Bocsanczy AM, Castillo J, Cellier G, Coutinho TA, Drenth A, Friman VP, Genin S, Guidot A, Hikichi Y, Huang Q, Iyer-Pascuzzi AS, Kai K, Pecrix Y, Poussier S, Ray JD, Rossato M, Schomer RA, Siri MI, Vinatzer B, Allen C (2023). Letter to the Editor: The *Ralstonia* research community rejects the proposal to classify phylotype I *Ralstonia* into the new species *Ralstonia nicotianae*. *Phytofrontiers*. doi: https://doi.org/10.1094/PHYTOFR-06-23-0071-LE

2022

18. ***Arif M**, Czajkowski R, Chapman T (2022). Editorial: Genome-wide analyses of *Pectobacterium* and *Dickeya* species. ***Frontiers in Plant Science***. doi:10.3389/fpls.2022.822829
19. Zhang J, ***Arif M**, Shen H, Sun D, Pu X, Hu J, Lin B, Yang Q (2022). Genomic comparisons and phenotypic diversity of *Dickeya zeae* strains causing bacterial soft rot of banana in China. ***Frontiers in Plant Science***, 13:822829. doi:10.3389/fpls.2022.822829
20. DeLude A, Wells R, Boomla S, Chuang S, Urena F, Shipman A, Rubas N, Kuehu DL, Bickerton B, Peterson T, Dobhal S, Arizala D, Klair D, Ochoa-Corona FM, Ali ME, Odani J, Bingham JP, Jenkins D, Fletcher J, Stack JP, Alvarez AM, ***Arif M** (2022). Loop-mediated isothermal amplification (LAMP) assay for specific and rapid detection of *Dickeya fangzhongdai* targeting a unique genomic region. ***Scientific Reports***, 12:19193, doi.org/10.1038/s41598-022-22023-4

21. Klair D, Arizala D, Dobhal S, Boluk G, Alvarez AM, ***Arif M** (2022). *Pectobacterium colocasium* sp. nov. isolated from taro (Colocasia esculenta). ***BioRxiv.*** Doi:10.1101/2022.02.08.479620
22. Arizala D, Dobhal S, Alvarez AM, ***Arif M** (2022). Elevation of *Clavibacter michiganensis* subsp. *californiensis* to species level as *Clavibacter californiensis* sp. nov., merging and re-classification of *Clavibacter michiganensis* subsp. *chilensis* and *Clavibacter michiganensis* subsp. *phaseoli* as *Clavibacter phaseoli* sp. nov. based on complete genome in silico analyses. ***Int J Syst Evol Microbiol***, 72(9), doi: 10.1099/ijsem.0.005427
23. Boluk G, Dobhal S, Arizala D, Alvarez AM, ***Arif M** (2022). *Dickeya colocasiae* sp. nov. isolated from wetland taro, Colocasia esculentum. ***BioRxiv.*** Doi:10.1101/2022.01.14.47641
24. Arizala D, Dobhal S, Babler B, Crockford A, Rioux RA, Alvarez AM, ***Arif M** (2022). Development of a multiplex TaqMan qPCR targeting unique genomic regions for the specific and sensitive detection of *Pectobacterium* species and *P. parmentieri*. ***J Appl Microbiol***, 132(4), 3089-3110. doi.org/10.1111/jam.15447

