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EDUCATION

2010. **Ph.D.** Genome Science and Technology Graduate Program, Division of Life Sciences. University of Tennessee Knoxville.

2005. **M.S.** Marine Biology. University of North Carolina Wilmington.

2002. **B.S.** Plant Biology. University of Georgia Athens.

PROFESSIONAL EXPERIENCE

08/2017 – present **Assistant Professorship.**
Biology Department. Eastern Connecticut State University. Willimantic, CT.

11/2014 – 08/2017 **Research Assistant Professorship.**
Department of Biology. University of Massachusetts Amherst.

09/2014 – 08/2017 **Adjunct Faculty.**
Biology Department. Holyoke Community College. Holyoke, MA.

01/2011 – 05/2014 **Course Instructor/Lecturer.**
Stockbridge School of Agriculture. (Formerly the Dept. of Plant, Soil and Insect Sciences). University of Massachusetts Amherst.

07/2010 – 11/2014 **Postdoctoral Research Fellowship.**
Stockbridge School of Agriculture. (Formerly the Dept. of Plant, Soil and Insect Sciences). University of Massachusetts Amherst.

TEACHING EXPERIENCE

Eastern Connecticut State University

Fall 2017 - 2020. **Lecturer and Lab Instructor.** Biology 334, General Microbiology. *Three semesters, developed new lecture and lab sequence.*

Fall 2017 - 2020. **Lecturer and Lab Instructor.** Biology 344, General Mycology. *Two semesters, developed new lecture and lab sequence.*

Fall 2017 - 2020. **Lecturer and Lab Instructor.** Biology 120, Organismal Biology. *Six semesters, updated lab and developed new lecture sequence.*

Holyoke Community College

2015 - 2017. Lecturer and Lab Instructor. Biology 217, Human Anatomy and Physiology I. *Five semesters.*

2015 - 2017. Lecturer and Lab Instructor. Biology 218, Human Anatomy and Physiology II. *Four semesters.*

2014 - 2017. Lecturer and Lab Instructor. BIO 120, General Zoology. *Four semesters.*

2014 - 2017. Lecturer and Lab Instructor. Biology 101, Intro Biology for Non-Majors. *Five semesters.*

2015 - 2016. Lecturer and Lab Instructor. Biology 229, Microbiology. *Three semesters.*

2014. Lab Instructor. Biology 107, Cell Functions. *Two semesters.*

University of Massachusetts Amherst

Spr 2013. Co-Instructor. Translational Research in Plant Pathology Journal Club (PLSOILIN 692A), 1 credit hr. Plant, Soil, and Insect Sciences Graduate Program.

Spr 2012. Co-Instructor. Plant:Pathogen Interactions Journal Club (PLSOILIN 692A), Plant, Soil, and Insect Sciences Graduate Program.

Fall 2011. Instructor. Introductory Botany (PLSOILIN 102), 4 credit hrs. Dept. of Plant, Soil, and Insect Sciences.

Fall 2011. Co-Instructor. Plant:Pathogen Interactions Journal Club (PLSOILIN 692A), Dept. Plant, Soil, and Insect Sciences.

PEDAGOGY TRAINING

Eastern Connecticut State University

2020. ACUE webinar on transitioning to online instruction.

2019. Certificate in Effective Instruction – ACUE (Association of College and University Educators). Course in effective teaching practices requiring the implementation of evidence-based instructional approaches, co-issued by the American Council on Education.

2018. “Antibiotic Discovery Training Course.” Pedagogy workshop funded by Tiny Earth Network, held at University of Connecticut Storrs, Department of Molecular and Cell Biology, Dr. Nicole Broderick. July 2018.

2018. “Employability 101 Workshop- CICD, Eastern Connecticut State University. Workshop on incorporating employability tools in the classroom.

UNDERGRADUATE AND GRADUATE RESEARCH MENTORING

Eastern Connecticut State University

2017 - 2020. Mentor for Independent Study students and an Honor's student. Students receive mentoring and training in microbiology and molecular biology lab skills, and genetic and genomic analyses. The students listed also presented their results in the form of poster and oral presentations (*), and peer-review publications (**).

