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EDUCATION

DUKE UNIVERSITY, Durham, NC, USA. Ph.D. Botany/Genetics. Sept. 1990-Dec. 1995
Title of Ph.D. dissertation: "Evolution of lichen-forming fungi: A phylogenetic study of the *Omphalina* (Basidiomycota)/*Coccomyxa* (Chlorophyta) model system"
Supervisor: Dr. Rytas Vilgalys

UNIVERSITY OF OTTAWA, Ottawa, Ontario, Canada. August 1987-May 1990
M.Sc. in Biology. **Supervisor**: Dr. Irwin Brodo

UNIVERSITÉ LAVAL, Ste-Foy, Québec, Canada. August 1982-May 1987
B.Sc. in Agronomy; Plant and Soil Sciences.

PROFESSIONAL ACADEMIC APPOINTMENTS

July 2015–present	**PROFESSOR,** Department of Biology, Duke University, Durham, North Carolina
July 2005–June 2015	**ASSOCIATE PROFESSOR,** Department of Biology, Duke University, Durham, North Carolina
July 2001–June 2005	**ASSISTANT PROFESSOR,** Department of Biology, Duke University, Durham, North Carolina
Dec. 1996–June 2001	**ASSISTANT CURATOR (TENURE-TRACK POSITION),** Department of Botany, Field Museum of Natural History, Chicago, Illinois.
Dec. 1995–Dec. 1996	**POSTDOCTORAL RESEARCH ASSOCIATE (NIH FUNDED).** Department of Biology, Indiana University at Bloomington.
Jan.–May 1994	**JUNIOR A.W. MELLON FELLOW,** Lab. of Molecular Systematics, Smithsonian Institution**.**
Sept. 1979–Aug. 1992	**TECHNICIAN AND RESEARCH ASSISTANT,** Forest Ecology Laboratory, Laval University, Québec, Canada.

OTHER ACADEMIC APPOINTMENTS

Aug. 2011-present	**Member of the Center for Microbial Genomics and Microbiomics**, Duke University, School of Medicine. http://microbialgenomics.mgm.duke.edu/faculty
Dec. 2010–2014	**Member of the Duke Institute for Genome Sciences & Policy (IGSP).** Duke University, School of Medicine. http://www.genome.duke.edu/directory/faculty/lutzoni
2010–present	**Curator of the William Louis & Chicita F. Culberson Lichen Herbarium & Library**. Duke University Herbarium, Department of Biology, Duke University.
Sept. 2006–June 2015	**Research Associate in Botany at The Field Museum, Chicago**. By recommendation of the staff in the Department of Botany and invitation by Dr. Lance Grande, Senior Vice President and Head of Collections and Research.
2002–2019	**Faculty member of the Duke University Program in Genetics and Genomics** (UPGG)
2001–2009	**Curator of lichens,** Duke University Herbarium.

OTHER ACADEMIC APPOINTMENTS (continued)

1999–2001 **Adjunct Professor**, Dept. of Biological Sciences, University of Illinois at Chicago

Feb 1998–Feb. 2001 **Lecturer**, Committee on Evolutionary Biology, University of Chicago.

SCIENTIFIC COMMUNITY SERVICES

March 2017 **Reviewer for a proposal submitted to the Polish National Science Center, OPUS program.**

Sept. 2016-2020 **Member of the Mycological Society of America (MSA) Membership Committee**.

Sept. 2016-2017 **ex officio, Past Chair, of the Mycological Society of America (MSA) Distinctions Committee.** This committee oversees the selection of recipients of the Distinguished Mycologist Award, the William H. Weston Award for Teaching Excellence, and the Alexopoulos Prize for the most promising mycologists early in their career.

Sept. 2015-2016 **Chair of the Mycological Society of America (MSA) Distinctions Committee.** This committee oversees the selection of recipients of the Distinguished Mycologist Award, the William H. Weston Award for Teaching Excellence, and the Alexopoulos Prize for the most promising mycologists early in their career.

Feb. 20, 2016 **Participant at the second Dimensions of Biodiversity (DoB) PI meeting** at NSF, Arlington, VA.

October 2014 **Served on a DEB panel** at the National Science Foundation.

May 2013-Aug. 2014 **Member of the Scientific Committee for the 10th International Mycological Congress (IMC10)**. Member of the committee for Topic 5: Phylogenetics, Evolution and Systematics. Bangkok, Thailand.

Jan. 16, 2013 **Participant at the first Dimensions of Biodiversity (DoB) PI meeting** at NSF, Arlington, VA. The main goal was to gain a research update from various research groups and for participants to voice their view of future directions for the NSF DoB program.

October 2012 **Served on a BIO grant review panel,** for the National Science Foundation.

Aug. 30-31, 2012 **Member of the review panel of the German Research Foundation** (DFG) to evaluate a proposal to establish the German Federation for the Curation of Biological Data (GFBio) with the mandate to establish a cyberinfrastructure for all German biological collections. The day of my departure for Germany I had to cancel because of a health emergency. I still provided a written report to the DFG.

March 18-21, 2012 **Department of Energy (DOE) Joint Genome Institute (JGI) Fungal Advisory Committee Meeting** and Fungal Jamboree. Walnut Creek, California.

August 2011–2015 **Member of the Mycological Society of America (MSA) Distinctions Committee.** This committee oversees the selection of recipients of the Distinguished Mycologist Award, the William H. Weston Award for Teaching Excellence, and the Alexopoulos Prize for the most promising mycologists early in their career.

April 2011 **Expert reviewer for the German National Science Foundation** (DFG)**.** Provided an external evaluation for one grant proposal.

Jan. 2010–2013 **Member of the board of governing councilors for the International Symbiosis Society** (ISS).

Jan. 2008–2014 **External reviewer** of grant proposals submitted to the **Natural Sciences and Engineering Research Council of Canada** (NSERC).

1996–present **External reviewer for the National Science Foundation** (DEB), USA.

2009–2012 **Member of the scientific committee** for the organization of the Seventh International Association for Lichenology Symposium. January 2012, Bangkok, Thailand.

SCIENTIFIC COMMUNITY SERVICES (continued)

Oct. 13–15, 2010 **Invited participant for a workshop entitled "Cyberinfrastructure and the Dimensions in Biodiversity – Planning for success", funded by NSF.** One goal of this workshop was to gather community input to define a vision, technical requirements, procedures, and approaches for the development of cyberinfrastructure (CI) supporting integrative research in biodiversity sciences. The outcomes of the workshop were a set of recommendations for the development of further strategy with an ultimate goal of providing improved support, usability, and sustainability of CI resources to the biodiversity research community; one that is nimble, adaptable, and responsive to inevitable changes in the research and IT landscapes.

Sept. 24–26, 2010 **One of eight invited experts by the German National Science Foundation** (DFG) to participate in a workshop entitled "Academy recruiting young scientists in systematics of plants and fungi" (Nachwuchsacademie der DFG). The goal was to help 20 young systematists to prepare more competitive grant proposals that they eventually submitted to the DFG. Senkenberg Museum, Frankfurt.

May 2010 **Expert reviewer for the Israel Science Foundation.** Provided an external evaluation for one grant proposal.

2009 **Served on a DEB grant review panel,** for the National Science Foundation. Arlington, VA.

May 2009 **Expert reviewer for the Swiss National Foundation.** Provided an external evaluation for one grant proposal.

Jan.–May 2008 **Expert advisor for a Search committee for an Associate Professor/Senior Lecturer in Systematic Botany at the Department of Evolution, Genomics and Systematics, Uppsala University, Sweden**. As one of two "Expert Advisors", I had to evaluate the scientific and teaching proficiency of 19 prime candidates selected by the Recruitment Committee, and participate in the interview process and all decisional meetings.

January 2007–2010 **Consultant for the NSF funded project "processing PhylOData" (pPOD)** to develop core database technologies to enable the integration of "Assembling the Tree of Life" (AToL) information.

Sept. 2005–Aug. 2006 **Member of the "Blue Sky" committee for the Mycological Society of America** (MSA) to develop a strategic plan for the MSA; by invitation from the President of the Mycological Society of America.

2004–2006 **Member of the International Scientific Advisory Committee for the Eight International Mycological Congress** (IMC8; 2006, Australia).

Nov. 2004 **Member of the Assembling the Tree of Life (AToL) workshop steering committee**. This meeting of PIs for all current AToL projects took place at the National Science Foundation, Nov. 19-21, 2004.

May 2004 **Participant on the 2004 NSF panel for the Assembling the Tree of Life program**.

2002–2004 **Council member of the Society of Systematic Biologists**

July 2003–Aug. 2005 **Council member representing the area of Systematics and Evolution** for the Mycological Society of America.

2001–2006 **Participant in the Research Coordination Networks in Biological Sciences**: A Phylogeny for Kingdom Fungi (Deep Hyphae). Network funded by NSF.

2001–2005 **Member and Chair of the Mycological Society of America Student Awards Committee**.

2000–2004 **Treasurer of the International Association for Lichenology** executive council.

Dec. 2000 **Invited Participant at NSF for a workshop that led to the establishment of a new program at NSF** — Assembling the Tree of Life (AToL): Assembling the Tree of Life Workshop III (final report)- Developing the Technology and Infrastructure needed for Assembling the Tree of Life, University of Texas, Austin.

SCIENTIFIC COMMUNITY SERVICES (continued)

July 2000 **Invited Participant at NSF for a workshop that led to the establishment of a new program at NSF** — Assembling the Tree of Life (AToL): Assembling the Tree of Life Workshop I - Research Needs in Phylogenetics and Phyloinformatics, Yale University, New Haven, CT.

1997–2000 **Deputy Treasurer of the International Association for Lichenology** executive council.

1993 **Evaluation of a grant proposal submitted to the Austrian Science Foundation**.

UNIVERSITY-WIDE SERVICES

Oct. 2019-present I am leading an **advisory committee for the establishment of a Native American Studies program** at Duke University. We report directly to the Dean of Arts and Sciences.

Aug. 2019-present As part of the Faculty-Student Interaction committee and with the help of the chair of the Arts and Sciences Council, **I led an effort to establish a Native American Studies program at Duke**. The Dean of Arts and Sciences established an advisory committee for the establishment of this new study program at Duke. As part of this advisory committee I prepared a report for the Dean that includes a list of potential candidates.

Nov. 11, 2019 **I led a discussion about undergraduate research at duke** with the Director of Undergraduate Research Support office and a faculty in residence. About 15 students came to this evening event.

Nov. 8, 2019 **I led a discussion about undergraduate research at duke** for a HOPE dinner organized by a student resident.

Nov. 2 & 3, 2019 **Leader for two workshops on how to find and join a research lab at Duke.** A record high of 226 students RSVP for this fall semester. A total of 115 students attended these two workshops, 57 students attended the workshop on Nov. 2 and 58 students attended the workshop on Nov. 3. This is a 44% increase over last year.

Nov. 1 2019-present **Member of the Teaching for Equity Fellowship Alumni Board**, Duke University.

Oct. 10, 2019 **Invited speaker and panelist** at the Duke Arts & Sciences Council on advising Duke Native American students.

Sept. 2019 **Undergraduate Research Support Office**, I contributed to the "Getting Started in Research" event on East campus (White Hall).

Feb. - May 2019 **Member of the Native Student Advisory Board**. Center for Multicultural Affairs, Duke University.

Feb. 2019-present **Member of the Committee on Faculty-Student Interaction**. By invitation from the Chair of the Arts and Sciences Council, Duke University.

Nov. 3 & 4, 2018 **Leader for two workshops on how to find and join a research lab at Duke** (80 undergraduate students attended these two workshops). This workshop is continuing to gain popularity among undergraduate students. This is because undergraduate student Manish Kumar '20 from Duke Student Government helped promote the workshop to Duke's student body, through classes, listserv's, and other forms of media. His post-workshop survey has been very helpful to better serve the undergraduate population at Duke. Dr. Sarah Russell (Director of the Undergraduate Research Support office) attended one of the workshop and advertised this workshop through the website of her office. For the first time we introduced students to Scholars@duke as a powerful tool to find potential research labs at Duke. This was done with the help of Julia Trimmer (Office of the Provost Finance and Administration) who introduced me to this interactive query system and who participated in one of the two workshops this semester.

Oct. 2018-present **Faculty Advisor for Alpha Pi Omega**, the first Native American Sorority at Duke University (by invitation).

UNIVERSITY-WIDE SERVICES (continued)

Oct. 16, 2018 **Leader for the Workshop "How to find and join a research lab at Duke"** (25 undergraduate students attended this workshop). This was presented to the students of the Focus cluster "Genetics and Genomics".

Oct. 12, 2018 **Participant in the Duke Service-Learning Context and Connections event**. This is an immersive encounter with Durham for Duke faculty members interested in deepening their own knowledge of and connections to the Durham community, and in exploring connections with their teaching, research, and service.

Sept. 18, 2018 **Undergraduate Research Support Office**, contributed to the "Getting Started in Research" event.

March 30, 2018 **AB Duke Faculty Panelist**. Interviewed four prospective students that were selected as finalist candidates for the AB Duke Scholarship (one afternoon).

Feb. 24 & 25 2018 **Leader for two workshops on how to find and join a research lab at Duke** (49 undergraduate students attended these two workshops). This workshop is gaining popularity among undergraduate students. This spring semester we doubled the attendance because undergraduate students Manish Kumar '20 and Jake Satisky '21 from Duke Student Government helped promote the workshop to Duke's student body, through classes, listserv's, and other forms of media. In addition, they collected a post-workshop survey, and the results will be used to see how to increase outreach even more in the future. Also Dr. Sarah Russell (Director of the Undergraduate Research Support office) attended one of the workshop.

Jan. 30, 2018 **Invited panelist** for Teaching for Equity: Lessons Learned and Creating Classroom Change. Part of the Teaching for Equity Fellow program, Duke University.

Fall 2017 **Leader for two workshops on how to find and join a research lab at Duke** (24 undergraduate students attended these two workshops)

Spring 2017 **Leader for two workshops on how to find and join a research lab at Duke** (26 undergraduate students attended these two workshops)

Oct. 2015–May 2016 **Participant in the Teaching for Racial Justice program**. Duke University.

May 2014– Feb.2015 **Member of the Diversity Task Force Subcommittee 4** – Assessing Diversity in the Duke Faculty: Patterns and Profiles.

Aug. 2012–present **Academic Advisor for non-declared major students through the Initiative for Maximizing Student Diversity (IMSD; R25) at Duke University**. I have been advising three students for 2012-2013 and took an additional three students every subsequent years, except in 2017 when I took five additional students, all Native Americans.

Nov. 2010–May 2011 **Member of the Digital Futures Task Force at Duke University**, a group charged by Provost Lange in 2009 to explore issues related to the evolution of new models for use, management, dissemination, and preservation of digital information, and to develop strategic plans for supporting these at Duke University. By invitation of Paolo Mangiafico (Director of Digital Information Strategy, Provost's Office), and Molly Tamarkin (Associate University Librarian for Information Technology, Duke University Libraries).

Sept. 2008–2013 **Member of the Research Computing Advisory Council (RCAC)** responsible for the governance of the Research Computing Centers (RCC) at Duke University.

Sept. 2009–Feb. 2010 **Member of the Performance Review Committee** of Deborah Jakubs as the *Rita DiGiallonardo Holloway University Librarian & Vice Provost for Library Affairs.* **Duke University**. By invitation from the Provost, Peter Lange.

Sept. 2007–May 2008 **Member of the Research Computing Faculty Advisory Group** (RCFAG). By invitation from the Vice Provost for Research, Jim Siedow, and Assistant Vice President for Academic Services & Technology Support, Julian Lombardi.

UNIVERSITY-WIDE SERVICES (continued)

Sept.2006–Aug.2009 **Member of the Library Council, Duke University**. By invitation from the Provost, Peter Lange.

2005 I prepared and submitted a proposal to the NSF DGE, Integrative Graduate Education and Research Training Program, IGERT-Preproposal; IGERT Program in Symbiotic Systems. **PI with Fred Dietrich, William Morris, John Harer, and Richard Barber as Co–PIs**. **We were not invited to submit a full proposal.** This proposal included three different schools (Arts and Sciences, Medical school and NSOE) in an effort to offer a multidisciplinary training to graduate students interested in studying symbiotic systems.

Oct. 2004 **Point person for the Dept. of Biology for the external review of Arts & Sciences Information Science and Technology (A&SIST) at Duke University**. In preparation for this review, I prepared a report for the Chair of Biology (Dr. Philip Benfey) and the Administration of Duke University (Dr. John Harer).

