

Curriculum Vitae

Rosaria Ann Healy, Ph.D.

Assistant Scientist

Dept. of Plant Pathology, University of Florida

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Education

2013 Ph.D. University of Minnesota, St. Paul, MN

Co-Advisors: Dr. David McLaughlin and Dr. Imke Schmitt

2002 M.S. Iowa State University, Ames, IA

Advisor: Dr. Lois H. Tiffany

1977 B.S. College of St. Benedict, St. Joseph, MN

Research Experience

2016 to present Assistant Research Scientist, University of Florida, Gainesville, FL

2015 Post Doctoral Research University of Florida, Gainesville, FL

Supervisor: Dr. Matthew E. Smith

2013-2015 Post Doctoral Research Harvard University, Cambridge, MA

Advisor: Dr. Donald H. Pfister

2011-2012 Research Assistant University of Minnesota, St. Paul, MN

Advisor: Dr. David McLaughlin: Assembling the Fungal Tree of Life

1999-2005 Research Associate Iowa State University, Ames, IA

Advisor: Dr. Harry T. Horner

Publications

- 2021 Orihara, T, R Healy, A Corrales, ME Smith. Multi-locus phylogenies reveal three new truffle-like taxa and the traces of interspecific hybridization in *Octaviania*

- (Boletales). Submitted to *IMA Fungus*
- **2021** Castellano, MA, CD Crabtree, D Mitchell, RA Healy. Eight new *Elaphomyces* species (Elaphomycetaceae, Eurotiales, Ascomycota) from eastern North America. *Fungal Systematics and Evolution* 7:113-131.
 - **2020** Kraistudomsook N, **RA Healy**, DH Pfister, C Truong, E Nouhra, F Kuhar, AB Mujic, JM Trappe, ME Smith. Resurrecting the genus *Geomorium*: Systematic study of fungi in the genera *Underwoodia* and *Gymnohydnotrya* (Pezizales) with the description of three new South American species. *Persoonia* 44: 98-112.
 - **2019** Grupe AG II, N Kraistudomsook, **R Healy**, D Zelmanovich, C Anderson, G Guevara, J Trappe, ME Smith. A new species and a new combination of truffle-like fungi in the Geopora-Tricharina lineage from North America: *Terracavicola echinospora* gen. et. sp. nov. and *Geopora lateritia* comb. nov. *Ascomycete.org*. 11: 37-47.
 - **2019** Kraistudomsook N, **RA Healy**, AB Mujic, DH Pfister, ER Nouhra, ME Smith. Systematic study of truffles in the genus *Ruhlandiella* with the description of two new species from Patagonia. *Mycologia* 111: 477-492.
 - **2019** Nasser A, S Sarwar, AN Khalid, **R Healy**, ME Smith. *Hortiboletus kohistanensis* (Boletaceae), a new bolete species from temperate and subalpine oak forests of Pakistan. *Phytotaxa* 388: 239-246.
 - **2018** Grupe AC, MA Sulzbacher, T Grebenc, **R Healy**, G Bonito, ME Smith. *Tuber brennemanii* and *Tuber floridanum*: two new *Tuber* species are among the most commonly detected ectomycorrhizal taxa within commercial pecan (*Carya illinoensis*) orchards. *Mycologia* 110: 780-790.
 - **2018** Smith ME, S Cruz, **R Healy**, MV Caiafa, *Carolinigaster bonitoi*, Fungal Planet 825. In Crous et al. Fungal Planet Description Sheets, *Persoonia* 41: 328-329.
 - **2018** Alvarado P, **R Healy**, G Moreno, J Cabero, M Scholler, A Schneider, A Vizzini, V Kaounos, J. María Vidal, G. Hensel, E. Rubio, A. Mujic & ME Smith. Phylogenetic studies in *Genabea*, *Myrmecocystis* and related genera. *Mycologia* 110: 401-418
 - **2018** Guevara-Guerrero G, G Bonito, ME Smith, **R Healy**, AC Grupe II, E Cázares,

