

David E. Cook

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Department of Plant Pathology
Kansas State University, Manhattan Kansas

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EDUCATION

August 2013 PhD. Department of Plant Pathology, University of Wisconsin-Madison
May 2008 MSc. Crop Soil Environmental Science, Virginia Tech
December 2005 BSc. Crop Soil Environmental Science, Virginia Tech, Cum Laude

PERSONAL FELLOWSHIPS and APPOINTMENTS

2022 – Current **Associate Professor**, Department of Plant Pathology, Kansas State University, Manhattan Kansas
2022 – Current Graduate Program Director, Department of Plant Pathology, Kansas State University, Manhattan Kansas
2017- 2022 **Assistant Professor**, Department of Plant Pathology, Kansas State University, Manhattan Kansas
2014- 2016 **Postdoctoral Fellow**, Human Frontiers in Science Program (HFSP), Laboratory of Phytopathology, Wageningen University, Netherlands
2014- 2014 **Postdoctoral Fellow**, European Molecular Biology Organization (EMBO), Laboratory of Phytopathology, Wageningen University, Netherlands
2013- 2014 **Postdoctoral Research Associate**, Laboratory of Phytopathology, Wageningen University, Netherlands
2009- 2013 **PhD Fellow**, American Phytopathological Society-Pioneer Graduate Fellowship in Plant Pathology, University of Wisconsin-Madison

PUBLICATIONS

*Contributed equally

Corresponding author

Lui S, Lin G, Ramachandran SR, Cruppe G, Cook DE, Pedley KF, Valent B. 2022. Rapid mini-chromosome divergence among fungal isolates causing wheat blast outbreaks in Bangladesh and Zambia. *Published on bioRxiv*, <https://doi.org/10.1101/2022.06.18.496690>

Huang J, Rowe D, Zhang W, Suelter T, Valent B, Cook DE#. 2022. CRISPR/Cas12a induced double-strand breaks are repaired by locus-dependent and error-prone pathways in a fungal pathogen. *Published on bioRxiv* doi: <https://doi.org/10.1101/2021.09.08.459484>.

Huang J, Cook DE#. 2022. The contribution of DNA repair pathways to genome editing and evolution in filamentous pathogens. **FEMS Reviews Microbiology**, fuac035, <https://doi.org/10.1093/femsre/fuac035>

PUBLICATIONS (*continued*)

Sia J*, Zhang W*, Jonckheere E, Cook DE#, Bogdan P#. 2022. Inferring functional communities from partially observed biological networks exploiting geometric topology and side information. **Scientific Reports**, 12, 10883. <https://doi.org/10.1038/s41598-022-14631-x>

Sharma VK, Marla S, Zheng WG, Mishra D, Huang J, Zhang W, Morris GP, and DE Cook#. 2022. RNA silencing by CRISPR in plants does not require Cas13. **Genome Biology** 23, 6 <https://doi.org/10.1186/s13059-021-02586-7>

Kramer M, Seidl MF, Thomma BPHJ#*, Cook DE*. 2022. Local rather than global H3K27me3 dynamics are associated with differential gene expression in *Verticillium dahliae*. **mBio**, 13, 1. <https://doi.org/10.1128/mbio.03566-21>

Huang J, Cook DE#. 2021. CRISPR-Cas12a ribonucleoprotein-mediated gene editing in a plant pathogenic fungus *Magnaporthe oryzae*. **STAR Protocols**, (3) 101072 <https://doi.org/10.1016/j.xpro.2021.101072>

Kramer M*, Cook DE*, van den Berg G, Seidl MF, Thomma BPHJ. 2021. DNA methylation in *Verticillium dahliae* requires only one of three putative DNA methyltransferases, yet is dispensable for growth, development and virulence. **Epigenetics & Chromatin** 14, 21. <https://doi.org/10.1186/s13072-021-00396-6>

Huang J, Zhang W, Cook DE#. 2021. Histone modification dynamics at H3K27 are associated with altered transcription of *in planta* induced genes in *Magnaporthe oryzae*. **PLoS Genetics**, 17(2):e1009376. <https://doi.org/10.1371/journal.pgen.1009376>

Sharma V, Zheng W, Huang J, and DE Cook#. 2021. CRISPR-Cas RNA targeting using transient Cas13a expression in *Nicotiana benthamiana*. In: Jin H., Kaloshian I. (eds) RNA Abundance Analysis. **Methods in Molecular Biology**, vol 2170. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-0743-5_1