Feb. 15, 2003 **Invited speaker for the 2003 University Program in Genetics and Genomics (UPGG) recruitment of prospective students**.

2002–2005 **Representative of the science faculty on the Arts & Sciences Computing Committee** (ASCC), Duke University.

2002 **Invited Panelist for the 7th Annual Ph.D. Career Symposium** "Weighing your options: Research in and outside the academy". Sponsored by Duke University Graduate School, and Career Center.

June 1999–June 2000 **Liaison person** for University of Illinois, Chicago/Field Museum teaching and graduate training activities.

1997–1998 **Head of Pritzker lab of Molecular Systematics and Evolution** at the Field Museum.

DEPARTMENT OF BIOLOGY SERVICES

2019-2020 **Member of the Curriculum Assessment Committee**.

2018-2019 **Member of the Diversity Committee**.

2017-2018 **Member of the Diversity Committee**.

2016 **Chair of the departmental retreat committee**. Duke Marine Lab for the entire Department of Biology; fall of 2016.

2015-2017 **Member of the Performance Review Committee.** Department of Biology, Duke University.

Fall 2014 **Member of the Holiday Party Committee**.

2013-2014 **Member of the departmental seminar committee with Dr. Katia Koelle**.

2012-2013 **Member of the departmental retreat committee with Dr. Sherryl Broverman**. We were responsible for organizing a retreat at the Duke Marine Lab for the entire Department of Biology, which took place in the fall of 2013.

Summer 2011 **Member of the search committee** for hiring a lab administrator for the course General Microbiology (BIO 103L).

Spring 2011 **Chair of the Faculty Review Committee** for the reappointment of Alison Hill as Lecturer; with Drs. Mark Rausher and Tai-ping Sun as committee members.

Summer 2010 **Member of the search committee** for hiring a lab administrator for the course General Microbiology (BIO 103L).

Jan. 2008–2010 **Member of the Performance Review Committee.** Department of Biology, Duke University. Evaluation of each faculty member's performance based on their annual report.

Oct. 2008 **Member of the search committee for hiring a Unix Systems Administrator** in the Department of Biology, Duke University.

DEPARTMENT OF BIOLOGY SERVICES (continued)

Sept. 2004–2006 **Member of the Department of Biology Computer Committee, Duke University**.

Sept. 2004–Aug. 05 **Co-chair of the Research Support Infrastructure Steering Committee**. Department of Biology, Duke University.

April 2004 **Reviewer for the 2004 Biology one-semester fellowship**, Duke University.

2002–present **Duke University Academic Advisor** for biology major undergraduate students.

2002–present **Duke University Faculty Reader** for Graduation with Distinction in Biology.

Dec. 2002–Aug. 2003 Member of the **Dept. of Biology Shared Equipment Allocation** Committee, Duke University.

Dec. 2002 **Member of search committee for a tenure-track position in the Dept. of Biology at Duke University** for a computational biologist/bioinformatician. This search led to the hiring of Dr. Paul Magwene.

EDITORSHIPS

2019-present Associate Editor for the journal IMA FUNGUS, International Mycological Association.

2017–present Founding Editorial Board member of the new journal Plant and Fungal Systematics

2014, 2016 Invited Editor, Proceedings of the National Academy of Science USA (PNAS)

2010–2015 Member of Board of Reviewers, PLoS Currents: Tree of Life

2003–present Associate Editor, Molecular Phylogenetics and Evolution

2004, 2009–2014 Associate Editor, Mycologia

2003–2008 Member of Editorial Board, International Journal of Plant Sciences

2001–2006 Associate Editor, Systematic Biology

1999–2002 Associate Editor, Canadian Journal of Botany

1999–2000 Member of Editorial Board, Systematic Biology

1998–2003 Member of Editorial Board, Molecular Phylogenetics and Evolution

REVIEWER FOR:

American Journal of Botany, Biotechniques, BMC Evolutionary Biology, Canadian Journal of Botany, Cladistics, Environmental Microbiology and Environmental Microbiology Reports, Fungal Genetics and Biology, Genetics, Journal of Phycology, ISME, Molecular Biology and Evolution, Molecular Ecology, Molecular Phylogenetics and Evolution, Mycologia, Mycological Progress, Mycological Research, Nature, Nature Communications, Nature Reviews Microbiology, New Phytologist, Persoonia, PLoS Currents: Tree of Life, PNAS, Protoplasma, Science, Symbiosis, Systematic Biology, The Bryologist, The Lichenologist, Trends in Ecology and Evolution.

SYMPOSIA ORGANIZATION

Aug. 2020 Co-organized a symposium entitled "Macroevolution of Lichens" for the Ninth International Association for Lichenology Symposium (IAL9), Bonito, Brazil. Co-convened with Dr. Pradeep Kumar Divakar.

July 2017 Co-organized a symposium entitled "Evolution of Land Plants and their interactions with the environment" for the International Botanical Congress (IBC-2017), Shenzhen, China. Co-organized with Dr. Yin-Long Qiu (University of Michigan, USA).

Aug. 2016 Co-organized a symposium entitled "Dimensions of fungal biodiversity: mycology at the interface of genetic, phylogenetic, and functional diversity" for the annual meeting of the Mycological Society of America (MSA), Berkeley, California. Co-organized with Dr. Betsy Arnold.

SYMPOSIA ORGANIZATION (continued)

Aug. 2016 Organized a congress symposium entitled "Evolution of Lichen Symbiosis" for the Eight International Association for Lichenology Symposium (IAL8), Helsinki, Finland. Co-convened with Dr. Francesco Dal Grande.

April 2015 Organized and chaired a special session entitled "Integrating unknown fungi into the tree of life: a perspective from endophytes". Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015.

Nov. 2014 Organized a congress symposium entitled "Advancements in the study of lichen symbiosis in Latin America" for the VIII Congreso Latinoamericano de Micología, Medellín, Colombia. Co-convened with Drs. Jesus Hernandez and Reinaldo Vargas.

Aug. 2014 Organized a congress symposium entitled "Evolution, ecology and genetics of specificity in fungal symbioses" for the tenth International Mycological Congress (IMC10), Bangkok, Thailand. Co-convened with Dr. Keisha Findley.

July 2012 Organized a congress symposium entitled "Interdisciplinary approaches to symbiotic inquiry: Revealing earth biodiversity" for the Seventh International Symbiosis Society Congress, Krakow, Poland. Co-convened with Dr. Betsy Arnold.

Jan. 2012 Organized a congress symposium entitled "Exploring the lichen microbiome and its multifaceted interactions" for the Seventh International Association for Lichenology Symposium (IAL7), Bangkok, Thailand. Co-convened with Dr. Martin Grube.

2011 Organized a congress symposium entitled "Mechanisms of fungal–plant interactions: Perspectives from the interface of ecology, evolutionary biology, and genomics" for the annual meeting of the Mycological Society of America, Fairbanks, Alaska. Co-convened with Dr. Betsy Arnold.

2010 Organized a congress symposium entitled "Origin and co–evolution of lichen and mycorrhizal fungi with plants" for the Ninth International Mycological Congress (IMC9), Edinburgh, UK. Co-convened with Dr. Brandon Matheny.

2006 Organized a congress symposium entitled "Lichen symbiosis: Extraterrestrial life, evolution and penguin rookery" for the Eight International Mycological Congress (IMC8), Cairns, Australia.

2004 Organized a discussion session/symposium entitled "Phylogenetic methods: Assembling the lichen tree of life". The Fifth International Association for Lichenology Congress (IAL5). University of Tartu, Estonia.

2000 Organized a symposium entitled "How to detect ancient asexual fungal lineages and recombination?" Annual meeting of the Mycological Society of America, University of Vermont, USA.

1999 Organized a General Symposium entitled "Recent advances in lichenology: Molecular approaches to solving issues related to species complex, conservation genetics, and the evolution of life history features". XVI International Botanical Congress, Saint Louis, MS, USA. Co-convened with Dr. Ana Crespo.

1998 Organized a congress symposium on "Molecular Genetic approaches to the Study of Lichen Symbiosis". Sixth International Mycological Congress, Israel. Co-convened with Dr. Daniele Armaleo.

1997 Organized a symposium entitled "Bridging the Gap between Phylogeny and the Classification of Lichen-Forming Ascomycetes" for ABLS, at AIBS, Montreal, Canada.

1997 Organized a four-day field trip for lichenologists for ABLS, at AIBS, Montreal, Canada.

1996 Organized a contributed symposium on "Lichen Symbiosis Studies using Model Systems". Third congress of the International Association for Lichenology, Austria. Co-convened with Dr. Daniele Armaleo.

PAST AND CURRENT PROFESSIONAL AFFILIATIONS

– American Association for the Advancement of Science – American Bryological and Lichenological Society – American Society of Plant Taxonomists – Botanical Society of America – British Lichen Society –

Canadian Botanical Association – International Association for Lichenology – International Symbiosis Society –Mycological Society of America – Sigma Xi – Society for Molecular Biology and Evolution – Society for the Study of Evolution – Society of Systematic Biologists.

AWARDS

2018 **SENIOR HONOR AWARD, from Duke University student Class of 2018**. Awarded by a senior student in celebration of a person at Duke who had a special impact on their Duke experience.

2017 **SENIOR HONOR AWARD, from Duke University student Class of 2017**. Awarded by a senior student in celebration of a person at Duke who had a special impact on their Duke experience.

2016 **MYCOLOGICAL SOCIETY OF AMERICA FELLOW**. Awarded to outstanding mid-career mycologists based on their contributions to research, teaching and service to the society.

2011 **NOMINATED FOR THE 2011 OUTSTANDING POSTDOC MENTOR AT DUKE UNIVERSITY AWARD.**

2010 **NOMINATED FOR THE 2010 OUTSTANDING POSTDOC MENTOR AT DUKE UNIVERSITY AWARD.**

2005 **MYCOLOGICAL SOCIETY OF AMERICA C. J. ALEXOPOULOS AWARD.** Awarded annually to an outstanding mycologist early in their career. The nominees are evaluated primarily on the basis of quality, originality, and quantity of their published work. Officially received the award at the annual meeting of the MSA in Hilo, Hawaii.

2000 **GEORGE R. COOLEY AWARD** for best contributed paper in plant systematics. Awarded by the American Society of Plant Taxonomist at the Botany 2000 meeting, Portland, Oregon. First authorship required; graduate students or those within 5 years of finishing their Ph.D. are eligible.

1996 **TWELFTH ANNUAL PERRY PRIZE, DEPARTMENT OF BOTANY, DUKE UNIVERSITY**. This award is given to a graduating Ph.D. student in recognition of an outstanding dissertation as determined by vote of the faculty members.

1993 **MYCOLOGICAL SOCIETY OF AMERICA GRADUATE AWARD**. Awarded annually to two promising graduate students in mycology. Applicants are evaluated on the basis of their scholastic merit, research ability, and promise shown as a mycologist.

1989 **A. J. SHARP AWARD.** For the best student paper in the Bryological and Lichenological Section at the annual meeting of the Botanical Society of America. Paper presented at the AIBS congress held at the University of Toronto.

1989 **LIONEL CINQ–MARS AWARD.** For the best student paper presented at the annual meeting of the Canadian Botanical Association. Paper presented at the AIBS congress held at the University of Toronto.

GRANTS

2019 $413,082 (September 1, 2019 – August 31, 2022). NSF, DEB – Population & Community Ecology, Systematics & Biodiversity Sciences; BEE: Spatio-temporal factors shaping symbiotic networks: a case study with cyanolichens. **PI with Jolanta Miadlikowska as Co-PI**.

2017 $19,517 (May 1, 2017 – April 30, 2019). NSF Doctoral Dissertation Improvement Grant, DEB – Population and Community Ecology; DISSERTATION RESEARCH: Assessing the importance of trophic lability for fungal endophytism using the moss *Dicranum scoparium* and its associated fungi. **PI with Ko-Hsuan Chen as Co–PI.**

2016 $2,453 (Jan. 5, 2016) Supplement to NSF DEB–Dimensions of Biodiversity; Dimensions: Collaborative Research: An interdisciplinary study of hyperdiverse endophytic fungi and their function in boreal forests. This supplement was obtained to attend the second Dimensions of Biodiversity PI meeting at NSF. **Sole PI for Duke University**.

2015 $149,943 (Feb. 1, 2016 - Jan. 31, 2018). NSF, DEB – Phylogenetic systematics; SG: Combining phylogenetic and network analyses for the study of symbiotic systems: a case study using lichens. **PI, with Jolanta Miadlikowska as Co–PI.**

GRANTS (continued)

2015 $735,285 of a total of $2,489,809 (Jan. 1, 2016 - Dec. 31, 2020). NSF GoLife; Collaborative Research: Filling the largest void of the fungal genealogy of life (the Pezizomycotina) and integrating symbiotic, environmental and physiological data layers. **Lead PI, with Jolanta Miadlikowska as Co–PI, in collaboration with PI Betsy Arnold (University of Arizona, Tucson), PI Ignazio Carbone (North Carolina State University), PI Erik Hom (University of Mississippi) and PI Louise Lewis (University of Connecticut)**.

2013 $502 (Jan. 16, 2013). Supplement to NSF DEB–Dimensions of Biodiversity; Dimensions: Collaborative Research: An interdisciplinary study of hyperdiverse endophytic fungi and their function in boreal forests. This supplement was obtained to attend the first Dimensions of Biodiversity PI meeting at NSF. **Sole PI for Duke University**.

2013 $20,357 (May 1, 2013 – April 30, 2015). NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology and Biodiversity Inventories Cluster; DISSERTATION RESEARCH: Early Evolution of Fungi and the Transition to a Terrestrial Lifestyle: Marine Habitats, the New Frontier. **PI with Kathryn Picard as Co–PI.**

2013 $6,250 (Jan. 1, 2013 – August 31, 2013). REU supplement (for Duke undergraduate student Anh Huynh) to NSF grant DEB–Systematic Biology and Biodiversity Inventory REVSYS: Phylogenetic revision of the lichen-forming genus *Peltigera* (Ascomycota): Disentangling cryptic speciation, phenotypic plasticity, and hybridization. **Co–PI, with Jolanta Miadlikowska as PI**.

2012 $20,399 (July 1, 2012 – Dec. 31, 2013). Subcontract from an EPSCoR First Award, State of Nebraska, to Dr. Dawn Simon. Evolution of rRNA introns in fungi. **Sole PI on the subcontract**.

2011 $292,066 of a total of $4.2 millions (July 1, 2011 – June 30, 2016). NSF EF – CROSS–EF ACTIVITIES Advancing Digitization of Biological Collections (ADBC); Digitization TCN: Collaborative Research: North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change. **PI with Jonathan Shaw as Co–PI**.

2010 $786,195 of a total of $2,995,154 (January 1, 2011 – December 31, 2016). NSF DEB–Dimensions of Biodiversity; Dimensions: Collaborative Research: An interdisciplinary study of hyperdiverse endophytic fungi and their function in boreal forests. **Sole PI for Duke University, in collaboration with PI Betsy Arnold (University of Arizona, Tucson), PI Georgiana May (University of Minnesota, Twin Cities) and PI Ignazio Carbone (North Carolina State University, Raleigh)**.

2010 $405,478 (September 1, 2010 – August 31, 2015). NSF DEB–Systematic Biology and Biodiversity Inventory; REVSYS: Phylogenetic revision of the lichen-forming genus *Peltigera* (Ascomycota): Disentangling cryptic speciation, phenotypic plasticity, and hybridization. **Co–PI, with Jolanta Miadlikowska as PI**.

2010 $9,546 (May 15, 2010 – May 14, 2012). NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology and Biodiversity Inventories Cluster; DISSERTATION RESEARCH: A phylogenetic characterization of the lichen microbiome. **PI with Brendan Hodkinson as Co–PI.**

2010 $5,965 (May 1, 2010 – August 15, 2010). REU supplement (for Duke undergraduate student Stephanie Villagra) to NSF grant DEB–Systematic Biology and Biodiversity Inventory; A multilocus phylogenetic study of the Teloschistales (Ascomycota) and the evolution of symbiotic systems. **Sole PI**.