2021

25. Boluk G, Arizala D, Dobhal S, Zhang J, Hu J, Alvarez AM, ***Arif M** (2021). Genomic and phenotypic biology of novel strains of *Dickeya zeae* isolated from pineapple and taro in Hawaii: insights into genome plasticity, pathogenicity, and virulence determinants. ***Frontiers in Plant Science***. doi:10.3389/fpls.2021.663851
26. Domingo R, Perez C, Klair D, Vu H, Candelaria-Tochiki A, Wang X, Camson A, Uy JN, Salameh M, Arizala D, Dobhal S, Boluk G, Bingham JP, Ochoa-Corona F, Ali ME, Stack JP, Fletcher J, Odani J, Jenkins D, Alvarez AM, ***Arif M** (2021). Genome-informed loop-mediated isothermal amplification assay for specific detection of *Pectobacterium parmentieri* in infected potato tissues and soil. ***Scientific Reports***, 11, 21948. doi.org/10.1038/s41598-021-01196-4
27. **Arif M**, Busot GY, Mann R, Rodoni B, Stack JP (2021). Field-deployable recombinase polymerase amplification assay for specific, sensitive and rapid detection of the US Select Agent and toxigenic bacterium, *Rathayibacter toxicus*. ***Biology,*** 10, 620. doi.org/10.3390/biology10070620
28. Larrea-Sarmiento A, Stack JP, Alvarez AM, ***Arif M** (2021). Multiplex recombinase polymerase amplification assay developed using unique genomic regions for rapid on-site detection of genus *Clavibacter* and *C. nebraskensis*. ***Scientific Reports,*** 11, 12017. doi.org/10.1038/s41598-021-91336-7
29. Klair D, Silva J, Arizala D, Boluk G, Dobhal S, Ahmad AA, Uyeda J, Alvarez AM, ***Arif M** (2021). First Report of *Pectobacterium brasiliense* causing soft rot on mizuna (*Brassica rapa* var. *japonica*) in the United States. ***Plant Dis.*** doi.org/10.1094/PDIS-03-21-0644-PDN
30. **Arif M**, Busot GY, Mann R, Rodoni B, Stack JP (2021). Multiple internal controls enhance reliability for PCR and real time PCR detection of *Rathayibacter toxicus*. ***Scientific Reports***, 11, 8365; doi.org/10.1038/s41598-021-87815-6
31. Klair D, Boluk G, Silva J, Arizala D, Dobhal S, ***Arif M** (2021). First report of bacterial soft rot disease on pak choi (*Brassica rapa* subsp. *chinensis*) caused by *Pectobacterium brasiliense* in the United States. ***Plant Dis.*** doi.org/10.1094/PDIS-08-20-1854-PDN
32. Ramachandran S, Dobhal S, Alvarez AM, ***Arif M** (2021). Improved multiplex TaqMan qPCR assay with universal internal control offers reliable and accurate detection of *Clavibacter michiganensis*. ***J Appl Microbiol***, doi.org/10.1111/jam.15017

2020

33. Paudel S, Dobhal S, Alvarez AM, ***Arif M** (2020). Taxonomy and phylogenetic research on *Ralstonia solanacearum*: a complex pathogen with extraordinary economic consequences. ***Pathogens***, 9, 886; doi.org/10.3390/pathogens9110886
34. Zhang J, **Arif M**, Shen H, Hu J, Sun D, Pu X, Yang Q (2020). Genomic divergence between *Dickeya zeae* strain EC2 isolated from rice and previously identified strains, suggests a different rice foot rot strain. ***PLoS ONE*** 15(10), e0240908. doi.org/10.1371/journal.pone.0240908
35. Yasuhara-Bell J, **Arif M**, Busot G, Mann R, Rodoni B, Stack J (2020). Comparative genomic analysis confirms five genetic populations of the Select Agent, *Rathayibacter toxicus*. ***Microorganisms*** 8, 366; doi:10.3390/microorganisms8030366
36. Andreason SA, **Arif M**, Brown JK, Ochoa-Corona F, Fletcher J, Wayadande A (2020). Exploring the use of high-resolution melting analysis and helicase-dependent amplification for discrimination of *Bemisia tabaci* (Hemiptera: Aleyrodidae) cryptic species and *Trialeurodes vaporariorum*, ***J Econ Entomol***, doi.org/10.1093/jee/toaa180