Student mentored, Semester(s), Project Title, Conference(s)

- Mia Black-Graham***, Independent Study - Spring 2020, "Screening fungi for the antibiotic production in the battle against antibiotic resistance", 2020 CREATE Conference (abstract accepted, poster)
- Olivia Rianhard**, Independent Study - Spring 2020, "Characterizing *Phytophthora* Isolates from CT watersheds and plant nursery irrigation ponds"
- Sarah Bishop***, Independent Study - Spring 2020, "Development of a spectrophotometric assay to screen for compounds that inhibit biofilms and quorum sensing", 2020 CREATE Conference (abstract accepted, poster)
- Stefanos Stravoravdis****, Biology Honor's - Spring 2018 - Spring 2020, "Genomics of Fungicide Resistance in *Calonectria* species", 2019 Eastern Colleges Science Conference (oral), 2019 CREATE Conference (oral), 2019 and 2020 Pioneer Valley Microbiology Symposium at UMASS Amherst (poster, oral), abstract accepted for NCUR
- Brianna Fuentes***, Independent Study - Fall 2017 - Fall 2019, Evidence for Horizontal Gene Transfer of Fungicide Detoxification Genes", 2019 Eastern Colleges Science Conference (oral), 2019 CREATE Conference at ECSU (poster)
- Paige Tomko**, Independent Study - Fall 2019, "Phytophthora Species Recovered from Stream Baiting Watersheds in Eastern CT"
- Tahiri Contreras**, Independent Study - Fall 2019, "Screening Soil Fungi from Church Farm, Ashford, CT, for Antibiotic Production"
- Mitchell Cristofori***, Independent Study - Fall 2019, "Developing an Assay to Screen for Compounds that Disrupt Biofilm Formation in *Chromobacterium violaceum*", 2020 Pioneer Valley Microbiology Symposium at UMASS Amherst (poster)
- Azalea Martinez-Gonzalez***, Independent Study - Spring 2019, "Screening Soil Bacteria from Church Farm, Ashford, CT, for Antibiotic Production", 2019 CREATE Conference at ECSU (poster)
- Karen Sanchez***, Independent Study - Spring 2019, "Characterization of Antibiotic-Producing Soil Bacteria", 2019 CREATE Conference at ECSU (poster)
- James Kane***, Independent Study - Spring 2018, "Characterization of the mating-type locus in *Neonectria ditissima*", 2018 Eastern Colleges Science Conference (poster)

University of Massachusetts Amherst

2010 - 2014. Mentor for undergrad research. Biology Undergraduate Research Apprenticeships (BURA) or Independent Study.

Student mentored, Semester(s), Project Title, Conference(s)

Dylan Kessler**, Biology Honor's - 2011 - 2013, "Heterokaryons of *Sclerotinia homoeocarpa* exhibit enhanced adaptability to multiple fungicide pressures," 2013 American Phytopathological Society (oral)

Sean Gillis*, Biology Honor's - 2012 - 2013, "Screening for epigenetic changes associated with fungicide resistance", 2013 Undergraduate Research Conference, UMASS Amherst (poster)

Seema Mahase, Independent Study - 2014, "Mining genes involved in pathogenicity and fungicide resistance in *Sclerotinia homoeocarpa*"

Suon Heang Lee*, Independent Study - 2013, "Development of RNAi constructs for functional genomics of *Sclerotinia homoeocarpa*," 2012 UMASS Undergraduate Research Symposium (poster)

Martin Mullis, Independent Study - 2012, "Testing for synergism between ABC transport blockers and azole fungicides in *Sclerotinia homoeocarpa*."

Clemente Velaso-Annis*, Independent Study - 2012, "Development of protocol for screening epigenetic changes related to fungicide resistance", 2012 UMASS Undergraduate Research Symposium (poster)

Courtney Kimball-Badgett*, Independent Study - 2011, "Population genetics of *Sclerotinia homoeocarpa*", 2012 UMASS Undergraduate Research Symposium (poster)

Jon Stevens, Independent Study - 2012, "DNA Melt Curve Analysis of Fungicide Resistance Genes"

Leah Zivalic*, Independent Study - 2010 - 2011, "Developing qRT-PCR for fungicide resistance genes in *Sclerotinia homoeocarpa*," Meeting with university and Bayer chemical company representatives, Providence, RI in August 2010.