2010 $359,535 (Jan. 1, 2010 – Dec. 31, 2013). Subcontract as part of the Pacific Northwest National Laboratory's (PNNL) foundational scientific focus area (FSFA) under DOE–BER's genomic sciences program; Co–evolved autotroph–heterotroph associations (AHAs): Lichens and their roles in biological soil crusts. **PI with Daniele Armaleo and Fred Dietrich as Co–PIs.**

2009 $13,276 (July 27, 2009 – July 26, 2012). RET supplement (for Mark Green, (teacher at the Dept. of Natural Sciences, Horry–Georgetown Technical College, Conway, SC) to NSF Assembling the Tree of Life; Collaborative Research: AFTOL – resolving the evolutionary history of the Fungi. **Sole PI.**

GRANTS (continued)

2009 $389,467 (July 1, 2009 – June 30, 2013). NSF DEB–Systematic Biology and Biodiversity Inventory; A multilocus phylogenetic study of the Teloschistales (Ascomycota) and the evolution of symbiotic systems. **Sole PI.**

2007 $950,520 of a total of $3,000,000 (Oct. 1, 2007 – Aug. 31, 2012. NSF Assembling the Tree of Life; Collaborative Research: AFTOL – resolving the evolutionary history of the Fungi. **PI with J. Miadlikowska and R. Vilgalys as Co–PIs.**

2007 $321,611 of a total of $475,000 awarded for this collaborative project with Anne E. Arnold (University of Arizona at Tucson) (April 1, 2007 – March 31, 2010). National Science Foundation, Systematic Biology and Biodiversity Inventory, Collaborative Research: Hyperdiverse endolichenic and endophytic fungi: A large–scale, multi–gene phylogenetic survey and estimation of trophic transition networks. **Sole PI for the Duke University component of this collaborative project.**

2005 $10,662 (July 1, 2005 – June 30, 2007). NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology; DISSERTATION RESEARCH: Molecular phylogeny of Verrucariales (Fungi, Ascomycota) and the evolution of nutritional modes. **PI with Cécile Gueidan as CO–PI.**

2003 $11,816 (June 1, 2003 – May 31, 2005). NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology; DISSERTATION RESEARCH:Phylogenetics of *Nostoc* and the evolution of specificity and selectivity in cyanolichen symbioses. **PI with Heath O'Brien as CO–PI.**

2003 $1,115,544 out of a total of $2,648,328 awarded for this collaborative project with D. Hibbett (Clark University), D. McLaughlin (University of Minnesota) and J. Spatafora (Oregon State University) (Jan. 1, 2003 – June 31, 2007). National Science Foundation, Systematic Biology / Assembling the Tree of Life, Collaborative Project: Assembling the Fungal Tree of Life. **PI with R. Vilgalys as CO–PI.**

2002 $680,000 (Feb. 1, 2002 – Jan. 31, 2007). National Science Foundation, Systematic Biology, CAREER: Using multigene phylogenies to solve early ascomycete relationships and reconstruct the origin and losses of the lichen symbiosis. **Sole PI.**

2002 $399,780 (Feb. 21, 2002 – Feb. 20, 2005). National Science Foundation, MCB–Microbial Genetics; Testing the reverse–splicing model of intron spread with rDNA genes. **CO–PI with D. Bhattacharya as PI and Gutell (CO–PI).**

2001 $10,191 (June 1, 2001 – May 31, 2004). NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology; DISSERTATION RESEARCH: Phylogeny, reconstruction of ancestral states and divergence times of the lichen-forming fungi Acarosporaceae and *Acarospora*. **PI with Valérie Reeb as Co-PI.**

2001 $10,000 (June 1, 2001 – May 31, 2003) NSF Doctoral Dissertation Improvement Grant, DEB – Systematic Biology; DISSERTATION RESEARCH: Evolutionary history of reproductive systems in closely related taxa of the genus *Porpidia* (Ascomycota). **PI with Jutta Buschbom as Co-PI, transferred to Greg Mueller when I moved to Duke University.**

2000 $800 (1 year). Travel Grant, Polish Academy of Science (PAN), International agreement on scientific and technical collaboration between PAN and NSF; Coevolution of symbiotic associations within peltigerous lichens (Peltigerineae, Ascomycota). **Jolanta Miadlikowska's visit to my lab.**

2000 $21,500 (1 year) Swiss National Science Foundation (SNF); Investigation of mechanisms involved in accelerated evolution: a population genetic approach using the *Omphalina* (Basidiomycetes) model system. **Stefan Zoller's Postdoctoral Research in my lab.**

1999 $43,946 (January 1999 – March 2001) National Science Foundation, International Program, Eastern Europe division, Supplement to my DEB–9615542 grant; Consequences of mutualism (lichenization) on the phylogeny and diversification of ascomycetes. **Sole PI**.

1999 $16.400 (1999–2000) The Kosciuszko Foundation (An American Center for Polish Culture, New York – Warsaw); Tri–membered symbiotic associations as a key innovation for the radiation of the Peltigerales (lichen-forming Ascomycota. **Jolanta Miadlikowska's Postdoctoral Research in my lab.**

GRANTS (continued)

1998 $188,845 (July 1998 – June 2001) National Science Foundation, Major Research Instrumentation Program, DBI–9871374; Acquisition of a High–Capacity Multiprocessor Computer Server Cluster for Phylogenetic Analysis of DNA Sequence Data in Biological Research. **CO–PI.**

1997 $160,000 (March 1997–March 2001) National Science Foundation, Systematic Biology, DEB–9615542; Consequences of mutualism (lichenization) on the phylogeny and diversification of ascomycetes. **Sole PI**.

1997 $2,500 Gdansk University Grant BW 1100/5/02607; Large subunit nuclear ribosomal DNA variation in populations and species of the lichen genus *Peltigera* (Ascomycota, Peltigerales). **Jolanta Miadlikowska's visit to my lab.**

1996 $705,365 (1995–2001) National Science Foundation, Systematic Biology: Partnerships for Enhancing Expertise in Taxonomy (PEET), DEB–9521926; Studies in the Lasiosphaeriaceae. Monographs of two key genera and family–level phylogeny (fungi, ascomycetes, Sordariales). **Senior associate.**

1994 $10,000 (Feb. 1994–July 1996) National Science Foundation Dissertation Improvement Grant. Phylogeny in the genus *Omphalina* (Basidiomycota, Agaricales) and the evolutionary consequences of mutualism. **CO–PI.**

1988 $7,400 (1988–1990) Natural Sciences and Engineering Research Council of Canada. Biosystematics of the *Ionaspis–Hymenelia* complex (lichenized ascomycotina) in North America: A study at the generic level. **CO–PI.**

1988 $3,456 (July–August 1988) Northern Research Group, University of Ottawa, Ontario, Canada. Biosystematics of the *Ionaspis–Hymenelia* complex (lichenized ascomycotina) in North America: A study at the generic level. **Main PI.**

1988 $4,500 (July 1988) Polar Continental Shelf Project (PCSP), Government of Canada. Biosystematics of the *Ionaspis–Hymenelia* complex (lichenized ascomycotina) in North America: A study at the generic level. **CO–PI.**

INTERNSHIPS: GRADUATE STUDENTS AND VISITING SCIENTISTS IN THE LUTZONI LAB

2019 Edyta Mazur, Ph.D. student, W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, Poland. Visit of three months to sequence multiple loci for a phylogenetic revision of the genus *Lecanora* with an emphasis on Bolivian species.

2018 Carlos Pardo, undergraduate student, Universidad de Los Andes, Bogota, Colombia. Visit of three months to continue is work on *Peltigera* that he conducted in my lab during 2016.

2014-2015 Jes Coyle, Ph.D. student, University of North Carolina at Chapel Hill. I am on Jes' doctoral advisory committee. She was awarded an NSF Doctoral Dissertation Improvement Grant. She has been conducting the wet lab molecular portion of this project in my lab.

2014 Geir Hestmark, Professor of Biology (University of Oslo, Norway), returned to our lab during the Fall for a period of three months to pursue a collaborative project on the evolutionary ecology of the lichen-forming fungus *Umbilicaria* and its photobiont.

2013-2014 Dongling Niu, Researcher, Life Science School, Ningxia University, Yinchuan, China. Spent one year in the Lutzoni lab as a visiting scholar to learn molecular lab techniques and phylogenetic methods. She contributed to the REVSYS *Peltigera* project.

2012 Edgar Medina (Ph.D. student) University Program in Genetics and Genomics, Duke University. Did a one-semester rotation in my lab during his first year as a graduate student at Duke (Fall 2012). As part of his rotation in my lab he contributed to the characterization of mating loci for multiple species of the genus *Xanthomendoza*.

2012 Michael Gajdeczka (Ph.D. student) University Program in Genetics and Genomics, Duke University. Did a one-semester rotation in my lab during his first year as a graduate student at Duke (Summer 2012). As part of his rotation in my lab he contributed to the development of new intergenic markers using a comparative genomic approach in collaboration with the Joint Genome Institute (JGI) and the REVSYS project on *Peltigera*.

INTERNSHIPS: GRADUATE STUDENTS AND VISITING SCIENTISTS IN THE LUTZONI LAB (continued)

2012 Nicolas Magain (Ph.D. student at the University of Liège, Belgium) spent most of 2012 in my lab to learn phylogenetic methods and to conduct collaborative research for our REVSYS grant focusing on a taxonomic revision of the genus *Peltigera*. He joined us on the South America field trip and he is taking the lead for the revision of the *Peltigera neopolydactyla* species complex.

2012 Ko-Hsuan Chen (Ph.D. student) Department of Biology, Duke University. Did a one-semester rotation in my lab during her first year as a graduate student at Duke (Spring 2012). As part of her rotation in my lab she contributed to the Dimension of Biodiversity project, for which she sequenced two new loci to improve the efficiency of establishing phylogenetic relationships of the hyperdiverse endolichenic and endophytic fungi. Ko-Hsuan decided to join my lab after this research experience in my lab.

2011 Geir Hestmark, Professor of Biology (University of Oslo, Norway), returned to our lab during the Fall for a period of six weeks to initiate a new collaborative project.

2011 Nicolas Magain (Ph.D. student at the University of Liège, Belgium) will spend the entire Fall semester in my lab to learn phylogenetic methods and to conduct collaborative research for our REVSYS grant focusing on a taxonomic revision of the genus *Peltigera*. Nicolas will be responsible for one of the three species complexes targeted by this grant.

2011 Romina Orietta Gazis (Ph.D. student at the University of Maryland, College Park under the supervision of Dr. Priscila Chaverri) visited my lab for three months (February–April) to sequence multiple genes of putative endophytic fungi isolated from sapwood of wild rubber trees in Peru, that surprisingly seem to belong to the Lecanoromycetes based on ITS. She came to my lab to refine the phylogenetic placement of these unusual strains. She also conducted in vitro culture of these strains with typical alga found in lichens to characterize phenotypically their interaction. This visit was part of a collaboration on the recently NSF funded Dimensions of Biodiversity project (EnDoBiodiversity.org) and led to the discovery of a new class of fungi. A publication in the journal Molecular Phylogenetics and Evolution resulted from this visit.

2010–2011 Laryssa Baldridge (Ph.D. student) University Program in Genetics and Genomics, Duke University. Did two back–to–back rotations in my lab during the first year of her Ph.D.

2010 Dr. Sophie Plouvier (Postodoctoral Research Associate with Dr. Cliff Cunningham [Biology] and Dr. Cindy Van Dover [Marine Lab] at Duke University) visited my lab a few times (short visits) in 2010 to solve technical issues in isolating high quality DNA from deep–sea invertebrates for DNA sequencing. She is conducting her postdoc at the Duke Marine Lab.

2009–2011 Mark Green (teacher at the Dept. of Natural Sciences, Horry–Georgetown Technical College, Conway, SC) is pursuing a Ph.D. at the Tennessee Technological University, Cookeville, TN. My lab obtained an RET supplement from the AFTOL2, NSF grant to train Mark to conduct molecular phylogenetic research on lichens for his Ph.D.

2009–2010 Dr. Starri Heiðmarsson (Icelandic Institute of Natural History, Iceland), spent a one-year sabbatical in my lab to pursue his research on the systematic biology of the lichen-forming Verrucariaceae, Eurotiomycetes.

2009 Geir Hestmark, Professor of Biology (University of Oslo, Norway), spent one month in my lab to finalize a manuscript on the speciation of lichen-forming species *Umbilicaria* in the Andes and continue working on a long–term phylogenetic project on the Umbilicariales.

2009 Samantha Fernandez Brime, Ph.D. student, (University of Barcelona, Spain), 2-month visit to finalize phylogenetic analyses for her Ph.D. The main focus of her research has been lichen floristics in Spain and a phylogenetic revision of the genus *Diploschistes* (Ostropomycetidae).

2008 Maria Prieto, Ph.D. student, (Universidad Rey Juan Carlos, ESCET, Madrid, Spain), 3 ½-month visited my lab to learn molecular lab techniques and phylogenetic methods. She also took a graduate course (Systematic Biolgy, BIO 237L) co-taught by David Swofford and myself. The main focus of her research was the genus Catapyrenium s. l. (Verrucariaceae, Eurotiomycetes).

INTERNSHIPS: GRADUATE STUDENTS AND VISITING SCIENTISTS IN THE LUTZONI LAB (continued)

2008 Samantha Fernandez Brime, Ph.D. student, (University of Barcelona, Spain), 4-month visited my lab to learn molecular lab techniques and phylogenetic methods. She also took a graduate course at Duke University (Systematic Biolgy, BIO 237L) co-taught by David Swofford and myself. The main focus of her research has been lichen floristics in Spain and a phylogenetic revision of the genus *Diploschistes* (Ostropomycetidae).

2007 Katalin Molnar, Ph.D. student, (University of Budapest, Hungary); 4-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project. She completed the DNA sequencing work for this project and learned analytical methods to complement her training from her first visit in 2006. She successfully defended her Ph.D. thesis in Hungary in 2010.

2006 Constantino Ruibal, Postdoctoral Research Associate, (CBS, The Netherlands); 3 ½-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. Took also a graduate course (Systematic Biolgy) taught by François Lutzoni. Phylogeny of the Chaetothyriales (Eurotiomycetes).

2006 Katalin Molnar, Ph.D. student, (University of Budapest, Hungary), 3-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. Assembling the Lecanoromycetes tree of life (Ascomycota).

2005 Martin Kukwa, Postdoctoral Research Associate, (University of Gdansk, Poland); 3 ½-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. Assembling the Lecanoromycetes tree of life (Ascomycota) and the phylogenetic placement of sterile lichen-forming fungi.

2005 Geir Hestmark, Professor of Biology (University of Oslo, Norway); one month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. Resolving the phylogenetic placement of the Umbilicariaceae within within the Lecanoromycetes.

2004 Monica Garcia, Ph.D. Student, (University Rey Juan Carlos, Spain); 3 ½-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. The taxonomic focus of Monica's study is on the lichen-forming fungi in the Collemataceae.

2004 Alexandra Bachran, Ph. D. student, (Universitaet Kaiserslautern, Germany); 3-month visit for "Assembling the Fungal Tree of Life" (AFTOL) project to learn molecular lab techniques and phylogenetic methods. The taxonomic focus of Alexandra's study is on the Lichinales.

2004 Anja Amtoft, Ph. D. student, (New York Botanical Garden); 3-month visit to learn molecular systematic methods and to generate DNA sequence data for the NSF funded project "Assembling the Fungal Tree Of Life" (AFTOL).

2003 Damien Ertz, Ph. D. student, (National Botanic Garden of Belgium); 4-month visit to learn molecular systematic methods and to generate DNA sequence data for the NSF funded project "Assembling the Fungal Tree Of Life" (AFTOL).

2002 Gert Helms, Ph.D. student, (Experimentelle Phykologie und Sammlung für Algenkulturen, A.v.H.–Institut, Georg–August–Universität, Göttingen, Germany); 3-month visit to learn phylogenetic methods and to obtain DNA sequence data for NSF funded project in collaboration with Dr. Debashish Bhattacharya (University of Iowa).

2002 Ester Gaya, Ph.D. student, (University of Barcelona, Spain); 5-week visit to learn phylogenetic methods, and finalize two manuscripts.

2001 Dr. Anna Gorbushina, Associate Researcher, (Oldenberg University, Germany); 2-month visit to learn molecular and phylogenetic techniques and initiate long-term collaboration on micro–colonial fungi $3000.

2001 Celia Mobius, Ph.D. student, (Technische Universität Berlin, Germany); 3-month visit to learn molecular and phylogenetic techniques, as well as to revise our holdings of *Hypotrachyna*. $500.

2001 Ester Gaya, Ph.D. student, (University of Barcelona, Spain); 3-month visit to learn molecular and phylogenetic techniques, as well as to revise our holdings of *Caloplaca*. $1000

INTERNSHIPS: GRADUATE STUDENTS AND VISITING SCIENTISTS IN THE LUTZONI LAB (continued)

2001 Frank Kauff, Ph.D. student, (Universitaet Kaiserslautern, Germany); 2-week visit to revise our collection of Gyalectales and prepare a manuscript for publication.