Cook DE#, Kramer M, Torres D, Seidl MF, Thomma BPHJ#. 2020. A unique chromatin profile defines adaptive genomic regions in a fungal plant pathogen. **eLife** 2020; 9:e62208 DOI: 10.7554/eLife.62208

Seidl MF, Kramer M, Cook DE, Fiorin G, van den Berg G, Faino L, and BPHJ Thomma. 2020. Repetitive elements contribute to the diversity and evolution of centromeres in the fungal genus *Verticillium*. **mBio**, 11 (5) e01714-20; DOI: 10.1128/mBio.01714-20

Weiland JJ, Poudel RS, Flobinus A, Cook DE, Secor GA, and MD Bolton. 2020. RNAseq analysis of Rhizomania-infected sugar beet provides the first genome sequence of beet necrotic yellow vein virus from the USA and identified a novel alphanecrovirus and putative satellite viruses. **Viruses** 12, 626; doi:10.3390/v12060626

PUBLICATIONS (*continued*)

Peng Z, Garcia-Oliveira E, Guifang L, Ying H, Dalby M, Migeon P, Tang Haibao, Farman M, Cook DE, White F, Valent B, Liu S. 2019. Effector gene reshuffling involves dispensable mini-chromosomes in the wheat blast fungus. **PLoS Genetics** 15(9):e1008272.
<https://doi.org/10.1371/journal.pgen.1008272>

Zhang W, Corwin JA, Copeland D, Feusier J, Eshbaugh R, Cook DE, Atwell S, Kliebenstein. 2019. Plant-Necrotroph co-transcriptome networks illuminate a metabolic battlefield. **eLife** 2019;8:e44279 DOI: 10.7554/eLife.44279

Cook DE*, Valle-Inclan JE*, Pajoro A, Rovenich H, Thomma BPHJ, Faino L. 2019. Long-Read Annotation (LoReAn): automated eukaryotic genome annotation based on long-read cDNA sequencing. **Plant Physiology** 179: 38-54 DOI: <https://doi.org/10.1104/pp.18.00848>

Thomma BPHJ and Cook DE. 2018. Targeting microbial pathogens. **Science** 360:1070-1071. DOI: 10.1126/science.aat9343

Lowe-Power TM, Hendrich CG, Roepenack-Lahaye E, Li B, Wu D, Mitra R, Dalsing B, Ricca P, Naidoo J, Cook DE, Jancewics, Masson P, Thomma B, Lahaye T, Michael AJ, Allen C. 2018. Metabolomics of tomato xylem sap during bacterial wilt reveals *Ralstonia solanacearum* produces abundant putrescine, a metabolite that accelerates wilt disease. **Environmental Microbiology**, 20 (4) 1330-1349. DOI: 10.1111/1462-2920.14020.

Seidl MF*, Cook DE*, Thomma BPHJ. 2016. Chromatin biology impacts adaptive evolution of filamentous plant pathogens. **PLoS Pathogens**, 12 (11) e1005920

Thomma BPHJ, Seidl MF, Shi-Kunne X, Cook DE, Bolton MD, van Kan JAL, Faino L. 2016. Mind the gap; seven reasons to close fragmented genome assemblies. **Fungal Genetics and Biology** (90): 24-30

Cook DE, Mesarich CH, Thomma BPHJ. 2015. Understanding plant immunity as a surveillance system to detect invasion. **Annual Review of Phytopathology** 53:25.1-25.23.

Cook DE, Bayless A, Wang K, Guo X, Jiang J, Bent AF. 2014. Distinct copy number, coding sequence and locus methylation patterns underlie *Rhgl*-mediated soybean resistance to soybean cyst nematode. **Plant Physiology** 165:630-647.

Cook DE*, TG Lee*, Guo X, Melito S, Wang K, Bayless A, Wang J, Hughes TJ, Willis DK, Clemente T, Diers BW, Jiang J, Hudson ME, Bent AF. 2012. Copy number variation of multiple genes at *Rhgl* mediates nematode resistant in soybean. **Science** 338:1206-1209.

Melito S, Heuberger A, Cook DE, Diers BW, MacGuidwin AE, Bent AF. 2010. A nematode demographics assay in transgenic roots reveals no significant impacts of the *Rhgl* locus LRR-Kinase on soybean cyst nematode resistance. **BMC Plant Biology** 10:104.