37. Boluk G, Arizala D, Ocenar J, Mokwele J, Silva J, Dobhal S, Uyeda J, Alvarez AM, ***Arif M** (2020). First report of *Pectobacterium brasiliense* causing soft rot on *Brassica oleracea* var. *sabellica* L. in Hawaii, United States. ***Plant Dis.*** doi.org/10.1094/PDIS-04-20-0701-PDN
38. Arizala D, Dobhal S, Paudel S, Boluk G, Silva J, Ahmad AA, Uyeda J, Sugano J, Alvarez AM, ***Arif M** (2020). First report of *Pectobacterium brasiliense* causing bacterial soft rot and blackleg diseases of potato in Hawaii. ***Plant Dis*** doi.org/10.1094/PDIS-02-20-0395-PDN
39. Dobhal S, Boluk G, Babler B, Stulberg MJ, Rascoe J, Nakhla M, Chapman T, Crockford AB, Melzer M, Alvarez AM, ***Arif M** (2020). Comparative genomics approach for identifying signature regions to develop a robust and highly reliable multiplex TaqMan real-time qPCR assay for sensitive detection of the genus *Dickeya* and *Dickeya dianthicola.* ***J Appl Microbiol***, doi.org/10.1111/jam.14579
40. Boluk G, Dobhal S, Crockford AB, Melzer MJ, Alvarez AM, ***Arif M** (2020). Genome-informed recombinase polymerase amplification assay coupled with a lateral flow device for in-field detection of *Dickeya* species. ***Plant Dis.*** doi.org/10.1094/PDIS-09-19-1988-RE

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

- Recipient of 2025 CTAHR Dean's Award for "Excellence in Research".
- Editor, "Frontiers in Microbiology", 10/2021 – present
- Editor, Nature Publishing Group Journal "Scientific Reports", 05/2019 - present
- Guest Editor, Special Issue "Research in the Identification and Control Methods of Rot Diseases in Plants" for "Frontiers in Microbiology", 07/2023 – present.
- Guest Editor, Special Issue Volume II (Genome-wide analyses of *Pectobacterium* and *Dickeya* species) for "Frontiers in Plant Sciences", 09/2021 – 12/2022.
- 2022 Outstanding Associate Editor for Plant Microbe and Virus Interactions with Plants — Frontiers in Microbiology.
- Guest Editor, Special Issue (Genome-wide analyses of *Pectobacterium* and *Dickeya* species) for "Frontiers in Plant Sciences", since 04/2020 – 02/2021.
- Guest Editor, Special Issue (Advances on Bacterial Genomics) for "International Journal of Molecular Sciences", since 02/2020 – 06/2021.
- Senior Editor, American Phytopathological Society's Journal "Plant Health Progress", 01/2018 – present
- Review Panelist USDA NIFA grants, 2021, 2022, 2023
- Review panelist for pierce disease proposals, California Department of Food & Agriculture, 03/2018, 3/2019, 3/2022
- Member, APHIS Widely Prevalent Bacteria Committee, represent Hawaii and Guam, 2018 – present
- Chair (in 2021) and Vice Chair (in 2020), APS Emerging Diseases and Pathogens Committee
- CTAHR Senator, 08/2019 – present (SEC member 08/2022 - continue)
- Alternative Responsible Officer (ARO) for the Select Agent Program at the University of Hawaii, Feb 2018 – present
- Member of TAE Curriculum Committee, Department of Plant Environmental Protection Sciences, University of Hawaii, Aug 2017 – July 2019
- Member of Gamma Sigma Delta, The Honor Society of Agriculture, 2017 - present
- Co-instructor in a training workshop, "Plant Biosecurity in Theory and Practice", Biosecurity Research Institute, Kansas State University, Manhattan, KS, USA. Provided the hands-on biocontainment training to the students/postdocs/scientists from >15 countries every year, 2015 - present
- Organized a workshop, "Principles of Diagnostic Assay Validation", American Phytopathological Society Annual Meeting, San Antonio, TX, USA, 08/2017
- Member of Professional Societies, American Phytopathological Society (2009 - present)
- Member of Professional Societies, American Society for Microbiology (2009 -2010; 2017 - present)
- Member of the American Phytopathological Society's Bacteriology committee since 2016 - present.