2000 Frank Kauff, Ph.D. student, (Universitaet Kaiserslautern, Germany); 4-month visit for molecular work on Gyalectales and Ostropales.

2000 Olga Katenina, Ph.D. student, (Komarov Botanical Institute, Russia); two and a half month visit for systematic work on *Ramalina*. $1,000.

1999 Marcela Cáceres, Ph.D. student, (Department of Mycology, Center of Biological Sciences, Universidade Federal de Pernambuco, Recife, Brazil); 2-month visit to revise foliicolous lichens part of the FMNH lichen collection and learn molecular techniques for systematics.

1999 Dr. Ulrik Søchting, Professor, (University of Copenhagen, Denmark) was awarded funds for a 1-month visit to FMNH to revise our holdings of members of the lichen family Teloschistaceae. This visit will also allow the completion of a manuscript resulting from our collaborative work during the last four years.

1999 Christine Keller. Ph.D. student, (Switzerland) was awarded a one month internship to revise the lichen collection (the genus*Verrucaria*) at FMNH under my supervision and to gather preliminary data for her potential postdoctoral work with me starting January 2000. (Canceled because of health problems.)

1997 Jolanta Miadlikowska, Ph.D. student, (Poland) was awarded a one-month internship to work on the lichen collection (the genus *Peltigera*) at FMNH under my supervision and to gather preliminary data for a supplement to my NSF grant DEB–9615542. $784

1997 Jutta Buschbom, M.Sc. student, (Germany) was awarded a 3-month summer internship to work with me on the lichen collection and to prepare for her Ph.D. at the University of Chicago. $2,478

1997 Stefan Zoller, Ph.D. student, (Swiss Federal Institute for Forest,Snow and Landscape Research, Switzerland); 2-month visit to learn phylogenetic methods and complete part of his Ph.D. thesis.

1996 Richard Hyerczyk (USA) was awarded a 3-month internship to work on the lichen collection at FMNH. Richard was unable to accept the internship when available.

POST-DOCTORAL RESEARCH ASSOCIATES

Dr. Romain Darnajoux (October 2016-September 2019), **Postdoctoral Researcher**. Department of Geosciences, Princeton University, and Department of Biology, Duke University. Life Science Research Foundation Postdoctoral Fellowship. **Co-advisor with Dr. Xinning Zhang** .

*** (Oct. 2019-present) **Postdoctoral Researcher**. Department of Geosciences, Princeton Universit, Zhang Lab.

Dr. Nicolas Magain (January 2015-December 2018), **Postdoctoral Researcher**. Department of Biology, Duke University. Belgian American Educational Foundation (BAEF) and NSF GoLife; Collaborative Research: Filling the largest void of the fungal genealogy of life (the Pezizomycotina) and integrating symbiotic, environmental and physiological data layers. **Co-advisor with Drs Jolanta Miadlikowska and Ignazio Carbone.**

*** (2019-present), **Postdoctoral Researcher,** Evolution and Conservation Biology, University of Liège, Belgium.

POST-DOCTORAL RESEARCH ASSOCIATES (continued)

Dr. Camille Truong (February 2013-January 2014), **Postdoctoral Researcher**. Department of Biology, Duke University. Swiss National Science Foundation fellowship. NSF DEB–Systematic Biology and Biodiversity Inventory; REVSYS: Phylogenetic revision of the lichen-forming genus *Peltigera* (Ascomycota): Disentangling cryptic speciation, phenotypic plasticity, and hybridization. **Co–advisor with Dr. Jolanta Miadlikowska.**

*** (2018-present) **Assistant Professor**, UNAM, Mexico City**.**

*** (2012-August 2014) **Adjointe Scientifique** at Conservatoire et Jardin Botaniques, Geneva, Switzerland.

Dr. Ryoko Oono (March 2011–December 2013), **Postdoctoral Researcher**. Department of Biology, Duke University. Molecular Mycology and Pathogenesis Training Program (MMPTP). How do within–host endosymbiotic interactions affect host–pathogen interactions? **Co–advisor with Dr. Ignazio Carbone (North Carolina State University, Raleigh).**

*** (Jan. 2014-present) **Assistant Professor** (tenure-track) at the University of California, Santa Barbara.

Dr. Emilie Lefèvre (October 2011-August 2013), **Postdoctoral Researcher**. Department of Biology, Duke University. NSF DEB–Dimensions of Biodiversity; Dimensions: Collaborative Research: An interdisciplinary study of hyperdiverse endophytic fungi and their function in boreal forests. **Main advisor.**

***(2018-present) **Max Planck Tandem Group Leader** at the National University of Colombia, Bogota, Colombia.

*** (Sept. 2013-2017) **Postdoctoral research associate** in Gunsch Lab, Duke University.

Dr. Eimy Rivas Plata (August 2011–July 2013), **Postdoctoral Researcher**. Department of Biology, Duke University. NSF DEB–Systematic Biology and Biodiversity Inventory; REVSYS: Phylogenetic revision of the lichen-forming genus *Peltigera* (Ascomycota): Disentangling cryptic speciation, phenotypic plasticity, and hybridization. **Co–advisor with Dr. Jolanta Miadlikowska.**

Dr. Olaf Mueller (Nov. 2010–Dec. 31, 2012), **Postdoctoral Researcher**. Department of Biology, Duke University. Funded by a subcontract as part of the Pacific Northwest National Laboratory's (PNNL) foundational scientific focus area (FSFA) under DOE–BER's genomic sciences program; Co–evolved autotroph–heterotroph associations (AHAs): Lichens and their roles in biological soil crusts. In my lab he is conducting comparative genomic analytical work on the first genomes (fungal and algal) sequenced from a lichen symbiosis. **Co–advisor with Drs. Daniele Armaleo and Fred Dietrich.**

*** (Jan. 2013-present) **bioinformatician** at the Center for Microbial Genomics and Microbiomics, Duke University, School of Medicine. Starting date: January 1, 2013.

Dr. Ester Gaya (October 2006–July 2012), **Postdoctoral Researcher**. Department of Biology, Duke University. Fulbright Fellowship and NSF grant NSF DEB–Systematic Biology and Biodiversity Inventory; A multilocus phylogenetic study of the Teloschistales (Ascomycota) and the evolution of symbiotic systems. **Main advisor.**

*** (2017-present) **Senior Research Leader, Comparative Fungal Biology,** Kew Royal Botanical Garden, UK.

*** (2015-2016) **Research Leader, Comparative Fungal Biology,** Kew Royal Botanical Garden, UK.

*** (July 2014-2015) **Senior Researcher in Mycology,** Kew Royal Botanical Garden, UK.

POST-DOCTORAL RESEARCH ASSOCIATES (continued)

Dr. Kathleen Miglia (August 2007–July 2010), Postdoctoral Researcher. Department of Molecular Genetics and Microbiology, Duke University. NIH postdoctoral funding. **Unofficial Co–advisor**. Tom Mitchell (MGM) was her main advisor.

*** As of July 2010, Kathleen Miglia is the **Lab Administrator** for a large gateway course entitled "Molecular Biology" (BIO 101L) for the Biology Major at Duke University.

Valérie Reeb, (2005–2006) Postdoctoral Researcher. Department of Biology, Duke University. NSF CAREER grant. **Main Advisor.**

*** (2014-present) **Manager** of the Carver Center for Genomics at the University of Iowa.

*** (2010–2013) **Postdoctoral Research Associate** at the Carver Center for Genomics, Biology Department, University of Iowa.

*** (2007–2009) Postdoctoral Research Associate in the laboratory of Debashish Bhattacharya at the University of Iowa.

Dr. Cymon Cox (Jan. 2003–May 2005), Postdoctoral researcher, Department of Biology, Duke University. Funded by NSF–Assembling the Tree Of Life grant to FL. **Main co–advisor with Dr. Jonathan Shaw.**

*** (2009–present), **Auxiliary Investigator**, at Centro de Ciências do Mar do Algarve, Universidade do Algarve, Portugal.

*** (March 2005–2008), postdoctoral position at the British Museum (UK) under the supervision of Peter Foster.

Dr. Valérie Hofstetter (Jan. 2003–Dec. 2005), Postdoctoral researcher, Department of Biology, Duke University. Funded by NSF–Assembling the Tree Of life grant to FL. **Main advisor.**

*** (Aug. 2007–present) **Researcher in Mycology** at the "Station de recherche Agroscope Changins–Wädenswil ACW", Switzerland.

*** Recipient of a Postdoctoral Fellowship from the Swiss National Foundation (2002–2003).

Dr. Elizabeth Arnold (Jan. 2003–Dec. 2004), Postdoctoral Researcher. Department of Biology, Duke University. NSF Postdoctoral Research Fellowships program in Microbial Biology. **Main advisor.**

*** (July 2015–present) **Professor** in the Dept. of Plant Sciences, Division of Plant Pathology and Microbiology, at the University of Arizona.

*** (July 2010–2015) **Associate Professor** in the Dept. of Plant Sciences, Division of Plant Pathology and Microbiology, at the University of Arizona.

*** (Jan. 2005–2010) **Assistant Professor** in the Dept. of Plant Sciences, Division of Plant Pathology and Microbiology, at the University of Arizona.

*** Recipient of a NSF Postdoctoral Research Fellowship in Microbial Biology, (2002–2004).

Dr. Frank Kauff (2002–Nov. 2006), Postdoctoral researcher, Department of Biology, Duke University. Funded by Duke University, NSF–CAREER grant and NSF–Assembling the Tree Of Life grant to FL. **Main advisor.**

*** (2013-present) **Bioinformatician** at Justus-Liebig-Universität, Germany.

*** (Dec. 2006–Dec. 2012), **Junior Professor**. Department of Plant Ecology and Systematics, University of Kaiserslautern, Germany.

POST-DOCTORAL RESEARCH ASSOCIATES (continued)

Dr. Jolanta Miadlikowska (1999–2004), Postdoctoral researcher, Duke University. NSF funded + Kosciuszko Foundation and FMNH + Polish National Foundation, Duke University start–up budget, and by NSF–CAREER grant. **Main advisor.**

*** (2016-present) **Instructor B**, Department of Biology, Duke University, (Biology 201L: Gateway to Biology Major: Molecular Biology).

*** (2016-present) **Senior Researcher and Lab Manager**, Department of Biology, Duke University, Lutzoni lab.

*** (2004–2016) **Research Analyst II/Research Scientist**, Dept. of Biology, Duke University, Lutzoni Lab.

*** Recipient of a traveling grant from the Mycological Society of America to attend the Fifth International Mycological Congress in Oslo, Norway (2002).

*** Recipient of the Mason Hale Award at the Fourth Congress of the International Association for Lichenology (2000), Barcelona, Spain. For an outstanding Ph.D. dissertation completed during 1996–1999.

Dr. Christine Keller, Postdoctoral researcher in Switzerland, Swiss National Foundation and FMNH. **Co–advisor with Dr. Christoph Scheidegger.** (Christine was awarded this fellowship and FMNH match, but was not able to come to Chicago because of a major health problem. She has conducted this project in Zurich under my co–supervision. This project is now completed and she is currently a **researcher** in Switzerland.

Dr. Stefan Zoller (1999–2002) Postdoctoral researcher, Duke University. Swiss National Foundation and FMNH. Funded by Duke University. **Main advisor.**

*** (2011-present), **Bioinformatician** at the Swiss Federal Institute of Technology Zurich, Switzerland.

*** (2006–2010), **Bioinformatician** at the Functional Genomics Center at the University of Zurich and the ETH.

*** Spring 2004–2006, System Administrator for a cluster of 60 computers and Research Associate to conduct global climate change simulations in the Department of Environmental and Climate Physics at the University of Bern, Switzerland.

*** Dec. 2002–2003, Postdoctoral Research Associate at the North Carolina Supercomputer Center, USA.

GRADUATE STUDENTS

Carlos Pardo De la Hoz, (2018-present) second-year Ph.D. student, Duke University, Department of Biology. **Main advisor.**

Thesis title: TBA

Ian Medeiros, (2017-present) third-year Ph.D. student, Duke University, Department of Biology. **Main advisor**.

Thesis title: TBA

*** Recipient of NSF Graduate Research Fellowship (2017).

Stephanie Tolar, (2014-2015) Completed her master degree. Duke University, Department of Biology. **Main advisor.**

*** I was the main advisor of Stephanie during her first year. After two additional lab rotations, Stephanie explored the possibility to transfer to the Nicholas School of the Environment, since her main research interest has been in ecology. She then left Duke with a Master degree.

GRADUATE STUDENTS (continued)

Allan Castillo, (2014) Starting in the fall of 2014, Allan initiated a Ph.D. in the Department of Biology, Duke University. He was planning to do a rotation in the Lutzoni lab.

*** Allan Castillo (first-year graduate student) informed me after the beginning of the fall semester *2014) that he decided to join the Rausher lab and that he does not plan to do lab rotations. I wrote a letter of support that led to Allan being awarded the Dean's Graduate Fellowship from Duke University.

*** Recipient of a Dean's Graduate Fellowship from Duke University (2014).

Michael Gajdeczka, (2013-2014) completed his Master degree in May 2014, University Program in Genetics and Genomics, Duke University. **Main advisor**.

Thesis title: *Hyper-variability amidst order: a comparative genomic approach for identifying homologous fast-evolving phylogenetic markers applicable across broad taxonomic scales.*

Ko-Hsuan Chen, (2011-2017) completed her Ph.D. in July of 2017, Duke University, Department of Biology. **Main advisor.**

Thesis title: *Evolution of fungal endophytes and their functional transitions between endophytism and saprotrophism*.

*** **Assistant Research Fellow**, Biodiversity Research Center, Academia Sinica, Taipei, Taiwan (2019-present).

*** **Postdoctoral Associate**, University of Florida, Liao Lab (2017-2019).

*** Recipient of a Doctoral Dissertation Improvement Grant (DDIG) from NSF (2016).

*** Recipient of one of the best poster awards at the 10th International Mycological Congress (IMC10), which took place in Bangkok, Thailand (2014).

*** Recipient of an International Travel Award from the Mycological Society of America (2014).

*** Recipient of a summer fellowship from Duke University (2014).

*** Recipient of the Keever award, Department of Biology, Duke University (2013)

*** Recipient of a Travel Award from The Mycological Society of America (2013).

*** Recipient of Study Abroad Fellowship from the Taiwanese Government (2011).

Kathryn Picard, (2009–2013) Ph.D. student, Duke University, Department of Biology. **Main advisor**.

*** In 2013 (end of her fourth year) Kathryn transferred to the Pryer and Armaleo labs.

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2013).

*** Recipient of one of two awards for best oral presentation by a graduate student at the annual meeting of the Mycological Society of America (2012).

*** Recipient of a Graduate Student Fellowship from the Mycological Society of America (2012).

*** Recipient of an NSF Graduate Research Fellowship (2009).

*** Recipient of a fellowship from the Ford Foundation (2009).

*** Recipient of a Dean's Fellowship from Duke University (2009).

GRADUATE STUDENTS (continued)

Tami McDonald, (2004–2011) Completed her Ph.D. in December 2011, Duke University, Department of Biology and University Program in Genetics and Genomics. **Main advisor.**

Thesis title: *Genomic insights into the evolution and development of the lichen symbiosis:* Cladonia grayi *as a model lichen*.

*** Recipient of the Mason Hale Award from the International Association for Lichenology (IAL) for the best Ph.D. thesis in lichenology completed between August 1, 2011 and January, 31, 2014.

*** **(**May 2014-present) **Assistant Professor** (tenure-track) position at St. Catherine University, St. Paul, Minnesota. Starting date: July 1, 2014.

*** (Jan. 2011–June 2014) **Postdoctoral Research Associate**, University of Minnesota, Twin Cities.

*** Recipient of the 2012 Harold Sanford Perry Prize for the best Ph.D. thesis research in Plant Sciences, Department of Biology, Duke University.

*** Recipient of an award for the best poster at the annual meeting of the Mycological Society of America (MSA, 2007).

*** Recipient of a James B. Duke Fellowship (2004).

Brendan Hodkinson, (2005–2011) Completed his Ph.D. in May 2011, Duke University, Department of Biology. **Main advisor.**

Thesis title: *A Phylogenetic, Ecological, and Functional Characterization of Non-Photoautotrophic Bacteria in the Lichen Microbiome*.