Cook DE and Rainey KM. 2010. Seed coat deficiency, trait stability, and other soybean seed quality traits for natto cultivar development. **Crop Science** 50:1244-1249.

PATENTS

Cook DE, Sharma V, Morris GP, Marla S. 2021. Guide-induced gene silencing. Provisional Patent Appl. No.: 63/174,832

Bent AF, Hudson M, Diers B, Melito S, Cook DE, Hughes T, Bayless A, Wang J, Lee TG, Guo X. 2020. Rhg1 mediated resistance to soybean cyst nematode. US Patent 10808260.

GRANT FUNDING (Awarded)

- 2022-2024 Seedling Grant, Defense Advanced Research Projects Agency (DARPA). PI with Co-PI Dr. Paul Bogdan (USC). *Engineering novel plant receptors.*
- 2021-2025 National Science Foundation and United States Department of Agriculture, National Institute of Food and Agriculture. Co-PI with PI Dr. Liu, Co-PIs Dr. Valent and Dr. Koo. *Dynamic mini-chromosomes: mechanisms of exchange, stability and causation of fungal pathogen adaptation.*
- 2019-2022 National Science Foundation- Molecular and Cellular Biosciences. Models for Uncovering Rules and Unexpected Phenomena in Biological Systems (MODULUS), PI with Co-PI Dr. Paul Bogdan. *A Novel Spatiotemporal Multifractal Analysis to Evaluate Genome Dynamics.*
- 2019- 2020 Young Faculty Award (YFA), Directors Fellowship, Defense Advanced Research Projects Agency (DARPA), Sole PI. *Transcriptome engineering for enhanced agronomic defense, response and performance.*
- 2019-2022 United States Department of Agriculture, Education and Workforce Development REEU, Co-Project Director. *Pathways to plant health through integrated, FACT-driven research and extension internships.*
- 2018- 2021 United States Department of Agriculture, National Institute of Food and Agriculture (USDA-NIFA), Plant-Biotic Interactions program (PBI). Sole PI. *Deciphering the control network and genome dynamics during fungal plant pathogenesis.*
- 2018- 2021 Joint Genome Institute (JGI), Community Science Program New Investigator Project. Services provided at no cost. Sole PI. *Enabling RNA-targeting CRISPR in grass species for functional genomics and agronomic improvement.*
- 2017- 2019 Young Faculty Award (YFA) awarded by the Defense Advanced Research Projects Agency (DARPA), Sole PI. *Transcriptome engineering for enhanced agronomic defense, response and performance.*

HONORS AND AWARDS

- 2019 Directors Fellowship, Young Faculty Award, Defense Advanced Research Projects Agency
- 2016 International Congress on Molecular Plant-Microbe Interactions Travel Awardee
- 2015 Keystone Travel Scholarship to attend symposia on DNA methylation
- 2014 Human Frontier Science Program (HFSP) Postdoctoral Fellowship, award number LT000627/2014-L. Three years of funding.

- 2013 European Molecular Biology Organization (EMBO) Postdoctoral Fellowship, award number ALTF 969-2013. Two years of funding.
- 2012 Poster awarded overall first place at conference- Molecular and cellular biology of Soybean.
- 2009 American Phytopathological Society-Pioneer Graduate Fellowship in Plant Pathology. Four years funding for PhD.
- 2011 August M. Gorenz Scholarship, UW-Madison

DEPARTMENTAL SERVICE

- 2022-current Graduate Program Director, Department of Plant Pathology, KSU
- 2022 Postdoc hiring committee for Assist. Professor Shahideh Nouri, KSU Department of Plant Pathology
- 2021 Postdoc hiring committee for Assist. Professor Shahideh Nouri, KSU Department of Plant Pathology
- 2019 Postdoc hiring committee for Assoc. Professor Geoff Morris, KSU Department of Agronomy
- 2018-current Department Committee On Planning, KSU Plant Pathology
- 2018-2019 Invited speakers and organized departmental seminar series for Fall 2018 and Spring 2019
- 2018 Interim Department Head Search Committee, KSU Plant Pathology
- 2018 USDA Supercontainment facility policy committee, KSU Plant Pathology
- 2017- 2022 Graduate Student Screening Committee, KSU Plant Pathology
- 2017 Virology Faculty Search Committee, KSU Plant Pathology

