**Swarnalatha Moparthi**

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**EDUCATION**

Ph.D., Plant Pathology 2016

Washington State University (WSU)

M.S., Biology 2011

Youngstown State University (YSU)

Bachelor of Education (Biology) 2006

St. Joseph’s College of Education, Guntur, Andhra Pradesh, India

B.Sc., Botany, Genetics and Chemistry 2002

Acharya Nagarjuna University, Guntur, Andhra Pradesh, India

**PEER-REVIEWED PUBLICATIONS**

**Moparthi, S.,** Kleczewski, N. 2023. First report of curvularia leaf spot on *Zea mays* caused by *Curvularia lunata* in North Carolina. Plant Disease. DOI: doi.org/10.1094/PDIS-10-22-2306-PDN

**Moparthi, S.,** Parikh, L.P., Troth, E.E.G., and Burrows, M. E. 2022. Identification and prevalence of seed-borne *Botrytis* spp. in pulses of Montana. Plant Disease. DOI: doi.org/10.1094/PDIS-05-22-1236-RE

Bradshaw, M., Quijada., Tobin, P.C., Braun, U., Newlander, C., Potterfield, T., Alford, E.R., Contrearas, C., Coombes, A., **Moparthi, S.,** Buchholz, E., Murphy, D., Enos, W., Fields- Tyalor, A., Bower, A., and Pfister, D. H. 2022. More than plants: Botanical gardens as a source of fungal diversity. HortScience. DOI: doi.org/10.21273/HORTSCI16755-22

**Moparthi, S**., and Bradshaw, M. 2021. Powdery mildew epidemics in the nursery: role of chasmothecia in epidemic initiation and fungicide regimes to limit chasmothecia formation.  
Mycological Progress. DOI: 10.1007/s11557-021-01678-9

Parikh, L. P., **Moparthi, S.,** Crutcher, F. K. and Burrows, M. E. 2021. Identification of metalaxyl and ethaboxam insensitive *Pythium sylvaticum* pathogenic to pulse crops in Montana, USA. Plant Health Progress. <https://doi.org/10.1094/PHP-01-21-0001-FI>

Bradshaw M., Braun U., Götz, M., Takamatsu, S., Brand T., Cabrera M.G., Dirchwolf P., Kummer V., Medina, R., **Moparthi, S.** & Salcedo-Sarmiento, S. (2021) Contributions to the phylogeny and taxonomy of the Erysiphaceae (powdery mildews) – part 1. – Sydowia 73: 89–112. DOI 10.12905/0380.sydowia73-2020-0089

**Moparthi, S.,** Burrows, M. E., Mgbechi-Ezeri, J., and Agindotan, B.O. 2021.  *Fusarium* spp. associated with root rot of pulse crops and their cross pathogenicity to cereal crops in Montana. Plant Disease. DOI: 10.1094/PDIS-04-20-0800-RE

**Moparthi, S**., Peluoloa, C., Agindotan, B., McPhee, B. and Burrows, M. 2020. First report of gray mold of chickpea caused by *Botrytis euroamericana* in the USA. Crop protection. DOI: 10.1016/j.cropro.2020.105297

**Moparthi, S**., and Bradshaw, M. 2020. Fungicide efficacy trials for the control of powdery mildew (*Podosphaera cerasi*) on sweet cherry trees (*Prunus avium*). Biocontrol Science and Technology. DOI: 10.1080/095831577-2020-1755616.

Qin, R., **Moparthi, S**., Feldman, M., Charlton, B., and Sathuvalli, V. 2020. Effect of foliar application of 2,4-d and calcium on four red- potato cultivars. Agronomy Journal. DOI:org/10.1002/agj2.20444

**Moparthi, S**., and Bradshaw, M. 2020. CABI datasheet on *Podosphaera spiraeae*, a new invasive species in North America. CABI international.

**Moparthi, S.,** Grove, G.G., Pandey, B., Bradshaw, M., Latham, S.R., Braun, U., Meeboon, J., and Romberg, M. 2019. Phylogeny and taxonomy of *Podosphaera cerasi*, sp. nov., and *Podosphaera prunicola* sensu lato, Mycologia, 111:4, 647-659, DOI: 10.1080/00275514.2019.1611316.