*** (Jan. 2013–present) **Postdoctoral Research Associate**, University of Pennsylvania, PA.

*** (June 2011–Dec. 2012) **Postdoctoral Research Associate**, New York Botanical Garden, NY.

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2010).

*** Recipient of a Graduate Student Fellowship from the Mycological Society of America (2009).

*** Recipient of an award for the best talk at the annual meeting of the Mycological Society of America (MSA, 2008).

*** Recipient of an NSF Pre–Doctoral Fellowship (2005).

*** Recipient of a James B. Duke Fellowship (2005).

Suzanne Joneson, (2003–2009) Completed her Ph.D. in May 2009, Duke University, Department of Biology. **Main advisor.**

Thesis title: *The Molecular Biology of Lichen Symbiosis and Development*.

*** (Sept. 2018–present) **Associate Professor** of Biology, University of Wisconsin, Waukesha.

*** (Sept. 2011–2018) **Assistant Professor** of Biology, University of Wisconsin, Waukesha.

*** (June 2009–Aug. 2011) two–year postdoctoral research position at the University of Idaho, Moscow.

*** Recipient of the Mason Hale Award from the International Association for Lichenology (IAL) for the best Ph.D. thesis in lichenology completed between May 2008 and May 2010.

GRADUATE STUDENTS (continued)

Cécile Gueidan, (2002–2007) Completed her Ph.D. in December of 2007, Duke University, Department of Biology. **Main advisor.**

Thesis title: *Systematics of the Lichen Family Verrucariaceae and Evolution of the Rock-inhabiting Habit within a Group of Ecologically Diverse Fungi (Chaetothyriomycetidae, Ascomycota).*

*** (Jan. 2014–present) **Systematist** (lichen collection) at the Australian National Herbarium, Canberra, Australia.

*** (Jan. 2010–Dec. 2013) **Researcher** (lichen collection) British Museum, London, UK.

*** (Jan. 1, 2008–Dec. 2009) **Postdoctoral Research Associate**, Centraalbureau voor Schimmelcultures (CBS), The Netherlands.

*** In her fifth year of her Ph.D., Cécile Gueidan was offered a researcher position at the Centraalbureau voor Schimmelcultures (CBS) in The Netherlands. This is one of the largest fungal culture collections in the world. Her appointment was for five years with a possibility to apply for permanency after three years. She accepted this position that started January 1, 2008. In January 2010 she moved to the British Museum, London, UK, to take a leading research position in lichenology. After one year this will become a permanent position.

*** Recipient of a Graduate Student Fellowship from the Mycological Society of America (2006).

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2004).

*** Recipient of a Mini–PEET from the Society of Systematic Biologists (2003).

*** Recipient of the Society of Systematic Biologists Awards for Graduate Student Research, Evolution meeting (2003).

*** Recipient of the American Society of Plant Taxonomists Graduate Research Award (2003).

Heath O'Brien, (2000–2006) completed his Ph.D. in May of 2006, Duke University, Department of Biology. **Main advisor.**

Thesis title: *Phylogenetics of Heterocystous Cyanobacteria and the Evolution of Specificity and Selectivity in Cyanolichen Symbioses*.

(Jan. 2013–present) **Bioinformatician**, University of Bristol, UK.

(Fall 2008–Dec. 2012) **Postdoctoral Researcher** at the University of Toronto, Canada.

(Fall 2006–summer 2008) lab manager for the course General Microbiology (Bio 103L), Duke University, Department of Biology.

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2003).

*** Recipient of the American Society of Plant Taxonomists Graduate Research Award (2002).

*** Recipient of a 2–year Postgraduate Scholarship B (PGS B) from the Natural Sciences and Engineering Research Council of Canada (2002).

*** Recipient of the Society of Systematic Biologists Awards for Graduate Student Research, Evolution meeting (2001).

GRADUATE STUDENTS (continued)

Carla Rydholm, (2000–2006) Completed her Ph.D. in May of 2006, Duke University, Department of Biology, and University Program in Genetics. **Main advisor.**

Thesis title: *Population and Mating System Biology of the Common Mould* Aspergillus fumigatus *and its Close Relatives*.

*** (2014–present) **Attorney Associate** at Lex Machina, Menlo Park, California.

*** (Fall 2009–2013) **Law Clerk** at the First Amendment project in Oakland, CA, USA; a nonprofit law firm.

*** (Fall 2009–present) **Research Scholar** at the Center for Genome Ethics, Law & Policy at Duke University.

*** (Fall 2006–May 2009) Student in the Law program at Duke University.

*** Recipient of the Karling Graduate Student Research Award (2002) from the Botanical Society of America.

*** Recipient of the Alma Whiffen Barksdale/John P. Raper Travel Award from the Mycological Society of America (2003).

Valérie Reeb, (1998–2006) Completed her Ph.D. in May of 2005. Duke University, Department of Biology. **Main advisor.** Subsequently, she was a postdoctoral researcher in my lab., funded by my NSF CAREER grant.

Thesis title: *The Lichen Family Acarosporaceae: Circumscription, Origin of Divergence and Evolution of Group I Intron Encoded Homing Endonuclease*.

*** (2014-present) **Manager** of the Carver Center for Genomics at the University of Iowa.

*** (2010–2013) **Postdoctoral Research Associate** at the Carver Center for Genomics, Biology Department, University of Iowa.

*** (2007–2009) Postdoctoral Research Associate in the laboratory of Debashish Bhattacharya at the University of Iowa.

*** Recipient of the Mycological Society of America Graduate Fellowship. Awarded annually to two promising graduate students in mycology ($2,000). Applicants are evaluated on the basis of their scholastic merit, research ability, and promise shown as a mycologist (2004).

*** Recipient of a traveling grant from the Mycological Society of America to attend the Fifth International Mycological Congress in Oslo, Norway (2002).

*** Recipient of the New England Botanical Club Graduate Student Research Awards (2001).

*** Recipient of a Grant from the Exploration Fund of the Explorers Club (2001).

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2001).

*** Recipient of the American Society of Plant Taxonomists Graduate Research Award (1999).

*** Recipient of the Karling Graduate Student Research Award (1999) from the Botanical Society of America.

*** Grant–in–Aid of Research, Sigma–Xi (1999 & 2000).

GRADUATE STUDENTS (continued)

Jutta Buschbom, Ph. D. completed in 2003. University of Chicago, Committee on Evolutionary Biology. I was the **main advisor for the first four years**. After moving my lab to Duke University, Jutta completed her Ph.D. at the University of Chicago under the supervision of Greg Mueller (The Field Museum)**.**

Thesis title: *Evolutionary history and processes underlying contrasting reproductive modes in the lichen-forming genus* Porpidia *(Ascomycota)*.

*** Recipient of a Doctoral Dissertation Improvement Grant from NSF (2001).

*** Recipient of the Mycological Society of America Graduate Student Award (2000).

*** Recipient of the Karling Graduate Student Research Award (2000) from the Botanical Society of America.

UNDERGRADUATE STUDENTS TRAINED IN THE LUTZONI LAB

Camille Wilder, Duke University. Camille joined the Lutzoni lab in the Spring of 2019. She is working closely with Ian Medeiros on his Ph.D. project.

William White, Duke University. Will joined the Lutzoni lab in the Fall of 2018. He is working closely with Carlos Pardo on his Ph.D. project on *Peltigera*.

Carlos Pardo, Universidad de Los Andes. Microbiology, Bogotá, Colombia. Carlos spent almost the entire year of 2016 in my lab to learn large–scale DNA isolation, PCR and sequencing methods, as well as to assemble sequences, evaluate their quality, and generate high quality alignments for phylogenetic studies as part of two NSF funded phylogenetic projects on *Peltigera* and fungal endophytes. He had his own project on three-membered *Peltigera* that will be published with him as the first author. During this period he also took ESL and TOEFL courses in preparation for his application to graduate school in the US.

Jade Lu, Duke University. Jade joined my lab as a first-year student at Duke University. I have known Jade since she was a high school student through a workshop we organized on fungal endophytes for the North Carolina School of Science and Mathematics. She pursued a project in my lab on photobiont switching by lichen-forming fungi along a 1300-km South-North transect crossing the Canadian boreal bioclimatic zone. She graduated in the spring of 2017. She was the recipient of the Plant Science award from the Department of Biology

Anh Huynh, Duke University. Anh is a second-year student at Duke University. During her first year at Duke, she joined my lab as a research assistant for an NSF-funded project on *Peltigera* and a project on the evolution of introns. She was working primarily under the supervision of Eimy Rivas Plata and is now working under the supervision of Ph.D. student Ko-Hsuan Chen.

Komal Kinger, Duke University. Komal joined my lab as a first-year student at Duke University. She joined my lab as a research assistant for a research project on fungal-algal interactions involving chytrid fungi. She was working primarily under the supervision of Ph.D. student Kathryn Picard.

Ashley Gartin, Duke University. Ashley joined my lab as a first-year student in the Genome Focus Program. She joined my lab as a research assistant studying plant-fungal endosymbiosis. She was working primarily with postdoctoral researcher Ryoko Oono on the putative role of fungal endophytes on loblolly pine as resistant agent to pathogenic fungi.

Laurel Koch, Duke University. Laurel started working in my lab as a first-year undergraduate student. She joined my lab as a research assistant studying plant-fungal endosymbiosis. She was working primarily with postdoctoral researcher Ryoko Oono (spring and summer semesters of 2012) on the putative role of fungal endophytes on loblolly pine as resistant agent to pathogenic fungi. Laurel is currently a co-author on a publication that was submitted to the American Journal of Botany by Ryoko Oono.

UNDERGRADUATE STUDENTS TRAINED IN THE LUTZONI LAB (continued)

Lisa LaManna, City University of New York, The College of Staten Island, NY. Lisa took the initiative to contact all PIs of the Assembling the Tree of Life project to express her interest in Systematic Biology and desire to join a research lab for the summer of 2011. Lisa is spending nearly three months this summer in our lab to learn molecular lab techniques and analytical tools central to systematic biology and phylogenetics. She generated a significant amount of sequence data for an ongoing taxonomic review of the genus *Peltigera*, which will warranty her a co-authorship on one resulting publication.

Martin Miguel Ramirez Mejia, Universidad de los Andes, Microbiology, Bogotá, Colombia. Martin spent almost the entire year of 2011 in my lab to learn large–scale DNA isolation, PCR and sequencing methods, as well as to assemble sequences, evaluate their quality, and generate high quality alignments for phylogenetic studies as part of two NSF funded phylogenetic projects on the Teloschistales and Peltigerales. During this period he also took ESL and TOEFL courses in preparation for his application to graduate school in the US.

Angela Holguín Moreno, Universidad de los Andes, Microbiology, Bogotá, Colombia. Angela spent six months in my lab during 2010, to learn how to isolate algae and fungi in pure cultures from lichen thalli. She also learned large–scale DNA isolation, PCR and sequencing methods, as well as to assemble sequences and evaluate their quality, as part of a NSF funded phylogenetic project on the Teloschistales. During this period she also took ESL and TOEFL courses and took the TOEFL exam in preparation for her application to graduate school. She was successful in fulfilling the English requirement at her university and was admitted to pursue a M.Sc. degree in microbiology. She is also a co–author on a manuscript that was submitted for publication reporting results based on the sequences she generated while in my lab.

Stephanie Villagra, Duke University, Biology Major. Since Jan. 2010, Stephanie has been a work study in my lab working with postdoctoral research associate Ester Gaya, on our recently awarded NSF project focusing on the Teloschistales. During the summer of 2010 she will continue working on this project, with NSF funding as an REU supplement to this grant.

Cameron S. Miller, Duke University, Biology Major. Conducted an REU project in my lab during the Summer semester of 2006, under the supervision of Heath O'Brien, on plasmid characterization of *Nostoc*. He has pursued this project in my lab during the Fall semester of 2006 and the Spring semester of 2007 as an independent study project.

Bradford Condon. Oberlin College. Conducted an REU project in my lab during the Summer semester of 2006, under the supervision of Suzanne Joneson, to find and characterize genes involved in the early symbiotic developmental stages of lichen symbioses. During the Fall 2006 semester he has applied to several universities (including Duke University/Biology) to join their graduate programs.

Katherine Lindsay Higgins, Duke University, Biology Major, graduated in 2005. Worked in my lab during Summer 2004–Spring 2005; Research Independent Study; Honors thesis and Howard Hughes project on the diversity and specificity of fungal endophytes found in major lineages of plants as part of my NSF CAREER grant. In the Fall of 2005 she initiated graduate studies in ecophysiology of plants at the University of Utah.

** Lindsay was the recipient of the "Excellence in Plant Science Prize" given each year by the plant science faculty to a graduating biology major who has demonstrated excellence in botanical research. The prize consists of books appropriate to the student's field of interest.

Samantha Hill, Duke University, Biology major, graduated in 2007. From Fall 2003 to Spring 2005 Samantha was a Work Study in my lab as part of my NSF CAREER and AFToL grant. Provided assistance with maintenance of fungal cultures and general tasks in the lab. Because of her excellent performance as a freshman undergraduate student, we trained Samantha for conducting molecular work for this project and we might create a small project that could eventually become her honor thesis, or a Howard Hughes project.

Amanda Way, Duke University, Biology major, graduated in 2005. During the Spring and Summer 2003 semesters Amanda was a Work Study student in my Lab.

UNDERGRADUATE STUDENTS TRAINED IN THE LUTZONI LAB (continued)

Channa Pickett, Duke University, Biology major, graduated in 2004. During the Fall 2003 and Spring 2004 semesters Channa was a Work Study student in my lab. Provided assistance in preparing lectures for courses developed as part of my NSF CAREER grant and with various duties in the molecular lab.

Snehal Sarvate, Duke University, Biology major, graduated in 2004. During Fall 2003, Spring and Summer 2004, Snehal was a Work Study student in my lab. Conducted a large part of the molecular lab work for sequencing DNA of fungal endophytes found in lichens and plants. She also was the main person assisting Drs. A. Elizabeth Arnold and Jolanta Miadlikowska in obtaining and maintaining axenic fungal cultures for endophytes and lichenicolous fungi out of lichens and plants as part of the NSF CAREER grant. In the Fall of 2004, Snehal has joined the MD program at the University of Virginia at Richmond.

Paul Gugger, Duke University, Biology Major, Graduated in 2003. (Spring 2004 semester) Work Study in my lab as part of my NSF CAREER grant. Sequenced three genes for a large number of fungi isolated from plant leaves and lichen thalli. In the Fall of 2004, Paul completed a Ph.D. in ecology at the University of Minnesota, Twin Cities. He is currently conducting postdoctoral research at the University of California, Riverside.

Mary Jane Epps, Duke University, Biology Major, Graduated in 2004. During the 2003–2004 academic year, Mary Jane conducted a comparative study of fungal endophyte diversity in greenhouse plants representing all main lineages of plants. This work was done under the supervision of Dr. A. Elizabeth Arnold.

Rebecca Eells, Duke University, Biology major, will graduate in 2005. During the 2002–2003 academic year, Rebecca Eells conducted an independent study (Howard Hughes summer research fellowship) under the supervision of Dr. A. Elizabeth Arnold and Dan Henk (Ph.D. student) regarding fungal endophytes in Loblolly pine. This led to a manuscript that was recently submitted to Molecular Ecology.

Alyson Paulick, UNC at Chapel Hill, graduated in 2003. During Fall 2002–Spring 2003, Summers of 2004 and 2005. Alyson was a Work Study in my lab. Assisted members of my lab to maintain fungal cultures and data entry in two data bases (litterature on lichens, phylogenetics and lichenicolous fungi, and voucher information of fungal cultures and specimens) associated with my NSF CAREER grant. She has also helped the lab manager with ordering supplies for this project. In the Fall of 2003, she initiated studies toward a law degree at the University of Wisconsin at Milwakee.

Holly Sebby, undergraduate student, (Southern Illinois University at Carbondale). Three–month summer internship in 2000 to work on the FMNH lichen collection. $2,980.

HIGH SCHOOL STUDENT TRAINED IN THE LUTZONI LAB

Anita Simha, North Carolina School of Science and Mathematics (NCSSM). Anita took the two workshops on endophytic fungi that my lab organized for NCSSM as part of an outreach activity for our NSF Dimensions of Biodiversity grant on endophytic and endolichenic fungi of the boreal biome. Based on this experience, Anita joined my lab during the spring semester of her junior year (2012), and continued working with postdoctoral researcher Ryoko Oono until she obtained her high school degree. In my lab she worked on the putative role of fungal endophytes on loblolly pine as resistant agents to pathogenic fungi. She will be a co-author on a manuscript currently in preparation.