CONFERENCE PRESENTATIONS and INVITED TALKS

- 2022 12th Japan-US Seminar on Plant Pathology, Cornell University. (Invited, Oral)
- 2022 NSF workshop on Models for Uncovering rules and unexpected phenomena in biological systems, George Mason University. (Invited, Oral)
- 2022 Oklahoma State University, Department of Entomology and Plant Pathology seminar series. (Invited, Oral)
- 2022 Concurrent session co-chair, Chromatin, heterochromatin and Epigenetics, 31st Fungal Genetics Conference.
- 2021 Colorado State University, Soil and Crop Science Department seminar series (*virtual*). (Invited, Oral)
- 2021 University of Missouri- Kansas City (UMKC), School of Biological and Chemical Sciences seminar series (*virtual*). (Invited, Oral)

CONFERENCE PRESENTATIONS and INVITED TALKS (*continued*)

- 2020 DARPA Insect Allies Technical Interchange Meeting, Arlington Virginia.
(Invited, Oral)
- 2019 DARPA Young Faculty Award kick-off, Arlington Virginia. (Invited, Poster)
- 2019 USDA North Dakota State, Unit Seminar Series. (Invited, Oral)
- 2019 Molecular Plant-Microbe Interactions International Congress. Glasgow, Scotland.
(Invited, Oral)
- 2018 Kansas State University, Department of Biochemistry and Molecular Biophysics
seminar series. (Invited, Oral)
- 2018 Young Investigators Panel, K-State University. (Invited, Oral)
- 2018 DARPA Young Faculty Award kick-off, Arlington Virginia. (Invited, Poster)
- 2018 Lawrence Livermore National Labs (LLNL), DARPA YFA site visit. (Oral)
- 2018 University of Nebraska-Lincoln Department of Plant Pathology, seminar series
(Invited, Oral)
- 2018 DARPA Insect Allies Technical Interchange Meeting, Austin Texas. (Invited, Oral)
- 2017 Young Investigators Panel, K-State University. (Invited, Oral)
- 2017 University of Arkansas Department of Plant Pathology, seminar series. (Invited, Oral)
- 2017 DARPA Young Faculty Award kick-off, Arlington Virginia. (Invited, Poster)
- 2017 Kansas Louis Stokes Alliance for Minority Participation, K-State University.
(Invited, Oral)
- 2017 Ecological Genomics Summer Research Forum, K-State University. (Invited, Oral)
- 2017 29th Fungal Genetics Conference, Asilomar California. (Poster)
- 2016 Molecular Plant-Microbe Interactions International Congress. Portland, Oregon.
(Invited, Oral)
- 2016 Chromatin Dynamics, Ludwig Maximilian University. Munich, Germany.
- 2015 Keystone Symposium: DNA Methylation. Keystone CO. Selected for travel award
(Poster)
- 2014 ALW Molecular Genetics Annual Meeting. Lunteren, The Netherlands. (Selected, Oral
Presentation)
- 2014 Molecular Plant-Microbe Interactions International Congress. Rhodes, Greece. (Poster)
- 2013 Keystone Symposium: Plant Immunity: Pathways and Translation. (Selected, Oral)
- 2012 Molecular and Cellular Biology of the Soybean, Ames IA. *awarded overall 1st place.*
(Poster)
- 2012 American Phytopathologic Society Annual Meeting, Providence RI. (Poster)
- 2010 American Phytopathologic Society Annual Meeting, Charlotte NC. (Poster)
- 2009 Molecular Plant-Microbe Interactions International Congress. Quebec, Canada. (Poster)

LAB MEMBER PRESENTATIONS (presenting author is underlined)

Huang J, Rowe D, Zhang W, Suelter T, Valent B, Cook DE. Repair of CRISPR-Cas12a induced DNA double-strand breaks in *Magnaporthe oryzae* generates locus-dependent mutation profiles. 3rd Magnafest, Asilomar CA, March, 2022. (Oral)

Zhang W. Leveraging omics to ask and answer big biological questions. University of California-Riverside. December, 2021 (Invited Job Talk).