2011 - 2014. Mentor for PhD students, Dept. of Plant, Soil, and Insect Sciences and Plant Biology Graduate Program.

Amanda Bousquet, Fall 2012 and Spring 2013. Training in DNA melt curve analysis to detect fungicide resistance genes in *Sclerotinia homoeocarpa*.

Elisha Allan**, Spring and Fall 2012. Co-authored published book chapter and funded grant proposal with my mentoring in scientific writing.

Hyunkyung Sang**, Spring 2011 - Spring 2014, "Mechanisms of Fungicide Detoxification in *Sclerotinia homoeocarpa*", 2013 - 2015 American Phytopathological Soc. (oral), Co-authored two peer-reviewed publications.

COMPETITIVE GRANT AWARDS

Eastern Connecticut State University

Curriculum and Professional Development Grants

- 2019 -** "Training in Culturing and Fungicide Resistance Screening of the Apple Scab Pathogen, *Venturia inaequalis*." American Association of University Professors - Eastern Connecticut State University, **PI: Jonathan Hulvey. \$1,488.**
- 2018 -** "Development of Microbiology Course Activities to Enhance Marketable Student Skills in Microbiology." American Association of University Professors - Eastern Connecticut State University, **PI: Jonathan Hulvey. \$1,200.**
- 2018.** "Teaching an Antibiotic Discovery Course." Pedagogy workshop funded by Tiny Earth Network, held at University of Connecticut Storrs, July 2018. Room and board for five days at UCONN, Storrs, CT.

Research Grants

- 2018.** "Investigation of horizontal transfer of fungicide detoxification genes." Freeman Scholarship Award, Biology Dept. award for summer research for student Brianna Fuentes, \$500.
- 2018 -** "Genomics of Fungicide Resistance in *Venturia inaequalis*, Causal Agent of Apple Scab." American Association of University Professors - Eastern Connecticut State University, "Genomics of Fungicide Resistance in *Venturia inaequalis*, Causal Agent of Apple Scab" **PI: Jonathan Hulvey. \$4,500.**
- 2017 -** "Development and Implementation of Rapid Molecular Diagnostic Tests for QoI and Thiophanate-methyl Fungicide Resistance in the Turf Anthracnose Pathogen, *Colletotrichum cereale*" New England Regional Turfgrass Foundation, **PI: Jonathan Hulvey. \$16,028 over three years.**

University of Massachusetts Amherst

- 2014 -** USDA FY2014 Farm Bill, "Studying *Calonectria pseudonaviculata* Biology & Host-Pathogen Interactions to Enhance Mitigation Strategies". PIs: Robert Marra, Connecticut Agricultural Experiment Station, New Haven, CT, JoAnne Crouch, USDA-ARS, Beltsville, MD. **\$75,991 over two years.** Role: Grant co-author and researcher for RNA-Seq and functional genomics objectives.
- 2015** Testing for synergism between triadimefon and trifloxystrobin in the Boxwood Blight Pathogen, *Calonectria pseudonaviculata*. OHP. **PI: Jonathan Hulvey \$5,000 for one year.**
- 2015** "Development of rapid diagnostic assays to detect fungicide resistance in *Colletotrichum cereale*." US Golf Association. **PI: Jonathan Hulvey \$3,000 for one year.**
- 2013 -** "Implementing Quick and Inexpensive Molecular Diagnostic Assays for Fungicide Resistance in the Dollar Spot Pathogen, *Sclerotinia homoeocarpa*". New England Regional Turf Foundation, Research Grant. PI: Geunhwa Jung, **Co-PI:**

Jonathan Hulvey. \$30,000 over 2 years. Role: Primary grant author and primary researcher.