- MA Castellano, JM Trappe. *Tuber aztecorum* sp. nov., a truffle species from Mexico belonging to the Maculatum clade (Tuberaceae, Pezizales). *Myckeys* 30: 61-72.
- **2017 Healy R**, HT Horner, G Bonito, D McLaughlin, ME Smith. An ultrastructural study of spore wall development and septal pores in species of the *Pachyphlodes* (Pezizaceae, Pezizales) lineage with a description of the new species *Pachyphlodes anagardnerae*. *Mycological Progress* 17: 45-63. <https://doi.org/10.1007/s11557-017-1348-3>.
 - **2017 Healy R**, DH Pfister, AB Mujic, D Torres, D Nouhra, G Furci, ME Smith. *Pseudotrifarina lanigera* (Pezizales), a new species from the Patagonian region of Argentina. *Ascomycete.Org* 9: 135-138.
 - **2017 Van Vooren N**, U Lindemann, **R Healy**. Emendation of the genus *Trifarina* (Pezizales) based on phylogenetic, morphological and ecological data. *Ascomycete.Org* 9: 101-123.
 - **2017 Truong C**, AB Mujic, **R Healy**, F Kuhar, G Furci, D Torres, T Niskanen, PA Sandoval-Leiva, N Fernández, JM Escobar, A Moretto, G Palfner, D Pfister, E Nouhra, R Swenie, M Sánchez-García, PB Matheny, ME Smith. How to know the fungi: combining field inventories and DNA-barcoding to document fungal diversity. *New Phytologist* 214: 913-919. doi: 10.1111/nph.14509
 - **2017 Kumar, LM**, ME Smith, ER Nouhra, T Orihara, P Sandoval Leiva, DH Pfister, DJ McLaughlin, JM Trappe, **RA Healy**. A molecular and morphological re-examination of the generic limits of truffles in the *Tarzetta-Geopyxis* lineage – *Densocarpa*, *Hydnocystis*, and *Paurocotylis*. *Fungal Biology* 121: 264-284.
 - **2017 Bonito G**, K Hameed, M Toome-Heller, **R Healy**, C Reid, H-L Liao, MC Aime, C Schadt, R. Vilgalys. *Atractiella rhizophila* sp. nov., an endorhizal fungus isolated from the *Populus* root microbiome. *Mycologia* 109: 18-26.
 - **2016 Healy RA**, DH Pfister, AY Rossman, L Marvanová, K Hansen. Competing sexual-aseexual generic names of Pezizomycete (Pezizales) and recommendations for their use. *IMA Fungus* 7:285-288. doi: 10.5598/ima fungus. 2016.07.02.08.
 - **2016 Healy RA**, H Zurier, GM Bonito, ME Smith, DH Pfister. Mycorrhizal detection of native and non-native truffles in a historic arboretum and the discovery of a new

- North American species, *Tuber arnoldianum* sp. nov. *Mycorrhiza* 26: 781-792.
- **2016** Leicht-Young S, **R Healy**, P Del Tredici. Observation of Mycorrhizal Colonization in Roots in Natural Populations of *Celastrus orbiculatus* Thunb. *Journal of the Torrey Botanical Society*. 143: 322-324.
 - **2016** Cabero J, P Alvarado, **R Healy**, G Moreno. *Luteoamylascus aculeatus* (Pezizomycetes, Pezizaceae): a new genus and species near the *Pachyphlodes-Amylascus* lineage. *Mycological Progress* 15: 33.
 - **2016** Shao D, S Tang, **RA Healy**, PM Imerman, DE Schrunk, WK Rumbelha. A novel orellanine containing mushroom *Cortinarius armillatus*. *Toxicon* 114: 65-74.
 - **2016** McLaughlin DJ, **RA Healy**, TKA Kumar, EG McLaughlin, T Shirouzu, M Binder. Cultural and cytological characterization of a new species in the *Dacrymycetes* with a fully sequenced genome. *Mycologia*. 108: 457-468.
 - **2015** **Healy R**, C Hobart, GE Tocci, L Bóna, Z Merényi, AP Conde, ME Smith. Fun with the discomycetes: revisiting collections of Korf's anamorphic Pezizales and Thaxter's New England truffles leads to a connection between forms and the description of two new truffle species: *Pachyphlodes pfisteri* and *P. nemoralis*. *Ascomycete.org* 7 (6): 357-366.
 - **2015** McLaughlin, DJ, **RA Healy**, GJ Celio, RW Roberson, TKA Kumar. Evolution of zygomycetous spindle pole bodies: evidence from *Coemansia reversa* mitosis. *American Journal of Botany* 102: 707-717.
 - **2014** Perić, B, N Van Vooren, **RA Healy**, J Lazarević. Une *Trichophaea* rare récoltée en France et au Monténégro: *T. flavobrunnea* comb. nov. (Pezizales). *Mycol. Monten.* 17: 65-87.
 - **2013** **Healy, RA**, TKA Kumar, DA Hewitt, DJ McLaughlin. Functional and phylogenetic implications of septal pore ultrastructure in the fruiting body of *Neolecta vitellina*. *Mycologia* 105: 802-813.
 - **2013** Bonito, G, ME Smith, M Nowak, **RA Healy**, G Guevara, E Cázares, A Kinoshita, ER Nouhra, LS Domínguez, L Tedersoo, C Murat, Y Wang, BA Moreno, DH. Pfister, K Nara, A Zambonelli, JM Trappe, R Vilgalys. 2013. Historical