Zhang W, Sia J, Cook DE, Bogdan P. Leveraging community detection from network science to identify the cell's functional organization in biological networks. Plant Biology, virtual meeting, July, 2021. (Poster)

Marla, S. Leveraging genetic, genomic, and gene-editing tools for improving Montana cereal crops. Montana State University. October, 2021 (Invited Job Talk).

Zhang W, Sia J, Cook DE, Bogdan P. Leveraging community detection from network science to identify the cell's functional organization in biological networks. International Plant Systems Biology Workshop, virtual meeting, April, 2021. (Poster)

Huang J, Rowe D, Zhang W, Suelter T, Valent B, Cook DE. CRISPR-Cas12a induced DNA double-strand breaks are repaired by locus-dependent and error-prone pathways in a fungal pathogen. The Joint CanFunNet and Great Lakes Mycology Conference, virtual meeting, May, 2021. (Oral)

Zhang W, Huang J, Cook DE. Epigenetic regulation of effector gene expression in a fungal plant pathogen. Plant Biology World Summit, virtual conference, July, 2020. (Oral)

Sharma V, Zheng W, Huang J, Zhang W, Cook DE. Engineering RNA virus resistance using type VI CRISPR-Cas system. 38th Annual American Society of Plant Virology meeting, Minneapolis, Minnesota, July 2019. (Poster)

Zhang W, Huang J, Cook DE. Investigation of Epigenetic Control of *Magnaporthe oryzae* Gene Expression by ChIP-Seq and RNA-Seq. 30th Fungal Genetics Conference. Pacific Grove, California, March 2019. (Poster)

Huang J, Zhang W, Cook DE. Investigating the role of histone modification dynamics on H3K27 for regulating effector gene expression in *Magnaporthe oryzae*. 30th Fungal Genetics Conference. Pacific Grove, California, March 2019. (Poster)

Sharma V, Zheng W, Huang J, Cook DE. CRISPR-Cas mediated RNA modulation for improved plant defense. International Congress of Plant Pathology and American Phytopathologic Society combined meeting. Boston, Massachusetts, August 2018. (Poster)

ADVISING, TEACHING, ACTIVITIES

Graduate and Postdoc Advising

2022	Advisor- Postdoc, Dr. Jun Huang, Kansas State University
2021-2022	Major Advisor- PhD, Pratima Subedi, Kansas State University, Plant Pathology
2021-current	Committee Member- PhD, Heather Forster, Kansas State University, Interdepartmental Genetics
2021-current	Committee Member- PhD, Tyler Suelter, Kansas State University, Plant Pathology

2020-current Major Advisor- PhD, David Rowe, Kansas State University, Interdepartmental Genetics

2020-2022 Advisor- Postdoc, Dr. Divya Mishra, Kansas State University

2019-2021 Advisor- Postdoc, Dr. Sandeep Marla, Kansas State University

2019-2022 Co-Major Advisor- MSc, Joseph Fenoglia, Kansas State University, Plant Pathology

2018- 2021 Committee Member- MSc, Carla Bianca Redila, Kansas State University, Plant Pathology

2018- 2020 Committee Member- MSc, Bliss Betzen, Kansas State University, Plant Pathology

2018- current Committee Member- PhD, Afsana Noor, Kansas State University, Plant Pathology

2018- 2019 Advisor- Postdoc, Dr. Wenguang Zheng, Kansas State University

2017- 2021 Advisor- Postdoc, Dr. Veerendra Sharma, Kansas State University

2017- 2022 Advisor- Postdoc, Dr. Wei Zhang, Kansas State University

2017- 2022 Major Advisor- PhD, Jun Huang, Kansas State University, Plant Pathology

2017- 2022 Committee Member- PhD, Joel Steyer, Kansas State University, Plant Pathology

2016- 2022 Supervision- PhD. Martin Kramer, Wageningen University

2015 Supervision- MSc. Minor thesis, 8 months- Martin Kramer, Wageningen Univ.

Undergraduate Advising

2022 REEU Mentor- Tom MaCanany, Kansas State University, Biology Department

2020-2021 Mentor- Developing Scholars Program, Kaitilyn Headlee, Kansas State University, BSc., Freshman.