- 2013 -** United States Golf Association, Turfgrass and Environmental Research.
2014 “Development of Molecular Diagnostic Assays for Fungicide Resistance in the Dollar Spot Pathogen *Sclerotinia homoeocarpa*”. PI: Geunhwa Jung, **Co-PI: Jonathan Hulvey. \$20,000 for 1 year.** Role: Primary grant author and primary researcher.
- 2013 -** United States Golf Association, Turfgrass and Environmental Research. “Do
2016 management regimes of organically and conventionally managed golf course soils influence microbial communities and relative abundance of important turf pathogens?” PI and Co-PIs: Drs. Geunhwa Jung (UMASS), Daniel K. Manter (USDA), **Jonathan Hulvey**, and Ms. Elisha B. Allan (UMASS). **\$75,000 over 3 years.** Role: Co-author on grant and collaborating researcher.
- 2012 -** National Institute of Food and Agriculture, Hatch Grant. Project No. MAS00436:
2015 “Functional Genomics to Investigate and Characterize Genetic Factors Governing DMI-Sensitivity in *Sclerotinia homoeocarpa*”. PI: Geunhwa Jung (UMASS), **Co-PI: Jonathan Hulvey. \$90,000 over 3 years.** Role: Primary grant author and primary researcher.
- 2011.** Travel Fellowship Award for attending and presenting research at Oomycete Molecular Genetics Network conference. **\$1,000.**

AWARDS FOR RECOGNITION

Eastern Connecticut State University

- 2019.** Recognition by Provost for Outstanding Creative Achievement in 2018 academic year.

University of Massachusetts Amherst

- 2017.** Merit Award, Department of Biology, University of Massachusetts Amherst.

University of Tennessee Knoxville

- 2010.** Science Alliance Graduate Fellowship Award for Outstanding Achievement by a Graduate Student. University of Tennessee, Division of Biology. **\$3,500.**

RESEARCH PUBLICATIONS - PEER REVIEWED

Eastern Connecticut State University

1. Stravoravdis, S.*, LeBlanc, N. R., Marra, R. E., Crouch, J. A., **Hulvey, J. P.** 2020. Widespread Occurrence of a CYP51A Pseudogene in *Calonectria pseudonaviculata*. *Mycobiology*, 1: 1-7.
2. Sang, H.*, **Hulvey, J. P.**, Green, R., Xu, H., Im, J., Chang, T., & Jung, G. 2018. A Xenobiotic Detoxification Pathway through Transcriptional Regulation in Filamentous Fungi. *mBio*, 9(4), e00457-18. **Cited by: 1**

3. Kessler, D. *, Sang, H., Bousquet, A., **Hulvey, J.P.**, Garcia, D., Rhee, S., Hoshino, Y., Yamada, T. and Jung, G., 2018. Nucleic adaptability of heterokaryons to fungicides in a multinucleate fungus, *Sclerotinia homoeocarpa*. Fungal Genetics and Biology.
4. Castro-Rocha, A., **Hulvey, J. P.**, Wick, R., Shrestha, S. K., & Lamour, K. 2017. Genetic diversity of *Phytophthora capsici* recovered from Massachusetts between 1997 and 2014. *Mycological Progress*, 16(10), 999-1006. **Cited by: 2**

University of Massachusetts Amherst

5. Joyce, B. L., Haug-Baltzell, A. K., **Hulvey, J. P.**, McCarthy, F., Devisetty, U. K., Lyons, E. 2017. Leveraging CyVerse Resources for *De Novo* Comparative Transcriptomics of Underserved (Non-model) Organisms. *J. Vis. Exp.* (123), e55009, doi:10.3791/55009. **Cited by: 1**
6. Villani, S.M., **Hulvey, J.**, Hily, J., and Cox. K.D. 2016. Overexpression of the CYP51A1 gene and repeated elements mediate differential sensitivity to DMI fungicides in *Venturia inaequalis*. *Phytopathology*. **Cited by: 7**
7. Brazee, N.J., Wick, R.L., and **Hulvey, J.** 2016. "*Phytophthora* species recovered from the Connecticut River Valley in Massachusetts, USA." *Mycologia*. **Cited by: 9**
8. Kamoun et al. 2015. The Top 10 oomycete pathogens in molecular plant pathology. *Molecular plant pathology* 16: 413-434 **Cited by: 189**
9. Sang, H., **Hulvey, J.**, Popko, J. T., Lopes, J., Swaminathan, A., Chang, T., Jung, G. 2015. A pleiotropic drug resistance transporter is involved in Reduced sensitivity to multiple fungicide classes in *Sclerotinia homoeocarpa* (FT Bennett). *Molecular Plant Pathology*. 16: 251- 261. **Cited by: 21**
10. **Hulvey, J.**, Popko, J., Sang, H., and G. Jung. 2012. Overexpression of *ShCYP51B* and *ShatrD* in *Sclerotinia homoeocarpa* field isolates exhibiting practical field resistance to a demethylation inhibitor fungicide. *Applied and Environmental Microbiology*. 78: 6674 - 6682. **Cited by: 38**