- biogeography and diversification of truffles in the Tuberaceae and their newly identified Southern hemisphere sister lineage. *PloS One* 8:1-15, e52765.
- **2013 Healy, RA**, ME Smith, GM Bonito, DH Pfister, Z-W Ge, GG Guevara, G Williams, K Stafford, T Lee, L Kumar, C Hobart, J Trappe, R Vilgalys, DJ McLaughlin. High diversity and widespread occurrence of asexual states in ectomycorrhizal Pezizales. *Molecular Ecology* 22:1717-1732.
 - **2013** Guevara, G, G Bonito, Trappe JM, E Cázares, G Williams, **RA Healy**, Schadt CW, R Vilgalys. New North American truffles (*Tuber* spp.) and their ectomycorrhizal associations. *Mycologia* 105:194-209.
 - **2012** Kumar, TK, **RA Healy**, JW Spatafora, M Blackwell, and DJ McLaughlin. *Orbilia* ultrastructure, character evolution and phylogeny of Pezizomycotina. *Mycologia* 104:462-476.
 - **2011** Kovács, GM, JM Trappe, AM Alsheikh, K Hansen, **RA Healy**, P Vági. *Terfezia* disappears from the North American truffle mycota as two new genera and *Mattirolomyces* species emerge. *Mycologia* 103: 831-840.
 - **2010 Healy, RA**, and G Kovács. 2010. Ultrastructural observations on the ascomata and ascospores of the truffle *Mattirolomyces terfezioides*. *Botany* 88: 85-92.
 - **2009 Healy, RA**, G Bonito, and JM Trappe. *Calongea*, a new genus of truffles in the Pezizaceae (Pezizales), *Anales del Real Jardín Botánico de Madrid* 66S1: 25-32.
 - **2009** Smith, ME and **RA Healy**. *Otidea subterranea* sp. nov.: *Otidea* goes below ground. *Mycological Research* 113: 858-866
 - **2009 Healy, RA**, RG Palmer, and HT Horner. Multicellular secretory trichome development on soybean and related *Glycine* gynoeceia. *International Journal of Plant Sciences* 170: 444-456.
 - **2009 Healy, RA**, G Bonito, and G Guevara. The Truffle genus *Pachyphloeus* in the U.S. and Mexico: phylogenetic analysis and a new species. *Mycotaxon* 107: 61-71.
 - **2007** Carter, C, **R Healy**, NM O'Tool, SMS Naqvi, G Ren, S Park, G Beattie, HT Horner, and RW Thornburg. Tobacco nectaries express a novel NADPH oxidase implicated in the defense of floral reproductive tissues against microorganisms. *Plant Physiology* 143: 389-399.