2019-2020 Mentor- Undergraduate Research, Nathan Ryan, Kansas State University, BSc. Agronomy

2018-2019 Mentor- Undergraduate Research, Shumin Li, Kansas State University, BSc. Animal Science

2018-2019 Mentor- Undergraduate Research, Brett Plemons, Kansas State University, BSc. Agronomy, Plant Pathology minor

2018 Mentor- Undergraduate Research, Mary Markland, Kansas State University, BSc. Animal Science

2015 Supervision- BSc. Major thesis, 8 months- Ron Boon, InHolland Univ.

2015 Supervision- BSc. Minor thesis, 6 months- Marloes van Dyke, Fontys Univ.

2015 Supervision- BSc. Major thesis, 4 months- Kyra Broeders, Wagenignen Univ.

2012-2013 Supervision- BSc. Biochemistry student, Amy Yan, UW-Madison

2011 Supervision- BSc. Plant pathology student, Michael Gardner, UW-Madison

2010 Supervision- BSc. Plant pathology student, Christina Brooks, UW-Madison

Teaching

2021 (Fall) PPATH-910 Molecular Plant-Microbe Interactions, Kansas State University

2021 (Spring) PPATH-870 Thesis Proposal Seminar, Kansas State University

2020 (Spring) PPATH-870 Thesis Proposal Seminar, Kansas State University

- 2019 (Fall) PPATH-910 Molecular Plant-Microbe Interactions, Kansas State University
- 2019 (Smr) PPATH-815 IGF Workshop, Guest Lecture, Kansas State University
- 2019 (Spring) PPATH-870 Thesis Proposal Seminar, Kansas State University
- 2018 (Spring) PPATH-870 Thesis Proposal Seminar, Kansas State University
- 2017 Fusarium Laboratory Workshop, Guest Lecture, Kansas State University
- 2015 Lecture- Bacterial pathogens and plant-microbe interaction basics, Wageningen University
- 2015 Teaching Assistant- Lab practical: *Principles of Plant Pathology*, Wageningen University
- 2012 Lecture- Plant pathogenic nematodes and emerging diseases, UW-Madison
- 2011 Teaching Assistant- Lab practical: *Plants, Parasites and People*, UW-Madison

Activities

- 2021 University non-discrimination training
- 2018 STEM Night at Marlatt Elementary, Co-Lead organizer for science night at local elementary school
- 2018 Girls Researching Our World (GROW), Weekend Workshop on what CRISPR-Cas is and why it is important. Kansas State University
- 2017 STEM Night at Marlatt Elementary, Co-Lead organizer for science night at local elementary school
- 2016 HFP-consulting, Leadership and Management Skills Course. Heidelberg, Germany.
- 2012 Wisconsin Entrepreneurial Bootcamp, UW-Madison Business School
- 2010 Chair- Plant Pathology Graduate Student Colloquium, UW-Madison
- 2003-2005 Student Athlete Advisory Committee (SAAC), Mens track representative, Va.Tech

GRANT REVIEWS

- 2022 National Science Foundation, MCB-Systems and Synthetic Biology (panel member)
- 2022 United States Department of Agriculture, National Institute of Food and Agriculture- Centers for Excellence (panel member)
- 2021 National Science Foundation, MCB-Systems and Synthetic Biology (Ad-hoc)
- 2020 United States Department of Agriculture, National Institute of Food and Agriculture- Agricultural Innovation through Gene Editing (panel member)
- 2019 United States Department of Agriculture, National Institute of Food and Agriculture- Agricultural Innovation through Gene Editing (panel member)
- 2019 National Science Foundation, IOS- Plant Biotic Interactions (Ad-hoc)
- 2017 National Science Foundation, IOS- Plant Genome Research Project (Ad-hoc)
- 2017 Kentucky Science and Engineering Foundation, Biosciences review (Ad-hoc)

JOURNAL PEER-REVIEW SERVICE

2021-current Associate Editor, Phytopathology

Service as peer reviewer:

BMC Plant Biology, DNA Repair, FEMS Microbiology Review, Fungal Genetics and Biology, G3, Journal of Integrative Plant Biology, mBio, Microbial Genomics, Molecular Biology and Evolution, Molecular Plant-Microbe Interactions, Molecular Plant Pathology, Nature Communications, New Phytologist, Phytopathology, Plant Cell, Plant Physiology, PLoS Genetics, PLoS One, PLoS Pathogens, Science Advances

PROFESSIONAL MEMBERSHIP

2016 Genetics Society of America (GSA)

2010 American Phytopathologic Society (APS)

2009 International Society for Molecular Plant-Microbe Interactions (IS-MPMI)