University of Tennessee Knoxville

11. Lamour et al. 2012. Genome Sequencing and Mapping reveal loss of heterozygosity as a mechanism for rapid adaptation in the vegetable pathogen *Phytophthora capsici*. *Molecular Plant-Microbe Interactions*. 25: 1350-1360. **Cited by: 132**
12. Gobena, D., Roig, J., Galmarini, C., **Hulvey, J.**, and Lamour, K. 2012. Genetic Diversity of *Phytophthora capsici* isolates from pepper and pumpkin in Argentina. *Mycologia*. 104: 102-107. **Cited by: 38**
13. Brazee, N.J., **Hulvey J.P.**, Wick, R. 2011. Evaluation of partial *tef1*, *rpb2*, and nLSU sequences for identification of isolates representing *Armillaria calvelescens* and *A. gallica* from northeastern North America. 115: 741-749. *Fungal Biology*. **Cited by: 21**
14. **Hulvey, J.**, Hurtado-Gonzalez, O., Aragón-Caballero, L. Gobena, D., Storey, D., Finley, L., and Lamour, K. 2011. Genetic diversity of the pepper pathogen *Phytophthora capsici* on farms in the Amazonian high jungle of Peru. *American Journal of Plant Sciences*. 2: 461- 466. **Cited by: 7**
15. **Hulvey, J.**, Telle, S., Nigrelli, L., Lamour, K., and M. Thines. 2010. Salisapiliaceae - A

new family of oomycetes from marsh grass litter of southeastern North America. *Persoonia*. 25: 109-116. *Cited by: 42*

16. **Hulvey, J.**, Gobena, D., Finley, L., K. Lamour. 2010. Co-occurrence and genotypic distribution of *Phytophthora* species recovered from watersheds and plant nurseries of Eastern Tennessee. *Mycologia*, 102: 1127-1133. *Cited by: 53*

17. **Hulvey, J.**, Young, J., Finley, L., K. Lamour. 2010. Loss of heterozygosity in *Phytophthora capsici* following N-ethyl-nitrosourea mutagenesis. *Mycologia*, 102: 27-32. *Cited by: 8*

University of North Carolina Wilmington

18. **Hulvey, J.P.**, Padgett, D.E., J.C. Bailey. 2007. Species boundaries within *Saprolegnia* (Saprolegniales, Oomycota) based on morphological and DNA sequence data. *Mycologia*, 99: 421-429. *Cited by: 47*

UNIVERSITY AND PROFESSIONAL SERVICE

Eastern Connecticut State University

2020 - pres. Biology Department Liaison to the Employability Council.

2020. Biology Dept. search committee for Plant Biologist faculty position.

2019 - pres. Senate Organization Committee.

2018 - pres. Faculty advisor for student club, "Mycology Club".

2018 - 2019. Faculty Senate Representative, Biology Dept.

2018 - 2019. Admitted Students Day, Lecture title, "Medical Mycology".

2018. Biology Dept. search committee for Technical Specialist.

2017 - pres. Biology Department Liaison to the Advising Center.

2017 - 2020. Volunteer for Open House, Biology Dept. Representative.

University of Massachusetts Amherst

2013. Volunteer judge for Life Sciences Undergraduate Research Symposium.

2013. Session Moderator of Research Presentations at the Northeastern American Phytopathological Society Meeting. October 23- 25, 2013. Southbury, CT.

2013. Volunteer, UMASS Cold Spring Orchard. Belchertown, MA.

2010. Session Moderator of Research Presentations at the Northeastern American Phytopathological Society Meeting. October 27- 29, 2010. Northampton, MA.

INVITED SEMINARS

Eastern Connecticut State University

2020. Connecticut Agricultural Experiment Station Spring Seminar Series. "Uncovering

Mechanisms of Fungicide Resistance and Detoxification.”