- **2007** Horner, HT, RA **Healy**, R Thornburg, G Ren, A Klyne, and C Seames. Amyloplast to chromoplast conversion in developing ornamental tobacco floral nectaries provides sugar for nectar and antioxidants for protection. *American Journal of Botany*. 94: 12-24
- **2007** Ren, G, **R Healy**, AM Klyne, HT Horner, MG James, and RW Thornburg. Transient starch metabolism in ornamental tobacco floral nectaries regulates nectar composition and release. *Plant Science* 173: 277-290.
- **2005** Horner, HT, T Cervantes-Martinez, **R Healy**, MB Reddy, BL Deardorff, TB Bailey, RL Bernard, and RG Palmer. Oxalate and phytate concentrations in seeds of soybean cultivars [*Glycine max* (L.) Merr.] *Journal of Agricultural and Food Science* 53: 7870-7877.
- **2005** **Healy, RA**, HT Horner, TB Bailey and RG Palmer. A microscopic study of trichomes on gynoecia of normal and tetraploid Clark cultivars of *Glycine max*, and seven near isogenic lines. *International Journal of Plant Science* 166: 415-425.
- **2004** **Healy, RA**, HT Horner and CR Bronson. Visual characterization of the extracellular matrix of *Cochliobolus heterostrophus* and a mutant strain with a modified matrix. *Canadian Journal of Botany* 82: 75-88.
- **2003** **Healy, R**. *Mattiolomyces tiffanyae*, a new truffle from Iowa, with ultrastructural evidence for its classification in the Pezizaceae. *Mycologia* 95: 765-772.
- **2003** Horner, HT, **RA Healy**, T Cervantes-Martinez, RG Palmer. Floral nectary fine structure and development in *Glycine max* L. (Fabaceae). *International Journal of Plant Sciences* 164: 675-690.

Other Publications

- **2019** **Healy RA**, L Leandro, LR Salamanca. Safe Mushroom Foraging. Iowa State University Extension and Outreach Bulletin PIDC48.
- **2019** Smith, ME, **RA Healy**. In Memoriam: James William Kimbrough, 1934-2017. *Mycologia*. In prep.

- **2014 Healy, RA.** The habits of truffles and other ectomycorrhizal fungi: reading tree roots for clues. *Arnoldia* 72/2.
- **2014 Healy, RA.** Fungal diversity.....hiding in plain sight. *The Mycophile* 54 (4): 11-15; *Illinois Mycological Association Newsletter*. April. 6-11.
- **2010 Healy, RA,** Richard, JL, Niyo, KA, and Klich, MA. In Memoriam: Lois Hattery Tiffany 1924-2009. *Mycologia* 102:985-988.

Book

2008 Huffman, DM, LH Tiffany, G Knaphus, and **RA Healy.** *Mushrooms and Other Fungi of the Midcontinental United States.* University of Iowa Press, Iowa City.

Book Chapter

2016 Healy, RA, Bonito, GM, and Smith, ME. A brief overview of the systematics, taxonomy, and ecology of the *Tuber rufum* clade. In Zambonelli A., Iotti M., and Murat, C. (eds.) True Truffle (*Tuber* spp.) in the World — Soil Ecology, Systematics and Biochemistry. *Soil Biology* Vol. 47: 125-136. Springer.

Teaching Experience

Assistant Scientist, University of Florida, Gainesville, FL

2016 to present Lab coordinator for PLP courses

Instructor, Harvard University, Cambridge, MA,

2014 (fall) OEB 54 (undergrad) Biology of Fungi, with laboratory

Graduate Teaching Assistant, University of Minnesota, St. Paul, MN

2010 (fall) BIOL 3007W (lab, undergrad) Plant, Algal and Fungal Diversity and Adaptation Lab

2010 (spring) BIOL 3005W (lab, undergrad) Plant Function

2009 (fall) BIOL 3007W (lab, undergrad) Plant, Algal and Fungal Diversity and Adaptation Lab

Teaching Assistant, Iowa State University, Ames, IA, graduate/undergraduate course