Graduate Students

Category	Current Number of Students	Number Graduated (Career)
Chair of Master's Committees	4	7
Chair of PhD Committees	3	3
Member of Master's Committees	0	3
Member of PhD Committees	3	7

Grant Support (Last 5 years only)

Title of Grant: Dual-action conjugates of phytochemicals for sustainable control of pectobacteria infections in potato and vegetables.
Source of Grant: BARD-NIFA
Total Dollar Value (Your share of the grant value): $
Dates of Grant: 01/2025 – 01/2027
Role (PI, Co-PI): Co-PI

Title of Grant: The role of water in the transmission and distribution of plant pathogenic *Ralstonia*.
Source of Grant: USDA NIFA
Total Dollar Value (Your share of the grant value): $750,000 ($200,000)
Dates of Grant: 09/2024 – 09/2027
Role (PI, Co-PI): Co-PI

Title of Grant: Cultivating the nextgen of diverse biosecurity professionals through a Pacific-Continental Network (PaCoN)
Source of Grant: USDA NIFA
Total Dollar Value (Your share of the grant value): $7,405,166
Dates of Grant: 06/2023 – 05/2028
Role (PI, Co-PI): PI

Title of Grant: Detection and tracking system for bacterial threats to potato and vegetable industries.
Source of Grant: USDA NIFA AFRI
Total Dollar Value (Your share of the grant value): $295,589
Dates of Grant: 03/2023 – 03/2026
Role (PI, Co-PI): PI

Title of Grant: Integrative Center for Environmental Microbiomes and Human Health Phase II.
Source of Grant: NIH-NIGMS
Total Dollar Value (Your share of the grant value): $10,729,794 ($909,375)
Dates of Grant: 08/2023 – 07/2028
Role (PI, Co-PI): RPL (Research Project Leader)

Title of Grant: Epidemiology, genome biology and evolution of *Ralstonia solanacearum* associated with ironwood decline.
Source of Grant: Office of the Associate Dean/Director for Research, CTAHR, UHM
Total Dollar Value (Your share of the grant value): $125,000
Dates of Grant: 10/2023 – 9/2028
Role (PI, Co-PI): PI

Title of Grant: Genome-informed next-generation detection protocols for pests and pathogens of specialty crops in Hawaii.
Source of Grant: Specialty Crops PBARC/CTAHR program, CTAHR, UHM
Total Dollar Value (Your share of the grant value): $225,461
Dates of Grant: 10/2020 – 9/2024
Role (PI, Co-PI): PI

Title of Grant: 'Omics' from source to sink: microbiome of stream irrigation system and its potential impact.
Source of Grant: NIH COBRE
Total Dollar Value (Your share of the grant value): $421,180
Dates of Grant: 08/2021 – 07/2023
Role (PI, Co-PI): PI

Title of Grant: EDNA-Bacteria for detection of six Select Agents and quarantine bacteria for the continental U.S. and Hawaii.
Source of Grant: FARMBILL (USDA/APHIS/PPQ)
Total Dollar Value (Your share of the grant value): $$159,979 ($58,978)
Dates of Grant: 10/2020 – 09/2021
Role (PI, Co-PI): Co-PI

Title of Grant: Irrigation water microbiome and its impact on the environment and human health.
Source of Grant: NIH COBRE Pilot Project
Total Dollar Value (Your share of the grant value): $35,375 ($35,375)
Dates of Grant: 01/2020 – 10/2020
Role (PI, Co-PI): PI

Title of Grant: Nanobubble Technology Applications in Aquaculture, Aquaponics, Hydroponics, Environment, Food and Food Safety.
Source of Grant: Office of the Associate Dean/Director for Research, CTAHR, UHM
Total Dollar Value (Your share of the grant value): $80,000 ($0)
Dates of Grant: 10/2019 – 9/2020
Role (PI, Co-PI): Co-PI

Title of Grant: Development of molecular methods to detect *Xanthomonas oryzae* pv. *oryzae* and *X. oryzae* pv. *oryzicola*.
Source of Grant: FARMBILL (USDA/APHIS/PPQ)
Total Dollar Value (Your share of the grant value): $103,267
Dates of Grant: 10/2019 – 09/2021
Role (PI, Co-PI): PI