**Moparthi, S.,** Bradshaw, M., Buck, J.W., Frost, K., and Hamm, P.B. 2018. First report of powdery mildew on *Abelmoschus esculentus* caused by *Golovinomyces spadiceus* in the United States. Plant Disease DOI.10.1094/PDIS-01-18-0179-PDN.

**Moparthi, S.,** Bradshaw, M., and Grove, G.G. 2018. First report of powdery mildew on *Verbascum thapsus* caused by *Golovinomyces orontii* in the USA. Plant Disease DOI. 10.1094/PDIS-09-17-1453-PDN.

**Moparthi, S.,** Bradshaw, M., and Grove, G.G. 2017. First report of powdery mildew on *Spiraea japonica* caused by *Podosphaera spiraeae* in the USA. Plant Disease 2017. DOI. 10.1094/PDIS-09-17-1419-PDN.

**Moparthi, S.,** Bradshaw, M., and Grove, G.G. 2017. First report of powdery mildew of *Helianthus* *annuus* Lemon Queen caused by *Golovinomyces spadiceus* in the USA. Plant Disease DOI. 10.1094/PDIS-09-17-1434-PDN.

Jasenec, A., Barasa, N., Kulkarni, S., Shaik, N., **Moparthi, S.**, Konda, V., and Caguiat, J. 2009. Profiling of L-cysteine induced selenite resistance in *Enterobacter* species. YSU. Proteome Science.7:30 doi: 10.1186/1477-5956-7-30.

**In press**

**Moparthi, S.,** Johnson, A., and Braun, U. 2023. *Podosphaera cerasi*- An old foe of sweet cherry with a new name –its biology, epidemiology, and beyond. Accepted in the Journal of Plant Pathology.

**Submitted**

Bradshaw, M. Aime, C., Maust A., **Moparthi, S.,** Jennings, K., Pane, A., Hendrix, D., Pandey, B., Rokas, A., Yuanning, L., Pfister, D. 2023. Extensive intragenomic variation in the internal transcribed spacer (ITS) region, the universal barcode in kingdom fungi. ScienceAdvances

**In Preparation:**

**Moparthi, S.,** Agindotan, B.O., McPhee, K., and Burrows, M. E., 2023. Varietal screening of pulse crops for Fusarium root rot resistance in Montana. To be submitted to Euphytica.

**Moparthi, S.,** Perez. O, McPhee, K., and Burrows, M. E., 2023. Identification and prevalence of *Fusarium* spp. associated with chickpea root rot in Montana. To be submitted to Crop Protection.

Parikh, L.P., **Moparthi, S.,** Burrows, M. E. and Agindotan, B.O. 2023. Efficacy of five herbal essential oils for management of *Didymella rabiei*. To be submitted to Plant Disease.

Garfinkel, A., **Moparthi, S.,** and Chastagner, G.A. 2023. New *Botrytis* species infecting pulse and Peony crops in North America. To be submitted to Plant Pathology.

**Moparthi, S.,** Meeboon, J., and Burrows, M. E. 2023. *Botrytis leguminosa* a novel species recovered from pulse seeds in Montana. To be submitted to Mycologia.

**GRANT WRITING EXPERIENCE**

McPhee, K., and **Moparthi, S.** 2020. Chickpea field survey for exploring the diversity of *Fusarium* and *Botrytis* spp. in Montana- Grant proposal for $99000 was accepted by Specialty Crop Block Grant, Montana Department of Agriculture.

McPhee, K., and **Moparthi, S.** 2021.Characterization of chickpea pathogens in Montana and evaluation of fungal species response to fungicide sensitivity. Grant proposal for $103,000 was accepted by Specialty Crop Block Grant, Montana Department of Agriculture.

**CONFERENCE ACTIVITY & PARTICIPATION**

**Moparthi, S.,** Burrows, M. E., and McPhee, K. 2020. Identification of diverse chickpea pathogens in Montana. Poster presentation. Plant Pathology Society of Alberta Virtual meeting. Nov 4-5.