2007 (fall) MICRO 456 (lab) Introduction to Mycology

Guest Lecturer, Iowa State University, Ames, IA

2005 Light Microscopy (lecture, lab, grad) In Situ Hybridization.

2006 Introduction to Mycology (grad, undergrad) Ascomycetes and Basidiomycetes

2005 Introduction to Mycology (grad, undergrad) Ascomycetes and Basidiomycetes

2002 Introduction to Mycology (grad, undergrad) Ascomycetes and Basidiomycetes

2001 Economic Botany (undergrad) Economic Mycology

1999 Introduction to Mycology (grad, undergrad) Ascomycetes and Basidiomycetes

1999 Soil Microbial Ecology (grad, undergrad) Mycorrhizal fungi.

1999 Economic Botany (undergrad) Economic Mycology

1999 Field Botany (undergrad) Fungi

1998 Field Botany (undergrad) Fungi

Mentoring Experience

University of Florida

2015-2019 Trained visiting scholar Sarah Duhon (University of Iowa M Sc student) in microscopy, molecular and culturing techniques. Trained the following students in the methodology of fulfilling Koch's Postulates: Niki Barber (*Cyathus* on *Hibiscus*); Emily Tharp (*Pestalotiopsis* on Balsam), Jason Hickman (*Colletotrichum* on *Smilax*); Sarah Prentice (*Fusarium* on *Tradescantia ohioensis*). Training included media preparation, Fungal culturing and storage, host preparation, isolation of fungi from host tissue, inoculation of fungi onto a host, molecular methods for sequencing fungi in culture.

2015-2016 Trained visiting scholar Arooj Naseer (University of the Punjab, Lahore, Pakistan) to use molecular methods for sequencing sporocarps and ectomycorrhizal roots in Matthew Smith's lab. She received her Ph.D. in 2018.

Harvard University

- **2014** Valentina Rodriguez, 4th yr undergraduate. Trained to culture Orbiliomycetes (including standard media making, autoclaving, transfers, record keeping, monitoring,

- use of microscope and micrography); extract and amplify for DNA sequencing of cultures. She is now applying to Medical School.
- **2014** Hannah Zurier, 2nd yr undergraduate. Trained to harvest ectomycorrhizal roots, morphotype, microscopy, micrography, extraction, amplification, sequencing, sequence editing, and contig formation.

University of Minnesota

- **2012-2014** Mara Demers, 2nd yr to 4th yr undergraduate. Trained to culture, and to extract, amplify, sequence, edit sequences, and analyze sequences in phylogenetic programs. She is now in the Plant Sciences graduate program at the University of Minnesota.
- **2010 (summer)** Thai Lee, 4th yr. undergraduate. Taught independent course in Mycology, field collecting techniques, extraction, amplification, and sequencing of fungal fruitbodies. He now works as a research scientist for Pioneer Seed Company (Johnston, IA).
- **2009** Leticia Kumar 4th yr undergraduate. Trained in field collecting, extraction, amplification and sequencing techniques. She now works for APHIS (Beltsville, MD).

Selected Presentations

- **2019** Hickman, J, **R Healy**, MC Climent Velez, P. Soria, B.S. Richter. First report of *Colletotrichum siamense* species complex on *Smilax rotundifolia* in the Southeast United States. APS Southern Division Meeting, Gainesville, FL. Poster
- **2019** Prentice, S, **R Healy**, BS Richter. First report of *Fusarium fujikuroi* species complex causing leaf spot on Ohio spiderwort (*Tradescantia ohioensis*). APS Southern Division Meeting, Gainesville, FL. Poster
- **2018 Healy, RA**, C Truong, JM Trappe, M Castellano, A Mujic, E Nouhra, ME Smith. *Amylascus*: an ectomycorrhizal truffle genus with a southern Gondwanan distribution. International Mycological Congress Meeting IMC11, San Juan, PR. Poster