2019. New England Regional Turfgrass Foundation Regional Conference. “Detection of Fungicide Resistance Alleles in Anthracnose of Turf.”

University of Massachusetts Amherst

2013. Stockbridge School of Agriculture Fall Seminar Series. Seminar Title: “Forging a path from ‘omics to translational plant pathology research”

2011. Dept. of Plant Biology Graduate Program Seminar Series. Spring. Seminar Title: “Functional genomics of fungicide sensitivity of New England populations of the turfgrass pathogen *Sclerotinia homoeocarpa*”

PROFESSIONAL CONFERENCE PRESENTATIONS

Eastern Connecticut State University

2018. “Evidence for CYP51-mediated reduced sensitivity to triazole fungicides in *Calonectria henricotiae*” (Poster). International Congress of Plant Pathology, American Phytopathological Society Joint Meeting, Boston, MA.

University of Massachusetts Amherst

2013. “High-resolution DNA melting analysis as a tool to screen for genetic polymorphism in fungicide resistance genes for two important turfgrass fungal pathogens, *Sclerotinia homoeocarpa* and *Colletotrichum cereale*” (Poster). Northeastern American Phytopathological Society Meeting, Southbury, CT.

2013. “RNA-Seq and heterologous yeast expression uncover evidence for novel fungicide resistance determinants with parallels to pesticide detoxification in plants and insects” (Oral presentation). Northeastern American Phytopathological Society Meeting, Southbury, CT.

2013. “Development of molecular fungicide resistance assays for an important turf pathogen” (Poster). American Phytopathological Society Meeting, Austin, TX.

2013. “*De novo* RNA-Seq and bioinformatic analyses uncover genetic determinants of fungicide detoxification” (Oral presentation). American Phytopathological Society Meeting, Austin, TX.

2012. “Functional genomics of fungicide resistance in the dollar spot pathogen, *Sclerotinia homoeocarpa*.” (Oral presentation). MassMyco: A regional meeting of fungal biologists in Massachusetts and surrounding states. Clark University, Worcester, MA.

2012. “Overexpression of *ShCYP51B* and *ShatrD* in *Sclerotinia homoeocarpa* field isolates exhibiting practical field resistance to propiconazole” (Poster and Oral presentations). American Phytopathological Society Meeting, Providence, RI.

2011. “Overexpression of the *BcatrD* homolog in *Sclerotinia homoeocarpa* field isolates exhibiting practical field resistance to propiconazole” (Oral presentation). Northeastern Division of the American Phytopathological Society Meeting, New Brunswick, NJ.

2011. “Salisapiliaceae – A new family of oomycetes from marsh grass litter of southeastern North America” (Poster). Oomycete Molecular Genetics Network Meeting. Asilomar, CA.

2011. "Concordance of genotype and vegetative compatibility groups for *Sclerotinia homoeocarpa* isolates" (Poster). Plant and Animal Genomes XIX Conference.

PRESS RELEASES

Eastern Connecticut State University

2020. "Biology Research Duo Publishes on Antifungal Resistance." URL: https://www.easternct.edu/news/_stories-and-releases/2019/12-december/biology-research-duo-publishes-on-antifungal-resistance.html

2020. "Biology Research Duo Publishes on Antifungal Resistance." URL: https://www.easternct.edu/news/_stories-and-releases/2019/12-december/biology-research-duo-publishes-on-antifungal-resistance.html

2019. "Biology Department Hosts 'Tiny Earth Day,' Welcomes Local High School Students." URL: https://www.easternct.edu/news/_stories-and-releases/2019/04-april/bio-department-hosts-tiny-earth-day-welcomes-local-high-school.html

2018. "Students Combat Antibiotic Resistance Crisis via 'Tiny Earth'" URL: https://www.easternct.edu/news/_stories-and-releases/2018/11-november/students-combat-antibiotic-resistance-crisis-via-tiny-earth.html

PROFESSIONAL SOCIETIES

Tiny Earth Network
American Society for Microbiology
American Phytopathological Society
Mycological Society of America

PEER-REVIEW JOURNAL REFEREE

MDPI Microorganisms
Applied and Environmental Microbiology
Crop Protection
Journal of Phytopathology
Current Microbiology
Plant Disease
Journal of General Plant Pathology