**Moparthi, S.,** Parikh, L.P., Agindotan, B.O., Peluoloa, C., and Burrows, M. E. 2020. Seed borne Botrytis species of pulse crops in Montana. Poster presentation APS Annual Virtual meeting. Aug 10-14.

**Moparthi, S.,** Parikh, L.P., Agindotan, B.O., Garfinkel, A., and Burrows, M. E. 2019. Identification and prevalence of seed borne *Botrytis* spp. In pulses of Montana. Oral presentation at North American Pulse Improvement Association, Biennial meeting, Fargo, ND. Nov 6-8.

Parikh, L.P., **Moparthi, S.,** Burrows, M. E., and Agindotan, B.O.Efficacy of five herbal essential oils for management of *Didymella rabiei*. Oral presentation at North American Pulse Improvement Association, Biennial meeting, Fargo, ND. Nov 6-8.

**Moparthi, S.,** Burrows, M.E., and Agindotan, B.O. 2019. Characterization of *Fusarium* spp*.* associated with root rot of pulse crops and their cross pathogenicity to cereal crops in Montana. Poster presentation APS Annual meeting, Cleveland, OH. Aug 2-7.

**Moparthi, S.,** Grove, G.G. 2016. Chokecherry and sweet cherry are infected by two host specific *Podosphaera* species. Poster presentation APS Pacific Division meeting, LaConner, WA June 28-30.

**Moparthi, S.,** and Grove, G.G., 2015. Chokecherry and sweet cherry are infected by two host specific *Podosphaera* species. Poster presentation, Science at IAREC, Prosser, WA July 1

**Moparthi, S.,** Caguiat, J.J. 2008. Transposon mutagenesis of *E.coli*, a selenite resistant strain. Poster presentation, Quest 2008, April, Youngstown State University, OH.

**EXTENSION TALKS**

**Moparthi, S.** 2022. Field crop pathogen identification. Oral presentation to Extension agents of Central North Carolina, July 25-29, 2022.

**Moparthi, S.** 2017. Powdery mildew management. Oral presentation to Master Gardeners of King, Pierce and Snohomish Counties, Puyallup, WA, June 12, 2017.

**Moparthi, S.** 2017. Sweet cherry diseases. Oral presentation to Master Gardeners of Kitsap County, Bremerton, WA, September 14, 2017.

**TEACHING EXPERIENCE**

**Teaching Assistant** August 2008- May 2010

Youngstown State University

BIOL 1560L: Microbiology Laboratory for Health Professions.

Responsibilities included teaching microscopy techniques, cultivation and identification of bacterial pathogens, microbiology of foods, disinfection techniques and grading the assignments of pre-medical and nursing students.

**WSU CAMPUS AND DEPARTMENTAL TALK**

**Moparthi, S.,** Grove, G.G. 2016. Epidemiology and management of powdery mildew in Washington State sweet cherry nurseries. Ph.D., Dissertation defense seminar, Pullman, WA November 14.

**Moparthi, S.,** Grove, G.G. 2015. Chokecherry and sweet cherry are infected by two host specific *Podosphaera* species. Poster presentation, Science at IAREC, Prosser, WA July 1.

**Moparthi, S.** 2013. The life and studies of H.H Flor. Oral presentation to Plant Pathology department, Pullman, WA, October 7, 2013.

**Moparthi, S.** 2014. Aflatoxins it’s beyond plant pathology’s problem. Oral presentation to Plant Pathology department, Pullman, WA, March 24, 2014.

**FELLOWSHIPS & SCHOLARSHIPS**

Hindu community scholarship at Youngstown state university, Aug 2008- May 2009.

Research Assistantship awarded by WSU to pursue Ph.D. in Plant Pathology. Aug 2011- Dec 2016

Best poster presenter- 2nd place in APS Pacific division meeting, June 2016, LaConner, WA.

**PROFESSIONAL AFFILIATIONS & VOLUNTEER SERVICES**

American Phytopathological Society (APS).

National Plant Diagnostic Network (NPDN).