- **2017 Healy, RA**, V Rodriguez, K Lobuglio, DH Pfister. An ultrastructural study of spore bodies in Orbiliomycetes. MSA annual meeting, Athens, GA. Poster.
- **2015 Healy, RA**, ME Smith, G Bonito, DH Pfister. Anamorph-teleomorph connections in the Pezizales: new knowledge, old names, and modern concepts. The second international workshop on ascomycete systematics. Royal Netherlands Academy of Arts and Sciences, Amsterdam. Oral.
- **2015 Pfister, DH, RA Healy**. An ultrastructural study of the unique sporebodies of the Orbiliomycetes. The second international workshop on ascomycete systematics. Royal Netherlands Academy of Arts and Sciences, Amsterdam. Oral.
- **2014 Healy, RA**, Bonito GM, Smith ME, Pfister DH. Ectomycorrhizae of red oak: does management make a difference? MassMyco conference, Harvard Forest, Petersham, MA. Poster.
- **2014 Healy, RA**, Celio GJ, Kumar TKA, Roberson RW, McLaughlin DJ. Ultrastructure of mitosis and spindle pole bodies in the zygomycetous fungus *Coemansia reversa* using conventional fixation and freeze substitution. Microscopy & Microanalysis meeting, Hartford, CT. Poster.
- **2014 McLaughlin, DJ, Healy RA**, Celio GJ, Kumar TKA, Roberson RW. Does mitosis in the zygomycetous fungus *Coemansia reversa* provide evidence for fungal spindle pole body evolution? International Mycological Congress 10, Bangkok. Oral.
- **2013 Healy, RA**, Bonito GM, Smith M. Mycological Society of America/ American Pant Pathology Society joint meeting, Austin TX. Poster.
- **2013 Healy, RA**. Revisiting fungal “fuzz” on forest soil: old mysteries solved, new mysteries unearthed. Arnold Arboretum, Boston MA. Oral.
- **2013 McLaughlin, DJ, Healy RA**, Robertson RW, Kumar TKA, Celio GJ. Evolution of zygomycetous spindle pole bodies: evidence from mitosis in *Coemansia reversa*. Mycological Society of America/ American Pant Pathology Society joint meeting, Austin TX. Poster.
- **2013 Healy, RA**, Smith ME, Bonito GM. . . . 2013. Truffles and tribulations: ways to interpret a cup fungus in a truffle tree. University of Florida, Gainesville FL. Plant Pathology Seminar. Oral.

- **2011 Healy, RA**, ME Smith, G Bonito, R Vilgalys, D J McLaughlin. Phylogenetic diversity and molecular ecology of asexual spore mats in ectomycorrhizal Pezizales. Mycological Society of America Annual Meeting, Fairbanks, AK. Oral.
- **2010 Healy, RA**. Evolution and systematics of the truffle genus *Pachyphloeus*. PBS new graduate student orientation at Itasca Biological Station. Oral.
- **2010 Healy, RA**, G Bonito, G Guevara, DJ McLaughlin. Spore wall development informs interpretation of spore ornamentation and phylogeny in the truffle genus *Pachyphloeus*. Mycological Society of America Annual Meeting, Lexington, KY. Poster.
- **2009 Healy, RA**, TKA Kumar, and DJ McLaughlin. Phylogenetic implications of septal pore ultrastructure in the basal Ascomycete *Neolecta irregularis*. Mycological Society of America Annual Meeting, Snowbird, UT. Poster.
- **2007 Healy, R** and LH Tiffany. Macrofungi of Webster County, Iowa: Collections from 1917-1940 and 2000-2006, a comparison. Symposium on rare and endangered species of Iowa for the Iowa Academy of Science Annual Meeting, Pella, IA. Oral.
- **2006 Healy, R**, HT Horner, and RG Palmer. A structural view of secretory trichome development on soybean gynoecea. Annual meeting of the Botanical Society of America Annual Meeting, Chico, CA. Oral.
- **2005 Healy, RA**, HT Horner, and RG Palmer. Nectary development in Perennial *Glycine tomentella*, and annuals *G. soja* and cultivars of *G. max*: a comparative study. Botanical Society of America Annual Meeting, Austin, TX. Oral.
- **2005 Healy, RA**, HT Horner, and RG Palmer. Starch in soybean nectaries: a comparison among species and cultivars. Botanical Society of America Annual Meeting, Austin, TX. Oral.
- **2004 Healy, RA**, HT Horner, TB Bailey and RG Palmer. Trichomes on the gynoeceium of the Clark normal cultivar of *Glycine max* L. and seven near-isogenic lines plus a tetraploid: a comparative study of the relative numbers and types. Botanical Society of America Annual Meeting, Snowbird, Utah. Oral.

- **2002 Healy, R.** Family ties: the linking of a truffle to a family of cup fungi through septal pore ultrastructure. Iowa Academy of Science Annual Meeting, Des Moines, IA. Oral.
- **1999 Healy, R.** Truffles and false truffles in Iowa. Ecology and Evolutionary Biology Sixth Annual Symposium, Ames, IA. Oral.