Sharon Jiang, North Carolina School of Science and Mathematics (NCSSM). Sharon took the two workshops on endophytic fungi that my lab organized for NCSSM as part of an outreach activity for our NSF Dimensions of Biodiversity grant on endophytic and endolichenic fungi of the boreal biome. Based on this experience, Sharon joined my lab during her last semester at NCSSM to work with postdoctoral researcher Ryoko Oono on the putative role of fungal endophytes on loblolly pine as resistant agents to pathogenic fungi of this economically important tree. She is currently an undergraduate student at UNC-Chapel Hill.

Isabel Bukovnik, East Chapel Hill High, Chapel Hill, NC, rising senior. Isabel is currently a bio-major at the University of California, Berkeley. During the summer of 2009, Isabel joined my lab through the Howard Hughes Precollege Program in the Biological Sciences at Duke

University. She worked closely with Dr. Ester Gaya, a postdoctoral research associate in my lab, on a phylogenetic study of the lichen-forming fungi belonging to the Teloschistales (NSF funded project). Isabel went on to the University of California, Berkeley, for her undergraduate degree in biology.

OUTREACH

Fall 2019 — In collaboration with Dr. Erin Quinlan, the Lutzoni lab organized two workshops on lichens for high school students at the North Carolina School of Science and Mathematics (NCSSM). The goals of these workshops were to introduce 17 high school students to lichen identification, Duke University, to research on lichens, and to the Lutzoni lab, with the additional goals to select students to join my lab for hands-on experience conducting research on lichens and to initiate lichen based research projects at NCSSM. Three research projects at NCSSM resulted from this workshop. We hope to host two high school students from this cohort to conduct research in the Lutzoni lab during the spring of 2020 and/or in the summer of 2020.

Dec. 2018 — My lab (Scott Lagreca and Ian Medeiros) organized and led a two-hour workshop on lichen symbiosis as part of an activity for the Ellerbe Creek Watershed Association (ECWA) in Durham – Lichen Walk at Glennstone Preserve. This activity was open to the public in the Durham area. There were 20 participants on that Saturday morning (Dec. 1).

Nov. 10, 2018 — As part of our NSF (SG) *Peltigera* grant, my lab organized an exhibit for Darwin Day 2018 at the North Carolina Museum of Natural Sciences in Raleigh, NC. Our exhibit was entitled "The secret life of lichens". We introduced visitors to the lichen symbiosis.

February 2017 — As part of the Dimensions of Biodiversity project on endophytic and endolichenic fungi (endobiodiversity.org) and our new GoLife grant focusing on Pezizomycotina biodiversity, my lab organized an exhibit for Darwin Day 2017 at the North Carolina Museum of Natural Sciences in Raleigh, NC. Our exhibit was entitled "The power of living together: Symbiosis between fungi and plants". We introduced visitors to lichens, endophytic and mycorrhizal fungi.

February 2016 — As part of the Dimensions of Biodiversity project on endophytic and endolichenic fungi (endobiodiversity.org) and our new GoLife grant focusing on Pezizomycotina biodiversity, my lab organized an exhibit for Darwin Day 2016 at the North Carolina Museum of Natural Sciences in Raleigh, NC. Our exhibit was entitled "Evolution of solar-powered symbiotic fungi". We introduced visitors to lichens, endophytic and mycorrhizal fungi.

April 2014 — As part of an Ellerbe Creek Watershed Association (ECWA) activity, I led a two-hour workshop on lichen symbiosis at Bennett Place. This activity was open to the public in the Durham area.

Fall 2013 — In collaboration with Jes Coyle (Ph.D. student at UNC Chapel Hill) my lab organized two workshops on lichens for high school students at the North Carolina School of Science and Mathematics (NCSSM). The goals of these workshops were to introduce these high school students to Duke University, to research on lichens, to the Lutzoni lab to select students to join my lab for hands-on experience conducting research as part of this project, and to initiate a crowdsourcing project on lichens as biomoninotors.

Spring 2013 — As part of the Dimensions of Biodiversity project on endophytic and endolichenic fungi (endobiodiversity.org), my lab organized two workshops (March 23 and April 27, 2013) for high school students at the North Carolina School of Science and Mathematics (NCSSM). The goals of these workshops were to introduce these high school students to Duke University, to research on endophytes, to the Lutzoni lab and to select two students to join my lab for hands-on experience conducting research as part of this project. For more information on this outreach activity visit “endobiodiversity.org”.

OUTREACH (continued)

Spring 2013 As part of the NSF funded REVSYS project on the genus *Peltigera* (http://www.peltigera.lutzonilab.net/node/1610), the Lutzoni lab organized two workshops on lichen symbiosis (March 2 and 9, 2013) for high school students at the North Carolina School of Science and Mathematics (NCSSM). The goals of these workshops were to introduce these high school students to Duke University, to lichens, to the Lutzoni lab, and to select two students to join my lab for hands-on experience conducting research as part of this project. A total of 17 NCSSM students and two teachers took this workshop.

May 2012 As part of my NSF funded project "DEB–Systematic Biology and Biodiversity Inventory; A multilocus phylogenetic study of the Teloschistales (Ascomycota) and the evolution of symbiotic systems" Ester Gaya and I have organized an international workshop entitled "Workshop on Teloschistales: Towards a unified and phylogenetically based classification" (May 11-14, 2012) [http://www.teloschistales.lutzonilab.net/]. Seventeen experts gathered in Denmark to present the latest progress on this large class of lichen-forming Ascomycota. Centered around the most comprehensive phylogenetic study for this order, which resulted from this project, Ester Gaya was able to gather a consensus on the classification that should be adopted by the international community. Ester Gaya, as the sole postdoctoral researcher for this grant, is currently preparing a collective manuscript justifying this new, evolutionary meaningful and stable, classification as a direct result from this workshop.

Fall 2011 As part of the Dimensions of Biodiversity project on endophytic and endolichenic fungi (endobiodiversity.org), my lab organized two workshops for high school students at the North Carolina School of Science and Mathematics (NCSSM). The goals of these workshops were to introduce these high school students to Duke University, to research on endophytes, and to select two students to join my lab for hands-on experience conducting research as part of this project. As a result of this workshop, two NCSSM students have been conducting research in my lab on this project starting February 2012. For more information on this outreach activity visit "endobiodiversity.org".

PH.D. STUDENTS' ADVISORY COMMITTEE MEMBER OR EXTERNAL REVIEWER

Mike Alfaro, Ph.D. completed, University of Chicago, Committee on Evolutionary Biology. **Committee member.**

Marie–Josée Arseneau, M.Sc. completed, Université du Québec à Montréal. **M.Sc. thesis external reviewer** (1996).

Dylan Burge (until his fourth year), Ph.D. completed, Duke University, Department of Biology. **Committee member.**

Ignazio Carbone, Ph.D. completed, University of Toronto. **Ph.D. thesis external reviewer** (January 2000)**.**

Rachel Collin, Ph.D. completed, University of Chicago, Committee on Evolutionary Biology. **Committee member.**

Jes Coyle, Ph.D. completed, University of North Carolina, Chapel Hill, Department of Biology. **Committee member.**

Christine Davis, Ph.D. completed, Duke University, Department of Biology. **Committee member.**

David Desmarais, Ph.D. completed, Duke University, University Program in Genetics, Department of Biology. **Committee member.**

Norman Douglas, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Arielle Garrett, M.Sc. completed, Duke University, Department of Biology. **Committee member.**

Charles Hall, Ph.D. completed, Duke University, University Program in Genetics and Genomics**. Committee member.**

Daniel Henk, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

PH.D. STUDENTS' ADVISORY COMMITTEE MEMBER OR EXTERNAL REVIEWER (continued)

Yi-Hong Ke, third year Ph.D. student, Duke University, Department of Biology**. Committee member.**

Edgar Medina, M.Sc. completed, Universidad de los Andes, Colombia. **M.Sc. thesis external reviewer** (2011).

Shuzo Oita, fourth year Ph.D. student, University of Arizona, School of Plant Sciences. **Committee member**.

Maria Pia Miglietta, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Bryan Platkowski, fourth year Ph.D. student, Duke University, Department of Biology. **Committee member**.

Andrew Miller, Ph.D. completed, University of Illinois, Chicago, Ecology and Evolution group**. Committee member.**

Jessica Nelson, Ph.D. completed, Duke University, Department of Biology. **Committee member.**

Bernadette O'Reilly, M.Sc. completed, Duke University, Department of Biology. **Committee member.**

Hannah Reynolds, Ph.D. Completed, Duke University, Department of Biology**. Committee member.**

Eric Schuettpelz, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Dawn Simon, Ph.D. Completed, University of Iowa, Dept. of Biological Sciences. **External member of advisory committee.**

Daniel Speiser (until his fourth year), Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Alexandra Tobler, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Erin Tripp, Ph.D. completed, Duke University, Department of Biology**. Committee member.**

Yi–Hsin Erica Tsai, Ph.D. Completed, Duke University, Department of Biology**. Committee member.**

Ivo Widmer, Ph.D. completed, Bern University, Switzerland. **Ph.D. thesis external reviewer** (Nov. 2009).

COURSES TAUGHT AND RESEARCH INDEPENDENT STUDIES

Duke University (Spring 2020): **BIO 556L, Systematic Biology**. Sole instructor. Seven graduate students and one undergraduate student for a total of 8 enrolled students.

Duke University (Fall 2019): **BIO 212L, General Microbiology**. Sole instructor. A total of 50 undergraduate students.

Duke University (Spring 2019): Sabbatical leave.

Duke University (Fall 2018): **BIO/ENVIRON/GENOME 148FS-01, Genomics of Symbiosis**. FOCUS cluster on Genomes. Sole instructor. A total of 17 first-year undergraduate students took this course.

Duke University (Spring 2018): **BIO 346, Symbiosis: from organelles to microbiomes**. Sole instructor. A total of 15 undergraduate students are taking this course.

North Carolina State University (Fall 2017): **PP575, Introduction to Mycology**. Invited instructor for one 70 minute lecture/lab.

Duke University (Fall 2017): **BIO 212L, General Microbiology**. Sole instructor. A total of 28 undergraduate students.

Duke University (Spring 2017): **BIO 346, Symbiosis: from organelles to microbiomes**. Sole instructor. A total of 19 undergraduate students took this course.

COURSES TAUGHT AND RESEARCH INDEPENDENT STUDIES (continued)

Duke University (Fall 2016): **BIO/ENVIRON/GENOME 148FS-01, Genomics of Symbiosis**. FOCUS cluster on Genomes. Sole instructor. A total of 15 first-year undergraduate students took this course.

Duke University (Spring 2016): **BIO 556L, Systematic Biology**. Co–instructor (team teaching) with David Swofford. Six registered graduate students with one additional international student for a total of 7 students.

Duke University (Fall 2015): **BIO 212L, General Microbiology**. Co-instructor (team teaching) with Amy Schmid. A total of 31 students took this course.

North Carolina State University (Fall 2015): **PP575, Introduction to Mycology**. Invited instructor for one 70 minute lecture.

Duke University (Fall 2014): **BIO/ENVIRON/GENOME 148FS-01, Genomics of Symbiosis**. FOCUS on Genomes. Sole instructor. A total of 17 first-year undergraduate students took this course.

Duke University (Sring 2014): **BIO 212L, General Microbiology**. Main Instructor (2/3 of lectures) with Ph.D. student Jessica Nelson (1/3 of lectures). A total of 21 students took this course.

North Carolina State University (Fall 2013): **PP575, Introductory Mycology**. Invited lecturer for one lecture.

Duke University (Fall 2013): **BIO/ENVIRON/GENOME 148FS-01, Genomics of Symbiosis**. FOCUS on Genomes. Co-instructor (team teaching) with Jennifer Wernegreen. We had a full class of 18 first-year undergraduate students.

Duke University (Fall 2013): **BIO 212L, General Microbiology**. Co-instructor (team teaching) with Amy Schmid. A total of 24 undergraduate students took this course.

Duke University (Spring 2013): **BIO 89S-03, Symbiosis**. First-year seminar course. Co-instructor (team teaching) with Jennifer Wernegreen. We implemented partly a team-based learning approach based on a one-day workshop that we took at Duke University on March 16, 2012. Only three student took this course.

Duke University (Fall 2012): **BIO 556L, Systematic Biology**. Co–instructor (team teaching) with David Swofford. 12 registered students with four additional students (visiting graduate students or postdocs) for a total of 16 students.

Duke University (Spring 2012): **BIO 49S-03, Symbiosis (new course)**. First-year seminar course. Co-instructor (team teaching) with Jennifer Wernegreen. 7 students.

Duke University (Fall 2011): **BIO 103L, General Microbiology**. Co-instructor (team teaching) with Amy Schmid. 29 students.

Duke University (Spring 2011): **BIO 395S–86 Special Topics, Phylogenetics**. Co–instructor (team teaching) with David Swofford. 9 students (8 graduate students and 1 postdoctoral researcher.)

Duke University (Fall 2010): **BIO 237L, Systematic Biology**. Co–instructor (team teaching) with David Swofford. 10 students (7 graduate students and 3 postdoctoral researchers.)

Duke University (Fall 2010): **BIO 49S, Cutting Edge Ecology & Evolution at Duke**. Invited lecturer for one lecture.

North Carolina State University (Fall 2010): **PP575, Introductory Mycology**. Invited lecturer for one lecture.

Duke University (Fall 2009); **BIO 103L, General Microbiology**. Sole instructor. 102 students.

Duke University (Fall 2008): **BIO 237L, Systematic Biology**. Co–instructor (team teaching) with David Swofford. 14 students (9 graduate students, 3 postdoctoral researchers and 2 undergraduate students.)

COURSES TAUGHT AND RESEARCH INDEPENDENT STUDIES (continued)

Duke University (Fall 2007); **BIO 103L, General Microbiology**. Sole instructor. 105 students.

Duke University (Spring 2007); **UPGEN 287/BIO 187, Evolutionary Genetics**. Co–instructor with Fred Dietrich, David Goldstein and Mohamed Noor. 40 Students

Duke University: (Spring 2007); **BIO 191, Research Independent Study**, 1 student: Cameron S. Miller.

Duke University (Fall 2006): **BIO 237, Systematic Biology**. Sole instructor. 17 graduate students/postdoctoral researchers.

Duke University: (Falll 2006); **BIO 191, Research Independent Study**, 1 student: Cameron S. Miller.

Duke University (Spring 2005); **BIO 142L, Plant Systematics and Evolution**. Co–instructor with Kathleen Pryer and Paul Manos, 12 undergraduate students.

Duke University (Spring 2005); **BIO 321S, Systematics Discussion Group**. Instructor.

Duke University (Fall 2004); **BIO 238, Phylogenetics**. Sole instructor, 10 students.

Duke University: (Falll 2004); **BIO 191, Research Independent Study**, 1 student: Katherine Lindsay Higgins.

Duke University (Fall 2004); **BIO 321S, Systematics Discussion Group**. Instructor.

Duke University (Spring 2004); **BIO 142L, Plant Systematics and Evolution**. Co–instructor with Kathleen Pryer and Paul Manos, 16 undergraduate students.

Duke University (Spring 2004); **BIO 321S, Systematics Discussion Group**. Instructor.

Duke University (Fall 2003); **UPGEN 287/BIO 187, Evolutionary Genetics**. Co–instructor with Clifford Cunningham and Mark Rausher, 16 students.

Duke University (Fall 2003); **BIO 321S, Systematics Discussion Group**. Instructor.

Duke University (Spring 2003); **BIO 142L, Plant Systematics and Evolution**. Co–instructor with Kathleen Pryer. 9 students.

Duke University (Spring 2003); **BIO 321S, Systematics Discussion Group**. Instructor.

Duke University (Fall 2002); **BIO 238, Phylogenetics (new course)**. Main instructor, with co–instructor Stefan Zoller (13 students).

Duke University (Spring 2002); **BIO 142L, Plant Systematics and Evolution (new course)**. Co–instructor with Kathleen Pryer. 9 students.

University of Illinois at Chicago (1998); **BIOS 594, Topics in Biological Sciences: Symbioses**. Instructor with Greg Mueller and John Lussenhop.

University of Chicago (1998); **Reading: Evolutionary Biology Course 496**. Practical and Theoretical topics on DNA Sequence Analyses for Systematics.

University of Chicago (1997); **Bioscience 260. Mutualism and Symbiosis**; I gave two lectures on lichen symbioses.