Title of Grant: Restoring *Casuarina equisetifolia* as an agroforestry species in Guam through replacement of bacterial wilt infected trees and research into bacterial microbiomes and associated termites
Source of Grant: WSARE-USDA
Total Dollar Value (Your share of the grant value): $304,273 ($105,000)
Dates of Grant: 08/2019-07/2022
Role (PI, Co-PI): Co-PI

Title of Grant: Development of molecular methods to detect *Ralstonia solanacearum* Race3 Biovar2 in field settings.
Source of Grant: FARMBILL (USDA/APHIS/PPQ)
Total Dollar Value (Your share of the grant value): $64,370
Dates of Grant: 10/2019 – 09/2021
Role (PI, Co-PI): PI

Title of Grant: Genome-based circumscription and phenotyping of regulated microbes, especially the select agent *Ralstonia solanacearum*.
Source of Grant: FARMBILL (USDA/APHIS/PPQ)
Total Dollar Value (Your share of the grant value): $235,086 ($17,000)
Dates of Grant: 09/2019 – 08/2021
Role (PI, Co-PI): Co-PI

Title of Grant: Epidemiology, population genetics and comparative genomics of *Ralstonia Solanacearum* associated

with ironwood disease.
Source of Grant: Office of the Associate Dean/Director for Research, CTAHR, UHM
Total Dollar Value (Your share of the grant value): $125,000
Dates of Grant: 10/2018 – 9/2023
Role (PI, Co-PI): PI

2020
Title: Ecology of Guam's *Casuarina equisetifolia* and research into its decline
Authors (put an asterisk on the presenter): *Robert L. Schlub, Caleb M. Ayin, Anne M. Alvarez, Sujan Paudel, Mohammad Arif, Brian D. Marx, Claudia Husseneder, Karl A. Schlub, Marisol Quintanilla, Ned B. Klopfenstein, Lisa F. Kennaway, Yong Zhang, Chonglu Zhong, Abel Nicodemus
Name of Workshop: Proceedings of the Sixth International Casuarina Workshop
Title of the Proceeding: Casuarinas for green economy and environmental sustainability by Haruthaithanasan M, Pinyopusarerk K, Nicodemus A, Bush D, Thomson L.
Location: Krabi, Thailand
Date of Presentation: October 21-25, 2019

Presentations at Conferences (Last 5 years only)

2025
Title: Emerging pathogens and their multi-trophic interactions: Pioneering technologies to strengthen food safety and biosecurity
Authors (put an asterisk on the presenter): *Arif M (Plenary Session Speaker)
Name of Conference: IPS
Location: Nagpur, India
Date of Presentation: 01/2025

Title: Isothermal RPA-CRISPR/Cas12a system for rapid and highly specific detection of soft rot-causing bacterial pathogen *Dickeya fangzhongdai.*
Authors (put an asterisk on the presenter): *Cherryl, Dobhal S, Alvarez AM, Arif M
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 04/2025

Title: BacPath and BacPathDB: A field-deployable bacterial plant pathogen identification tool.
Authors (put an asterisk on the presenter): *Montesinos S, Arif M
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 04/2025

Title: Phenotypic and genomic diversity of *Pectobacterium brasiliense* strains isolated from various hosts in Hawai'i.
Authors (put an asterisk on the presenter): *Stewart V, Arizala D, Dobhal S, Arif M
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 04/2025

Title: Pan-genome insights into the evolutionary significance of the megaplasmid in *Ralstonia pseudosolanacearum*.
Authors (put an asterisk on the presenter): *Syhlman D, Arizala D, Dobhal S, Alvarez AM, Arif M
Name of Conference: SRS-CTAHR Symposium 2025

Location: Honolulu, HI
Date of Presentation: 04/2025

Title: The role of the *Ralstonia* megaplasmid in pathogenicity and host adaptation.
Authors (put an asterisk on the presenter): *Komal, Dobhal S, Alvarez AM, Arif M
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 04/2025

Title: Phenotypic and genomic diversity of *Pectobacterium brasiliense* strains isolated from various hosts in Hawai'i.
Authors (put an asterisk on the presenter): *Stewart V, Arizala D, Dobhal S, Arif M
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 06/2025