Awards and Recognition:

- 2013** Sargent Award, Harvard University Arnold Arboretum.
- 2013** MSA Best Poster Award, Mycological Society of America Award.
- 2013** First author paper (Healy et al. 2013) selected for Perspectives piece by editors of *Molecular Ecology*.
- 2012** Doctoral Dissertation Fellowship, University of Minnesota.
- 2011** Dayton Wilkie Natural History Fund Award, University of Minnesota.
- 2010** Dayton Wilkie Natural History Fund Award, University of Minnesota.
- 2009** Graduate Student Award, Society of Systematic Biologists.
- 2009** Friends of Farlow Fellowship, Harvard University, Cambridge, MA.
- 2008** Plant Biological Sciences Fellowship, University of Minnesota, St. Paul, MN.
- 2007** Pavelek Scholarship of the North American Truffling Society, Corvallis, OR.
- 2003** Sigma Xi associate member, Iowa State University Chapter, Ames, IA.
- 1997** Premium on Academic Excellence Award, Dept. of Botany, Iowa State University, Ames, IA.

Research Support

- **2020 NSFDEB-BSF grant** (Co-PI, \$603,581), Evolution of truffles, morels, and relatives (Pezizales) and their interactions with animals, plants, and bacteria” with Gregory Bonito and Matthew Smith.
- **2016 Ordway-Swisher Biological Station Seed Grant** (Co-PI, \$48,356), “DNA barcoding the macrofungi of Ordway-Swisher: documenting biodiversity and building

- herbarium resources for the fungi of iconic north Florida ecosystems” with Matthew Smith.
- **2013-2014 Iowa Science Foundation Award**, Iowa Academy of Science \$5000
“**Barcoding Pezizales of Iowa**” with Lynn Clark.
 - **2013-2014 Sargent Award** Harvard University Arnold Arboretum \$10,000
For “Ectomycorrhizal roots of red oak in the Arnold Arboretum and Harvard Forest: a comparison” with Donald Pfister.
 - **2010, 2011 Dayton-Wilkie Natural History Fund Award** University of Minnesota \$2200.
 - **2009-2010** A Survey of truffles and false truffles in Minnesota oak woodlands and savannas from **Minnesota Department of Natural Resources** \$3500.00.
 - **2007 Iowa Natural Areas Inventory Grant**, Iowa Department of Natural Resources and Iowa Preserve Advisory Board “An inventory of the macrofungi of Brushy Creek, Liska-Stanek Prairie, and Woodman Hollow State Preserves and Dolliver State Park. \$960.00.
 - **2006 Iowa Natural Areas Inventory Grant**, Iowa Department of Natural Resources and Iowa Preserve Advisory Board for “An inventory of the macrofungi of Brushy Creek, Liska-Stanek Prairie, and Woodman Hollow State Preserves and Dolliver State Park. \$820.00.
 - **2005 Iowa Natural Areas Inventory Grant**, Iowa Department of Natural Resources and Iowa Preserve Advisory Board for “An inventory of the macrofungi of Brushy Creek, and Woodman Hollow State Preserves and Dolliver State Park. \$620.00.
 - **2003 Iowa Natural Areas Inventory Grant**, Iowa Department of Natural Resources and Iowa Preserve Advisory Board for “An inventory of the macrofungi of Fallen Rock, Hardin City Woodland, and Mann Wilderness Area Preserves and Pine Lake State Park. Iowa Department of Natural Resources for “An inventory of the macro fungi in selected Iowa State Parks and Preserves”. \$1000.00.
 - **2002 Iowa Department of Natural Resources Grant**, Des Moines, IA for “An inventory of truffles and false truffles in selected state parks and preserves in Iowa

- with a listing of previously collected macrofungi from six state preserves and two state parks”. \$2000.00.
- **1999 Iowa Science Foundation Grant** from the Iowa Academy of Science, Cedar Falls, IA for “Truffles and false truffles in Iowa”. \$3,000.00.
 - **1998 Professional Advancement Grant** Graduate Student Senate, Iowa State University, Ames, IA for “Truffles in Iowa”. \$200.00.