Duke University (1993); Principles of genetics. Teaching Assistant for two 1–hour sessions per week with 20 students. An undergraduate and graduate course of 63 students.

Université Laval (1990) Taxonomie des lichens boréaux et arctiques. Sole instructor for this 60–hour course. A graduate course of 7 students.

Université Laval (1990); Systématique forestière et dendrologie. Instructor for part on lichen-forming fungi (two 3–hour lectures). First year undergraduate course of 105 students.

University of Ottawa (1989); Algae and Fungi. Teaching Assistant for one 3–hour lab session per week. A second year undergraduate course of 22 students.

Université Laval (1989); Écologie forestière II. Teaching Assistant for two 4–hour field work sessions in soil sciences. A third year undergraduate course of 55 students.

COURSES TAUGHT AND RESEARCH INDEPENDENT STUDIES (continued)

Université Laval (1986); Lichénologie. Teaching Assistant for a 10–day intensive course. Graduate course of 16 students.

Université Laval (1985); Agriculture et alimentation. Teaching Assistant for one 2–hour lab. per week. A first year undergraduate course.

University of Chicago (1998); Introduction to Research at Field Museum; I gave one lecture.

NON–REFEREED PUBLICATIONS

Diederich, P., Lücking, R., Ertz, D., Miadlikowska, J., Flakus, A., Dal Forno, M., Will-Wolf, S., Jovan, S., Gasulla, F., Guéra, A., de los Ríos, A., Pérez-Ortega, S., Kraichak, E., Allende, L., Obermayer, W., Lumbsch, H. T., Bungartz, F., Spielmann, A. A., Kukwa, M., Leavitt, S. D., Keuler, R., Newberry, C. C., Rosentreter, R., St Clair, L. L., Common, R. S., Braun, U., Heuchert, B., Millanes, A., Suija, A., Etayo, J., Lutzoni, F., Matura, N., Rodriguez-Flakus, P., Zhurbenko, M. P., Enkhtuya, O., Javkhlan, S., Muggia, L., Kaminsky, L., McMullin, R. T., Aptroot, A., Moncada, B., Pérez-Pérez, R. E. 2019. A tribute to James D. Lawrey, honoring a unique career in the biology of lichens and lichenicolous fungi. Plant and Fungal Systematics 64:115-115.

McMullin, R. T., Lendemer, J., and Lutzoni, F. 2016. A liber amicorum: Irwin Brodo. The Lichenologist 48:343-346.

Lutzoni, F., Clayden, S., Lendemer, J., Goward, T., and Hawksworth, D. L. 2015. Renowned lichenologist Irwin Brodo turns eighty. International Mycological Association (IMA) – Fungus 6(2):52-53.

Arnold, A. E., Carbone, I., Lutzoni, F., and May, G. 2011. A multidimensional study of endophytic fungal diversity. International Mycological Association (IMA) – Fungus 2(1):2-4.

Lutzoni, F. 2002. Assembling the lichen tree of life. International Lichenological Newsletter 35(2): 38–39.

Clayden, S., Goward, T. and Lutzoni, F. 2001. Homage to Ernie Brodo. International Lichenological Newsletter 33(2):64–65.

Lutzoni, F. 1999. Lichenologists in Israel (IMC6, Jerusalem, August 23–28, 1998. International Lichenological Newsletter 31:51–54.

BOOK REVIEW

Lutzoni, F. 1999. [Review] Stefan Ekman. The corticolous and lignicolous species of *Bacidia* and *Bacidina* in North America. Opera Botanica 127, 148 pp., 1996. The Bryologist 102:165–166.

ARTICLES WRITTEN ABOUT THE LUTZONI LAB

Harris, Robbie. 2019. Almost a billion years together; plants and fungi helped each other thrive. WVTF

Cat, Linh Ahn. 2019. The billion year partnership between plants and fungi. Forbes

Staff Writers. 2019. Researchers investigate a billion years of coexistence between plants and fungi. Space Daily

Anonymous. 2019. A billion years of coexistence between plants and fungi. ScienceDaily, Phys.org, EurekaAlert!

Stansberry, Matt 2019. Lichenizing Fungi: Hungry Trickster Gods. Zoomorphic, Issue 11. http://zoomorphic.net/2019/02/lichenizing-fungi-hungry-trickster-gods/

Leroux, J. 2015. Le Nord québécois demeure l'une des regions les plus propres de la planete. Voir au Future. Université de Sherbrooke. http://www.usherbrooke.ca/medias/nouvelles/recherche/recherche-details/article/30355/

Anonymous. 2010. Two to Tango: Genomic studies of symbioses reveal the impact of life's most intimate partnerships. GenomeLIFE 38: September/October. Published by Duke Institute For Genome Sciences and Policy. (Cover Story.)

Milius, Susan. 2009. A partnership apart. ScienceNews November 7:16–20. (Cover story.)

INTERVIEWS WITH JOURNALISTS FOR THESE ARTICLES

Klein, JoAnna. 2019. In the race to live on land, lichens did not beat plants. New York Times.

Joseph, Diana. 2017. NASA on the rise. The Standard. http://getthestandard.com/featured-posts/nasa-on-the-rise/

Pennisi, Elizabeth. 2016. Peaceful ant-plant partnerships lead to genomic arms races. Science 25 August, DOI: 10.1126/science.aah7229

Yin, Steph. July 21, 2016. Two's company, three's a lichen? The New York Times. http://www.nytimes.com/2016/07/22/science/lichen-symbiotic-relationship.html?_r=0

Pennisi, Elizabeth. 2016. A lichen ménage à trois. Science 22 July, 353:337. http://science.sciencemag.org/content/353/6297/337.full

NON–REFEREED INVITED ARTICLE

Lutzoni, F. and Miadlikowska, J. 2009. Lichens. Quick Guide. Current Biology 19:R502–R503.

REFEREED PUBLICATIONS AS BOOK CHAPTERS, SECTIONS OF BOOKS, OR ARTICLES THAT I WAS INVITED TO CONTRIBUTE

1. Gueidan, C., Hill, D. J., Miadlikowska, J., and Lutzoni, F. 2015. 4. Pezizomycotina: Lecanoromycetes. Pp. 89–120 *in:* Volume VII B of The Mycota, Systematics and Evolution (D. J. McLaughlin and J. W. Spatafora, eds.). Springer Verlag, Berlin, Germany.
2. Taylor, J. W., Spatafora, J., O'Donnell, K., Lutzoni, F., James, T., Hibbett, D. S., Geiser, D., Bruns, T. D. and Blackwell, M. 2004. The Fungi. Pp. 171–194 *in:* Assembling the Tree of Life (J. Cracraft and M. J. Donoghue, eds.). Oxford University Press, Oxford, UK.
3. Pagel, M. and Lutzoni, F. 2002. Accounting for phylogenetic uncertainty in comparative studies of evolution and adaptation. Pp. 151–164. *In* Biological Evolution and Statistical Physics. M. Laessig and A. Valleriani (Eds.), Springer Verlag, Berlin, Germany.
4. Lutzoni, F. 2002. Lichens. 618–622. *In*: Encyclopedia of Evolution. Vol. 2. M. Pagel (Ed.), Oxford University Press, Oxford, UK.
5. Kranner, I., and Lutzoni, F. 1999. Evolutionary consequences of transition to a lichen symbiotic state and physiological adaptation to oxidative damage associated with poikilohydry. 591–628. *In*: Plant response to environmental stresses: From phytohormones to genome reorganization. H. R. Lerner (ed.). Marcel Dekker, New York.

REFEREED PUBLICATIONS IN SCIENTIFIC JOURNALS

1. Haridas, S., Albert, R., Binder, M., Bloem, J., LaButti, K., Salamov, A., Andreopoulos, B., Baker, S. E., Barry, K., Bills, G., Bluhm, B. H., Cannon, C., Castanera, R., Culley, D. E., Daum, C., Ezra, D., González, J. B., Henrissat, B., Kuo, A., Liang, C., Lipzen, A., Lutzoni, F., Magnuson, J., Mondo, S. J., Nolan, M., Ohm, R. A., Pangilinan, J., Park, H.-J., Ramirez, L., Alfaro, M., Sun, H., Tritt, A., Yoshinaga, Y., Zwiers, L.-H., Turgeon, B. G., Goodwin, S. B., Spatafora, J. W., Crous, P. W., Grigoriev, I., V. 2020. 101 Dothideomycetes genomes: a test case for predicting lifestyles and emergence of pathogens. Studies in Mycology (accepted).
2. Flakus, A., Etayo, J., Miadlikowska, J., Lutzoni, F., Kukwa, M., Matura, N., and Rodriguez-Flakus, P. 2019. Biodiversity assessment of ascomycetes inhabiting *Lobariella* lichens in Andean cloud forests led to one new family, three new genera and 13 new species of lichenicolous fungi. Plant and Fungal Systematics 64:283-344.
3. Darnajoux, R., Magain, N., Renaudin, M., Lutzoni, F., Bellenger, J.-P., Zhang, X. 2019. Molybdenum threshold for ecosystem scale alternative vanadium nitrogenase activity in boreal forests. Proceedings of the National Academy of Sciences 116:24682-24688.
4. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Zimmerman, N. B., Carbone, I., May, G., Arnold, A. E. 2019. Host availability drives distributions of fungal endophytes in the imperiled boreal realm. Nature Ecology and Evolution 3:1430-1437.

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5. Armaleo, D., Müller, O., Lutzoni, F., Andrésson, Ó. S., Blanc, G., Bode, H. B., Collart, F. R., DalGrande, F., Dietrich, F., Grigoriev, I. V., Joneson, S., Kuo, A., Larsen, P. E., Logsdon, J. M., Lopez, D., Martin, F., May, S. P., McDonald, T. R., Merchant, S. S., Miao, V., Morin, E., Oono, R., Pellegrini, M., Rubinstein, N., Sanchez -Puerta, M. V., Savelkoul, E., Schmitt, I., Slot, J. C., Soanes, D., Szoevenyi, P., Talbot, N. J., Veneault-Fourrey, C., Xavier, B. B. 2019. The lichen symbiosis re-viewed through the genomes of *Cladonia grayi* and its algal partner *Asterochloris glomerata*. BMC Genomics 20:605.

6. Carbone, I., White, J. B., Miadlikowska, J., Arnold, A. E., Miller, M. A., Magain, N., U'Ren, J. M., Lutzoni , F. 2019. T-BAS version 2.1: Tree-Based Alignment Selector toolkit for evolutionary placement and viewing of alignments and metadata on curated and custom trees. Microbiology Resource Announcements 8:e00328-19.

7. Chen, K. H., Liao, H.-L., Bellenger, J.-P., Lutzoni, F. 2019. Differential gene expression associated with fungal trophic shifts along the senescence gradient of the moss *Dicranum scoparium*. Environmental Microbiology 21:2273-2289.

8. Chagnon, P. L., Magain, N., Miadlikowska, J. Lutzoni, F. 2019. Species diversification and phylogenetically constrained symbiont switching generated high modularity in the lichen genus *Peltigera*. Journal of Ecology 107:1645-1661.

9. Lutzoni, F., Nowak, M. D., Alfaro, M. E., Reeb, V., Miadlikowska, J., Krug, M., Arnold, A. E., Lewis, L. A., Swofford, D., Hibbett, D., Hilu, K., James, T. Y., Quandt, D. and Magallón, S. 2018. Contemporaneous radiations of fungi and plants linked to symbiosis. Nature Communications 9:5451. **Altmetric score, Jan. 24, 2020: 199.**

10. Miadlikowska, J., Magain, N., Pardo-De la Hoz, C. J., Niu, D., Goward, T., Sérusiaux, E. and Lutzoni, F. 2018. Species in section *Peltidea* (*aphthosa* group) of the genus *Peltigera* remain cryptic after molecular phylogenetic revision. Plant and Fungal Systematics 63:45-64.

11. Korotkin, H. B., Swenie, R. A., Miettinen, O.. Budke, J. M., Chen, K.-H., Lutzoni, F., Smith, M. E., and Matheny, P. B. 2018. Stable isotope analyses reveal previously unknown trophic mode diversity in the Hymenochaetales. American Journal of Botany 105:1869-1887.

12. Pardo-De La Hoz, C. J., Magain, N., Lutzoni, F., Goward, T., Restrepo, S., Miadlikowska, J. 2018. Contrasting symbiotic patterns in two closely related lineages of trimembered lichens of the genus *Peltigera*. Frontiers in Microbiology 9:2770.

13. Magain, N., Truong, C., Goward, T., Niu, D., Goffinet, B., Sérusiaux, E., Vitikainen, O., Miadlikowska, J., Lutzoni, F. 2018. Species delimitation at a global scale reveals high species richness with complex biogeography and patterns of symbiont association in *Peltigera* section *Peltigera* (lichenized Ascomycota, Lecanoromycetes). Taxon 67:836-870.

14. Lu, J., Magain, N., Miadlikowska, J., Coyle, J. R., Truong, C., Lutzoni, F. 2018. Bioclimatic factors at an intrabiome scale are more limiting than cyanobiont availability for the lichen-forming genus *Peltigera*. American Journal of Botany 105:1198-1211.

15. Chagnon, P. L, Magain, N., Miadlikowska, J., and Lutzoni, F. 2018. Strong specificity and network modularity at a very fine phylogenetic scale in the lichen genus *Peltigera*. Oecologia 187:767-782.

16. Chen, K.-H., Liao, H.-L., Arnold, A. E., Bonito, G., and Lutzoni, F. 2018. RNA-based analyses reveal fungal communities structured by a senescence gradient in the moss *Dicranum scoparium* and the presence of putative multi-trophic fungi. New Phytologist 218:1597-1611.

17. Kauff, F., Bachran, A. C., Schultz, M., Hofstetter, V., Lutzoni, F., Büdel, B. 2018. Molecular data favours a monogeneric Peltulaceae (Lichinomycetes). The Lichenologist 50:313-327.

18. Magain, N., Miadlikowska, J., Mueller, O., Gajdeczka, M., Truong, C., Salamov, A., Dubchak, I., Grigoriev, I. V., Goffinet, B., Sérusiaux, E., and Lutzoni, F. 2017. Conserved genomic collinearity as a source of broadly applicable, fast evolving, markers to resolve species complexes: a case study using the lichen-forming genus *Peltigera* section *Polydactylon*. Molecular Phylogenetics and Evolution 117:10-29. 25th anniversary issue of Molecular Phylogenetics and Evolution.

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19. Carbone, I., White, J. B., Miadlikowska, J., Arnold, A. E., Miller, M. A., Kauff, F., U'Ren, J. M., May, G., and Lutzoni, F. 2017. T-BAS: Tree-Based Alignment Selector toolkit for phylogenetic-based placement, alignment downloads, and metadata visualization: an example with the Pezizomycotina tree of life. Bioinformatics 33:1160-1168.

20. Heidmarsson, S., Gueidan, C., Miadlikowska, J. and Lutzoni, F. 2017. Multi-locus phylogeny supports the placement of *Endocarpon pulvinatum* within *Staurothele* s. str. (lichenised ascomycetes, Eurotiomycetes, Verrucariaceae). Phytotaxa 306:37-48.

21. Magain, N., Miadlikowska, J., Goffinet, B., Sérusiaux, E., and Lutzoni. F. 2017. Macroevolution of specificity in cyanolichens of the genus *Peltigera* section *Polydactylon* (Lecanoromycetes, Ascomycota). Systematic Biology 66:74-99.

22. Darnajoux, R., Zhang, X., McRose, D. L., Miadlikowska, J., Lutzoni, F., Kraepiel, A. M. L., and Bellenger, J.-P. 2017. Biological nitrogen fixation by alternative nitrogenases in boreal cyanolichens: importance of molybdenum availability and implications for current biological nitrogen fixation estimates. New Phytologist 213:680-689.

23. van Nieuwenhuijzen, E. J., Miadlikowska, J. M., Houbraken, J. A. M. P., Adan, O. C. G., Lutzoni, F. M., Samson, R. A. 2016. Wood staining fungi revealed taxonomic novelties in Pezizomycotina: New order Superstartomycetales and a new species *Cyanodermella oleoligni*. Studies in Mycology 85:107-124.

24. Magain, N., Sérusiaux, E., Zhurbenko, M. P., Lutzoni, F., and Miadlikowska, J. 2016. Disentangling the *Peltigera polydactylon* species complex by recognizing two new taxa, *P. polydactylon* subsp. *udeghe* and *P. seneca*. Herzogia 29:514-528.