Title: Impact of *Ralstonia* infection on the microbiome of Ironwood trees under varied environmental conditions.
Authors (put an asterisk on the presenter): *Maurya N, Dobhal S, Alvarez AM, **Arif M**
Name of Conference: SRS-CTAHR Symposium 2025
Location: Honolulu, HI
Date of Presentation: 06/2025

2024
Title: Emerging strains and their multi-trophic interactions threatening food safety and biosecurity.
Authors (put an asterisk on the presenter): *Arif M, Dobhal S, Li MM, Stack J
Name of Conference: XX International Plant Protection Congress (IPPC)
Location: Athens, Greece
Date of Presentation: 07/2024

Title: Emerging strains and multi-trophic interactions: a serious threat to food safety and biosecurity.
Authors (put an asterisk on the presenter): *Arif M
Name of Conference: Plant Biosecurity in Theory and Practice" workshop
Location: Manhattan, KS
Date of Presentation: 05/2024

Title: Fostering research in graduate teaching: the excitement of transforming theoretical foundations into peer-reviewed publications.
Authors (put an asterisk on the presenter): *Arif M, Stack JP, Dobhal S, Bingham J-P, Fletcher J
Name of Conference: APS Plant Health
Location: Memphis, Tennessee
Date of Presentation: 07/2024

Title: Deciphering the dynamics of attachment and internalization of mScarlet-I labelled (Chromosomally Integrated) *S. enterica* Oranienburg and shiga toxin-producing *E. coli* O157:H7 (STEC) in kale.
Authors (put an asterisk on the presenter): *Dobhal S, Ma LM, Arif M
Name of Conference: International Association for Food Protection
Location: Long Beach, California
Date of Presentation: 07/2024

Title: Multi-trophic interactions between soft rot-causing bacteria, foodborne pathogen, and their host plant.
Authors (put an asterisk on the presenter): *Bhandari S, Arif M, Ma LM, Dobhal S
Name of Conference: APS Plant Health
Location: Memphis, Tennessee
Date of Presentation: 07/2024

Title: Pan-genome analysis reveals a high diversity in the chromosome and megaplasmid of *Ralstonia pseudosolanacearum*.
Authors (put an asterisk on the presenter): *Syhlman D, Arizala D, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Plant Health
Location: Memphis, Tennessee
Date of Presentation: 07/2024

Title: Loop-mediated Isothermal Amplification (LAMP) assay for reliable detection of *Xanthomonas axonopodis* pv. *vasculorum*
Authors (put an asterisk on the presenter): *Bhandari S, Marabella M, Howard J, Do S, Montoya-Pimolwatana M, Dou Y, Arizala D, Montesinos S, Dobhal S, Arif M
Name of Conference: APS Plant Health
Location: Memphis, Tennessee
Date of Presentation: 07/2024

Title: Genomic Insights into *Xanthomonas axonopodis* pv. *vasculorum*: causative agent of sugarcane gumming disease
Authors (put an asterisk on the presenter): *Krakowiak S, Dobhal S, Arif M
Name of Conference: APS Plant Health
Location: Memphis, Tennessee
Date of Presentation: 07/2024

2023
Title: Advancement in plant pathogen diagnostics in high-throughput sequencing era.
Authors (put an asterisk on the presenter): *Arif M, Stack JP
Name of Conference: ICPP
Location: Lyon, France
Date of Presentation: 08/2023

Title: Interactions and genome biology of *Dickeya fangzhongdai*: A potential threat to potato industry
Authors (put an asterisk on the presenter): *Dobhal S, Arizala D, Boluk G, Arif M
Name of Conference: ICPP
Location: Lyon, France
Date of Presentation: 08/2023

Title: Genomic and phenotypic biology of novel strains of *Dickeya zeae*.
Authors (put an asterisk on the presenter): *Boluk G, Arizala D, Dobhal S, Alvarez AM, Arif M
Name of Conference: ICPP
Location: Lyon, France
Date of Presentation: 08/2023