Profession-related Academic or Community Service

2007-Present Peer Reviewer

- *Ascomycete.org*
- *Australian Journal of Botany*
- *Fungal Systematics and Evolution*
- *Molecular Ecology*
- *MycoKeys*
- *Mycologia*
- *Mycological Progress*
- *Mycorrhiza*
- *Mycoscience*
- *Mycotaxon*
- *Persoonia*
- *Phytotaxa*
- *Truffology*

Committees

- **2017-present** North American Mycoflora Project, fungal expert registry
- **2012-13** Fungal Biology Cluster Hire Search Committee, University of Minnesota
- **2012-2013** President of Phytograds (University of Minnesota Plant Biological Science graduate student group)

- **2010-2012** Treasurer of Phytograds

Consultant for mushroom identifications and poisonings

- **2014 - present** North American Mycological Association Volunteer
Identification consultant
- **2003-2008** Iowa Statewide Poison Control Center.
- **2002-2008** Iowa State University Extension, Plant Disease Clinic, Dept. Of
Plant Pathology, Iowa State University, Ames, IA.

Events

- **2018** “Plants get sick too” Teachers Workshop. University of Florida,
Gainesville, FL.
- **2016** Plant Pathology Graduate Student Workshop. University of Florida,
Gainesville, FL.
- **2014** Mushroom Mob at the Harvard Arnold Arboretum. Boston, MA.
- **2014** Symphony of the soil at the Boston Natural History Museum:
mycorrhizal root workshop. Boston, MA.
- **2007-2012** Fungal Identification for Minnesota Mycoblitz and Bioblitzes:
Mycoblitz at Eagle Bluff Sept 21-23, 2007; Bioblitzes at Minnesota Valley
Natnl Wldlfe Center June 13-14, 2008; Crosby Park, MNRRA June 12-13,
2009; Vermillion Highlands Research, Recreation, and Wildlife Management
Area, June 12, 2010. Katharine Ordway Natural History Study Area, Inver
Grove Heights, June 10-11, 2011; Lake Vermillion State Park, Towers, June
25-26th, 2011; Cedar Creek Ecosystem Science Reserve, June 9, 2012.
- **2012-2011** Bell Museum Mushroom Walks 10-Sep-2011 Quaking Bog, Wirth
Park, Minneapolis; 25-Sep-2010 Mississippi George Regional Park,
Minneapolis.
- **2011** Bell Museum Rot-O-Rama camp, fungal section on St. Paul Campus of
University of Minnesota.
- **2010** Fungal information for U of M Mycology table (McLaughlin Lab) for
Pilobolus Event, Bell Museum of Natural History.

- **2008** Chief Mycologist for the annual meeting and foray of the Kansas State Mushroom Club, Lawrence, KS.
- **2007-2008**, 2013 Fungal identifications for Iowa Bioblitzes: Heritage Valley. Iowa Natural Heritage Association, Allamakee Co., IA; Garst Farm property. The White Rock Conservancy, Guthrie Co., IA.

Talks

- **2017** Truffles and false truffles, Florida Academic Lichen And Fungi Enthusiasts League, Gainesville, FL.
- **2015** Ectomycorrhizal fungi, Boston Mycological Society, Cambridge, MA.
- **2014** Ectomycorrhizal fungi, Friends of Fresh Pond, Cambridge, MA.
- **2011** Truffles and false truffles of the Midwestern U.S. Iowa Lakeside Laboratory and Regents Resource Center, Milford, IA.
- **2009** Truffles and false Truffles. Minnesota Mycological Society, University of Minnesota, St. Paul, MN.
- **2008** Edible Mushrooms through the Seasons. Prairie Rapids Audubon group, Dickinson County, IA.
- **2008** Edible Mushrooms through the Seasons. Master Gardener Symposium, Buchanan County, IA.
- **2008** Truffles and False Truffles. Older Wiser Livelier Seniors program of the Story County Conservation Board, Ames, IA.
- **2007** Truffles and false truffles in Iowa for North American Truffle Society meeting, Corvallis, OR.
- **2007** Edible Fungi through the Seasons, for Buchanan Co. Extension, Independence, IA.
- **2003** Truffles and false truffles in Iowa. Missouri Mycological Society Foray, Mingo National Wildlife Refuge, MO.
- **2007** “Yard Fungi” for Master Gardeners, Lake City, IA.
- **2002** Truffles and false truffles in Iowa. Older Wiser Livelier Seniors, Story County Conservation Center, Ames, IA.

- **2001** Truffles and false truffles in Iowa. North American Mycological Society Annual Meeting, Collegeville, MN.