**Reviewer**

Frontiers Plant Science, Plant Disease, Plant Health Progress, PhytoFrontiers, Journal of Plant Pathology, Agronomy (MDPI), Horticulturae (MDPI), Agriculture (MDPI), Toxins (MDPI), Water (MDPI), Plants (MDPI), Metabolites, International Journal of Molecular Sciences (MDPI), Archives of Phytopathology and Plant Protection, Crop Protection, and Canadian Journal of Plant Pathology.

**WORK EXPERIENCE**

**Research Specialist**

North Carolina State University July2021- Present

Solving disease issues of field and specialty crops of North Carolina, updating disease issues section in the NC State Flue-Cured Tobacco Production Guide, reporting the new diseases through publications, assisting the workshop in training the extension agents, maintenance of the disease and other pest issue pages in NC State extension website.

**Post-Doctoral Researcher** Aug 2018- June 2021

Montana State University

Work as part of an interdisciplinary team to design and conduct greenhouse experiments in major crops such as pulse crops and small grains, characterization of *Fusarium* spp. on pulse crops, varietal screening of Pulse crops for Fusarium root rot resistance, characterization of pulse seed borne *Botrytis* spp., manuscript preparation and preparation of research reports.

**Research Assistant** May 2018- July 2018

Washington State University

Conducted fungicide resistance trial experiments on *Botrytis cinerea* and *B. paeoniae*, isolation of *Phytophthora ramorum* from soil samples using baits; isolation and molecular detection of *Botrytis cinerea* from peonies.

**Assistant Plant Diagnostician**  May2017- Oct 2017

Washington State University

Diagnosed plant and insect samples, assisted with basic diagnostic lab operations, developed teaching materials, detected pathogens through microscopic immunological and molecular testing methods, isolated fungi and bacteria onto the artificial growth medium, prepared diagnostic reports and maintained computer databases.

**Graduate Research Assistant** Aug 2011- Dec 2016

Washington State University

Conducted fungicide efficacy trials in the greenhouse and in nursery for the management of powdery mildew on sweet cherries, collected powdery mildew isolates from various sweet cherry growing regions of Washington State, designed and implemented field plot experiments to assess the efficacy of electrolyzed oxidized water in managing powdery mildew, carried out phylogenetic and taxonomic studies on *Podosphaera prunicola* and *Podosphaera cerasi*, conducted powdery mildew disease severity evaluations in sweet cherry orchard, vineyard and hop yard, generation and maintenance sweet cherry seedlings in the greenhouse and growth chamber; carried out epidemiological studies in the sweet cherry nursery to detect the source of initial inoculum in the nurseries and quantification of airborne inoculum using quantitative real time polymerase chain reaction, prepared manuscripts and presented posters at professional meetings.

**SKILLS AND CERTIFICATIONS**

*Lab Techniques:* Isolation of plant pathogens that include fungi and fungi like organism

Molecular and immunological techniques (DNA extraction, basic PCR, qPCR, ELISA)

Media preparation, aseptic technique, culture maintenance

Working knowledge of compound microscope

Disease severity evaluations

Experimental design, data collection, data analysis and interpretation of data.

*Data analysis platforms:*

Data analysis in R

ImageJ

*Certificates:*

Quality Systems Management training from National Animal Health Laboratory Network system and obtained certificates.

**REFERENCES**

**Dr. Gary Chastagner**

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2606 W Pioneer,

Puyallup, WA 98371

Tel: 253-445-4528

chastag@wsu.edu

**Dr. Gary G Grove,** Professor

WSU- Irrigated Agriculture Research and Extension Center,

24106 N Bunn Rd

Prosser, WA 99350-8694

Tel: (509) 786-9283

Email: Grove@wsu.edu

**Dr. Scot Hulbert**

Professor and chair

Washington State University

Johnson Hall 307

Pullman WA 99164

Tel: 509-335-3722

Scot\_hulbert@wsu.edu

**Jenny Glass**

Plant Diagnostician

Washington State University, Puyallup Research and Extension Center

2606 West Pioneer Avenue

Puyallup, WA 98371

Tel: 253-445-4582

Jennyglass@wsu.edu