Title: Genome biology and evolution of *Clavibacter michiganensis*.
Authors (put an asterisk on the presenter): *Arif M, Arizala D, Larrea-Sarmiento A, Dobhal S.
Name of Conference: ICPP
Location: Lyon, France
Date of Presentation: 08/2023

Title: Development of recombinase polymerase amplification assays for specific detection of *Xanthomonas oryzae* pv. *oryzae* and *Xanthomonas oryzae* pv. *oryzicola*
Authors (put an asterisk on the presenter): *Dobhal S, Arif M
Name of Conference: ICPP
Location: Lyon, France
Date of Presentation: 08/2023

Title: BacPath: Diagnostics pipeline for highly reliable detection of bacterial plant pathogens.

Authors (put an asterisk on the presenter): * Montesinos S, Dobhal S, Arif M
Name of Conference: APS Annual Meeting - Plant Health 2023
Location: Denver, CO
Date of Presentation: 08/2023

Title: Three new species, *Xanthomonas hawaiiensis* sp. nov., *Stenotrophomonas aracearum* sp. nov., and *Stenotrophomonas oahuensis* sp. nov., isolated from Araceae.
Authors (put an asterisk on the presenter): *Chuang SC, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting - Plant Health 2023
Location: Denver, CO
Date of Presentation: 08/2023

Title: *Ralstonia* infection in ironwood trees negatively impacts the diversity of the endophytic microbiome.
Authors (put an asterisk on the presenter): Klair D, Dobhal S, *Montesinos S, Delorm J, Schlub R, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting - Plant Health 2023
Location: Denver, CO
Date of Presentation: 08/2023

Title: Comparative genomic analyses revealed flagellar biosynthesis as a key virulence factor in the *Xanthomonas euvesicatoria*-panax pathosystem.
Authors (put an asterisk on the presenter): *Chuang SC, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting - Plant Health 2023
Location: Denver, CO
Date of Presentation: 08/2023

Title: Genome-Informed Loop-Mediated Isothermal Amplification (LAMP) Assay for Rapid and Specific Detection of *Dickeya dadantii*.
Authors (put an asterisk on the presenter): *Montesinos S, Tyagi G, Feng Z, Hampson E, Adhikari A, Minaai M, Wong L, Haubner M, Arizala D, Dobhal S, Arif M
Name of Conference: APS Annual Meeting - Plant Health 2023
Location: Denver, CO
Date of Presentation: 08/2023

2022
Title: Pacifica Bacterial Collection at the University of Hawaii: A valuable resource for genetic, evolutionary, taxonomic and epidemiological studies
Authors (put an asterisk on the presenter): *Arif M
Name of Conference: APS Annual Meeting
Location: Pittsburgh, PA
Date of Presentation: 08/2022

Title: Taxonomic and functional microbiome analyses of stream and spring irrigation water systems using illumina and nanopore sequencing platforms.
Authors (put an asterisk on the presenter): Klair D, Dobhal S, *Arif M
Name of Conference: APS Annual Meeting
Location: Pittsburgh, PA
Date of Presentation: 08/2022

Title: Homologous recombination in core genomes impacts phylogeny, virulence, and host adaptation of *Pectobacterium pectobacterium*.
Authors (put an asterisk on the presenter): 2. *Arizala D, Arif M
Name of Conference: APS Annual Meeting
Location: Pittsburgh, PA
Date of Presentation: 08/2022

2021

Title: The future of plant diagnostics and disease surveillance (part 2).
Authors (put an asterisk on the presenter): *Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Comparative genomics and phylogenetic analyses suggest a taxonomic re-organization and inclusion of a new species in the genus *Clavibacter*
Authors (put an asterisk on the presenter): *Arizala D, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Phylogenetic characterization and genealogy of strains in the *Ralstonia solanacearum* species complex associated with ironwood decline in Guam.
Authors (put an asterisk on the presenter): Paudel S, Dobhal S, Hu J, Schlub R, Alvarez AM, *Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Investigating microbial communities associated with source irrigation and wet taro field water using amplicon Oxford Nanopore MinIon sequencing.
Authors (put an asterisk on the presenter): *Klair D, Dobhal S, Ahmad A, Uyeda J, Silva J, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: *Xanthomonas* strains isolated from Araceae reveal diverse phylogenetic relationships and origins.
Authors (put an asterisk on the presenter): *Chuang S, Dobhal S, Pal K, Amore TD, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Multiplex real-time PCR assay for detection and discrimination of *Ralstonia solanacearum* R3bv2 from other strains in *R. solanacearum* species complex
Authors (put an asterisk on the presenter): *Dobhal S, Costanzo S, Paudel S, Stulberg MJ, Rivera Y, Nakhla MK, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Pathological and molecular biology of *Xanthomonas* strains causing bacterial leaf blight of Panax (*Polyscias guilfoylei*) in Hawaii.
Authors (put an asterisk on the presenter): *Chuang S, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Development of loop-mediated isothermal amplification assay for rapid detection of *Pectobacterium parmentieri* in infected potato and soil samples
Authors (put an asterisk on the presenter): *Klair D, Domingo R, Perez C, Huong V, Candelario-Tochiki A, Wang S, Camson A, Uy JN, Salameh M, Arizala D, Boluk G, Dobhal S, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

Title: Recovery of potato blackleg pathogens and impact of temperature on interactions between *Pectobacterium parmentieri* and *Dickeya dianthicola*
Authors (put an asterisk on the presenter): *Shrestha S, Babler B, Dobhal S, Arif M, Rioux R
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2021

2020

Title: Evolutionary genomics reveals recombination events involved in speciation, host specificity and pathogenicity in the genus *Clavibacter*
Authors (put an asterisk on the presenter): *Arizala D, Dobhal S, Paudel S, Seo HN, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Multitrophic interactions of chromosomally labelled *Pectobacterium* and Dickeya species with their host and analysis of pathogenicity determinants
Authors (put an asterisk on the presenter): *Dobhal S, Boluk G, Arizala D, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Multigene based TaqMan qPCR multiplex assay for sensitive and reliable detection of *Dickeya solani*
Authors (put an asterisk on the presenter): *Dobhal S, Santillana G, Stulberg MJ, Boluk G, Rascoe J, Nakhla MK, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Comparative Genomics analyses revealed distinct pathogenicity determinants and distinct features between *Dickeya zeae* strains from taro and pineapple
Authors (put an asterisk on the presenter): *Boluk G, Arizala D, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: A unique region revealed through genome-wide analyses was used to develop an RPA assay for detection of the Select Agent *Ralstonia solanacearum* R3bv2
Authors (put an asterisk on the presenter): *Dobhal S, Paudel S, Stulberg MJ, Rascoe J, Nakhla MK, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Complete genomic analysis of plant-pathogenic *Pectobacterium* species found associated with soft rot disease of kale
Authors (put an asterisk on the presenter): *Boluk G, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Field deployable recombinase polymerase amplification assay for rapid and accurate detection of *Ralstonia solanacearum* species complex
Authors (put an asterisk on the presenter): *Paudel S, Dobhal S, Stulberg MJ, Rascoe J, Nakhla MK, Seo HN, Schlub RL, Alvarez AM, Arif M

Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Comparative genomics analyses of the bacterial blight pathogen of anthurium, *Xanthomonas phaseoli* pv. *dieffenbachiae*
Authors (put an asterisk on the presenter): *Dobhal S, Arizala D, Chuang SC, Pal K, Amore TD, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: PCR multiplex to differentiate *Ralstonia solanacearum* species complex, including *R. solanacearum, R. pseudosolanacearum* and Select Agent R3bv2 strains
Authors (put an asterisk on the presenter): *Paudel S, Dobhal S, Lowe-Power T, Schlub RL, Allen C, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020

Title: Evolutionary relationships and phylogeny of *Dickeya zeae* strains based on phenotypic, biochemical and genomic characteristics
Authors (put an asterisk on the presenter): *Boluk G, Dobhal S, Alvarez AM, Arif M
Name of Conference: APS Annual Meeting
Location: Virtual/Zoom
Date of Presentation: 08/2020