25. Hestmark, G., Lutzoni, F., and Miadlikowska, J. 2016. Photobiont associations in co-occurring umbilicate lichens with contrasting modes of reproduction in coastal Norway. The Lichenologist 48:545-557.

26. U'Ren, J., Miadlikowska, J., Zimmerman, N. B., Lutzoni, F., Stajich, J. E., and Arnold, A. E. 2016. Contributions of North American endophytes to the phylogeny, ecology, and taxonomy of Xylariaceae (Sordariomycetes, Ascomycota). Molecular Phylogenetics and Evolution 98:210-232.

27. Chagnon, P.-L., U'Ren, J. M., Miadlikowska, J., Lutzoni, F., Arnold, A. E. 2016. Interaction type influences ecological network structure more than local abiotic conditions: Evidence from endophytic and endolichenic fungi at a continental scale. Oecologia 180:181-191.

28. Oono, R., Lefèvre, E., Simha, A., and Lutzoni, F. 2015. A comparison of the community diversity of foliar fungal endophytes between seedling and adult loblolly pines (*Pinus taeda*). Fungal Biology 119:917-928.

29. Gaya, E., Fernández-Brime, S., Vargas, R., Lachlan, R. F., Gueidan, C., Ramírez-Mejía, M., Lutzoni, F. 2015. The adaptive radiation of lichen-forming Teloschistaceae is associated with sunscreening pigments and a bark-to-rock substrate shift. Proceedings of the National Academy of Sciences 112:11600-11605.

30. Darnajoux, R., Lutzoni, F., Miadlikowska, J., and Bellenger, J.-P. 2015. Determination of elemental baseline using peltigeralean lichens from Northeastern Canada (Québec): Initial data collection for long term monitoring of the impact of global climate change on boreal and subarctic areas in Canada. Science of the Total Environment 533:1-7.

31. Chen, K.-H., Miadlikowska, J., Molnár, K., Arnold, A. E., U'Ren, J. M., Gaya, E., Gueidan, C. and Lutzoni, F. 2015. Phylogenetic analyses of eurotiomycetous endophytes reveal their close affinities to Chaetothyriales, Eurotiales and a new order – Phaeomoniellales. Molecular Phylogenetics and Evolution 85:117-130.

32. Oono, R., Lutzoni, F., Arnold, A. E., Kaye, L., U'ren, J. M., May, G., Carbone, I. 2014. Genetic variation in horizontally transmitted fungal endophytes of pine needles reveals population structure in cryptic species. American Journal of Botany 101:1362-1374.

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33. Miadlikowska, J., Richardson, D., Magain, N., Ball, B., Anderson, F., Cameron, R., Lendemer, J., Truong, C., and Lutzoni, F. 2014. Phylogenetic placement, species delimitation, and cyanobiont identity of endangered aquatic *Peltigera* species (lichen-forming Ascomycota, Lecanoromycetes). American Journal of Botany 101:1141-1156.

34. Miadlikowska, J., Kauff, F., Högnabba, F., Oliver, J. C., Molnár, K., Fraker, E., Gaya, E., Hafellner, J., Hofstetter, V., Gueidan, C., Otálora, M. A. G., Hodkinson, B., Kukwa, M., Lücking, R., Björk, C., Sipman, H. J. M., Burgaz, A. R., Thell, A., Passo, A., Myllys, L., Goward, T., Fernández-Brime, S., Hestmark, G., Lendemer, J., Lumbsch, H. T., Schmull, M., Schoch, C. L., Sérusiaux, E., Maddison, D. R., Arnold, A. E., Stenroos, S. and Lutzoni, F. 2014. Multigene phylogenetic synthesis for the class Lecanoromycetes (Ascomycota): 1307 fungi representing 1139 infrageneric taxa, 312 genera and 66 families. Molecular Phylogenetics and Evolution 79:132-168 (journal cover). ****As of January 12, 2018, eighth most cited article published in this journal****

35. Darnajoux, R., Constantin, J., Miadlikowksa, J., Lutzoni, F., and Bellenger, J.-P. 2014. Is vanadium a biometal for boreal cyanolichens? New Phytologist 202:765-771.

36. Hodkinson, B. P., Allen, J. L., Forrest, L., Goffinet, B., Sérusiaux, E., Andrésson, Ó. S., Miao, V., Bellenger, J.-P., and Lutzoni, F. 2014. Lichen-symbiotic cyanobacteria associated with *Peltigera* have an alternative vanadium-dependent nitrogen fixation system. European Journal of Phycology 49:11-19.

37. McDonald, T. R., Mueller, O., Dietrich, F. S., and Lutzoni, F. 2013. High-throughput genome sequencing of lichenizing fungi to assess gene loss in the ammonium transporter/ammonia permease gene family. BMC Genomics 14:225.

38. McDonald, T. R., Gaya, E, and Lutzoni F. 2013. Twenty-five cultures of lichenizing fungi available for experimental studies on symbiotic systems. Symbiosis 59:165-171.

39. O'Brien, H. E., Miadlikowska, J. and Lutzoni, F. 2013. Assessing population structure and host specialization in lichenized cyanobacteria. New Phytologist 198:557-566.

40. Fernández-Brime, S., Llimona, X., Lutzoni, F., and Gaya, E. 2013. Phylogenetic study of *Diploschistes* (lichen-forming Ascomycota: Ostropales: Graphidaceae), based on morphological, chemical and molecular data. Taxon 62:267-280.

41. Sliwa, L., Miadlikowska, J., Redelings, B. D., Molnar, K., Lutzoni, F. 2012. Are widespread morphospecies from the *Lecanora dispersa* group (lichen-forming Ascomycota) monophyletic? The Bryologist 115:265–277.

42. Gazis, R., Miadlikowska, J., Lutzoni, F., Arnold, E. and Chaverri, P. 2012. Culture-based study of endophytes associated with rubber trees in Peru reveals a new class of Pezizomycotina: Xylonomycetes. Molecular Phylogenetics and Evolution 65:294-304.

43. Geml, J., Kauff, F., Brochmann, C., Lutzoni, F., Laursen, G., Redhead, S.A., and Taylor, D.L. 2012. Frequent circumarctic and rare transequatorial dispersals in the lichenised agaric genus *Lichenomphalia* (Hygrophoraceae, Basidiomycota). Fungal Biology 116:388-400.

44. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Laetsch, A. D., and Arnold, A. E. 2012. Host- and geographic structure of endophytic and endolichenic fungi at a continental scale. American Journal of Botany 99:898–914.

45. Gaya, E., Högnabba, F., Holguin, A., Molnar, K., Fernandez–Brime, S., Stenroos, S., Arup, U., Søchting, U., Van den Boom, P., Lücking, R., Sipman, H. J. M., Lutzoni, F. 2012. Implementing a cumulative supermatrix approach for a comprehensive phylogenetic study of the Teloschistales (Pezizomycotina, Ascomycota). Molecular Phylogenetics and Evolution 63:374-387.

46. Prieto, M., Martinez, I., Aragón, G. G., Gueidan, C., and Lutzoni, F. 2012. Molecular phylogeny of *Heteroplacidium*, *Placidium* and related catapyrenioid genera (Verrucariaceae, lichen-forming Ascomycota). American Journal of Botany 99:23-35.

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127. Sirois, L., Lutzoni, F. and Grandtner, M. M. 1988. Les lichens sur serpentine et amphibolite du plateau du mont Albert, Gaspésie, Québec. Canadian Journal of Botany 66: 851–862.

REFEREED PUBLICATIONS GENERATED BY MEMBERS OF MY LAB, WHILE IN MY LAB AT DUKE, FOR WHICH I AM NOT A CO–AUTHOR

Ertz, D., Zhurbenko, M., Diederich, P. and **Miadlikowska, J**. 2003. A new species of *Plectocarpon* on *Peltigera* (lichenicolous Roccellaceae, Ascomycota). Lichenologist 106: 465–467.

Ertz, D., Diederich, P. and **Miadlikowska, J.** 2004. The lichenicolous *Opegrapha* species (Roccellaceae, Ascomycota) with 3–septate ascospores on *Pertusaria* and *Ochrolechia*. Botanical Journal of the Linnean Society 144: 235–241.

Gaya, E. 2009. Taxonomical revision of the *Caloplaca saxicola* group (*Teloschistaceae*, lichen-forming Ascomycota). Bibliotheca Lichenologica Vol. 101.

GOVERNMENT PUBLICATIONS

Lutzoni, F. 1990. Les lichens. *In*: Portrait de la végétation et de la flore du Saint–Laurent. Eds: Gratton, L. and C. Dubreuil. Direction de la conservation et du patrimoine écologique, Ministère de l'environnement, Québec.

Lutzoni, F. 1990. Les Lichens. In: État des connaissances sur les algues marines benthiques macroscopiques, les lichens et les bryophytes du couloirs du Saint–Laurent. Rapports préparés pour la Direction de la conservation et du patrimoine écologique, Ministère de l'environnement, Québec, p. 23–40.

INVITED ORAL PRESENTATIONS

(The name of the speaker is underlined for multi-author presentations)

1. Lutzoni, F., 2019. I was invited to give a talk at the Global Conference on Plant Science and Research (GPR 2019) to be held in Valencia, Spain, September 23-25, 2019. I declined this invitation because of other commitments.
2. Lutzoni, F., 2019. I was invited to give a potential plenary oral presentation at the 15th European Conference on Fungal Genetics (ECFG15), Evolution and Molecular Ecology Plenary session. Rome, Italy, 17-20 February 2020. I was not able to accept this invitation because of other commitments.
3. Lutzoni, F., 2019. I was invited to give a plenary talk at the 6th World Congress and Expo on Applied Microbiology that will take place in Rome, Italy, October 21-22, 2019. I declined this invitation because of other commitments.
4. Lutzoni, F., 2019. I was invited to give a talk at the 4th Global Conference on Plant Science and Molecluar Biology (GPMB 2019) to be held in London, UK in Sept. 2019. I declined the invitation because of the extensive, research related, traveling during the summer and teaching commitment in the fall.
5. Lutzoni F. 2019. I was invited to give a talk in the Department of Botany at the University of Cape Town, South Africa. The talk was given by A. Elizabeth Arnold.
6. Geml, J., Arnold, A. E., Nouhra, E., Morgado, L. N., Grau, O., Ibánez, A., and Lutzoni, F. 2019. Richness and community composition of taxonomic and functional groups of fungi along Neotropical and Palaeotropical elevation gradients. "Tropical mountains" symposium of the Tropical Ecology conference organized by the British Ecological Society and the German Tropical Ecology Society. Edinburgh, Scotland.
7. Lutzoni, F. 2018. Lichens and plants microbiomes for a comprehensive understanding of symbiotic systems. First Friday Microbiome seminar series: Microbiome research across disciplines and its impact on health and the environment. University of North Caroline, Chapel Hill, Nov. 2.
8. Lutzoni, F. 2017. Synchronized radiations of fungi and plants linked to symbiosis. XIX International Botanical Congress (IBC). Shenzhen, China, July 23-29.
9. Miadlikowska, J., Magain, N., Lu, J., Chagnon, P-L., Goffinet, B., Serusiaux, E., Lutzoni, F. 2017. Evolution of lichen symbiosis from the perspective of *Peltigera* and its *Nostoc* partner. XIX International Botanical Congress (IBC). Shenzhen, China, July 23-29.
10. Chen, K.-H., Liao, H.-L., Korotkin, H. B., Matheny, P. B., Lutzoni, F. 2017. Functional ecology of mycobiome shifts associated with plant senescence - linking environmental and experimental re-synthesis metatranscriptomics. XIX International Botanical Congress (IBC). Shenzhen, China, July 23-29.
11. Pardo-De la Hoz, C. J., Magain, N., Lutzoni, F., Restrepo, S., Miadlikowska, J. 2017. The role of symbiotic interactions in shaping evolutionary and spatial patterns in trimembered lichens from the genus *Peltigera*. IX Congreso Latinoamericano de Micología (CLAM). Lima, Peru, August 22-25.
12. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Leo, A., May, G., Carbone, I., Arnold, A. E. 2017. Boreal endolichenic fungal community structure at local, regional, and global scales. I was invited to give this talk as part of "Future Arctic" a global initiative on bryophyte and lichen Arctic research: from species to ecosystems, Université Laval, Québec, Canada, May 24-26.
13. Armaleo, D., Lutzoni, F., and Gosselin-Ildari, A., 2017. I was invited to be a panelist for a discussion on the Teaching of Equity Fellows Program at Duke as part of EATS, in the Department of Evolutionary Anthropology, Duke University, May 5.

INVITED ORAL PRESENTATIONS (continued)

14. Arnold, A. E., U'Ren, J. M., Miadlikowska, J., Carbone, I., Huang, Y.-L., Bowman, E. A., May, G., Lutzoni, F. 2016. Perspectives from leaves and lichens on the scale and distribution of the global endobiome. Presented as part of a symposium at the annual meeting of the Mycological Society of America, University of California, Berkeley, August 7-11.

15. Carbone, I., White, J. B., Miadlikowska, J., Arnold, A. E., Miller, M. A., Kauff, F., Schoch, C., U'Ren, J. M., May, G., Lutzoni, F. 2016. T-BAS: Tree-based alignment selector toolkit for phylogenetic-based placement, alignment downloads, and metadata visualization: an example with the Pezizomycotina tree of life. Presented as part of a symposium entitled "Dimensions of fungal biodiversity: mycology at the interface of genetic, phylogenetic, and functional diversity" at the annual meeting of the Mycological Society of America, University of California, Berkeley, August 7-11.

16. Chen, K.-H., Liao, H.-L., Arnold, A. E., Lutzoni, F. 2016. Metatranscriptomic analysis of the moss Dicranum scoparium reveals active fungal communities and functionalities across a senescence gradient. Invited presentation as part of a symposium entitled "Seed-free Plants at the Genomic Scale" at the Botany 2016 meeting, Savannah, Georgia, July 30 - August 3.

17. Lutzoni, F. 2016. Evolution of specificity within the lichen-forming genus *Peltigera* and its cyanobacterial partner *Nostoc*. Cellular and Molecular Fungal Biology, Gordon Research Conference, Holderness School in Plymouth, New Hampshire, June 19-24, 2016.

18. Lutzoni, F., Miadlikowska, J., and Arnold, A. E. 2015. A global phylogeny and classification of the Pezizomycotina. Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015.

19. Miadlikowska, J., Stenroos, S., and Lutzoni, F. 2015. Phylogenetic synthesis of the Lecanoromycetes. Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015.

20. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Gleason, T., Leo, A., Monacell, J. T., Arendt, K., Lefevre, E., Ball, B., Chen, K.-H., May, G., Carbone, I., Arnold, A. E. 2015. Geographic and temporal structure of endophytic and endolichenic fungal communities of the boreal biome. Invited as part of a symposium entitled "Biodiversity of Fungi" at the 28th Fungal Genetics Conference, Pacific Grove, Asilomar, California, March 17-22, 2015.

21. Miadlikowska, J., Magain, N., Goffinet, B., Sérusiaux, E., Lutzoni, F. 2015. Evolution of specificity in the lichen-forming genus *Peltigera* and its cyanobacterial partner: consequences on speciation rate and geographical range. Invited as part of a symposium entitled "Biodiversity of Fungi" at the 28th Fungal Genetics Conference, Pacific Grove, Asilomar, California, March 17-22, 2015.

22. Lutzoni, F. 2014. An evolutionary, ecological and genomic exploration of the lichen symbiosis and its microbiome. Department of Biology, University of Copenhagen, Denmark, December 15, 2014.

23. Lutzoni, F. 2014. A multidimentional exploration of the lichen symbiosis within the macroevolutionary context of fungi and land plants. Keynote presentation at the VIII Congreso Latinoamericano de Micología. Medellin, Colombia, November 4-7, 2014. http://almic.org/invitados

24. Magain, N., Miadlikowska, J., Goffinet, B., Sérusiaux, E., Lutzoni, F. 2014. Evolution of specificity within the lichen-forming genus *Peltigera* and its cyanobacterial partner: Consequences on speciation rate and geographical range. Invited as part of a symposium entitled "Evolution, ecology, and genetics of specificity in fungal symbioses" at the 10th International Mycological Congress, Bangkok, Thailand, August 3-8, 2014.

25. Lutzoni, F. 2014. A multidimentional exploration of the lichen symbiosis within the macroevolutionary context of fungi and land plants. Invited by graduate students of the Department of Ecology, Evolution, and Organismal Biology, and the Ecology and Evolutionary Biology Interdepartmental Graduate Program. Iowa State University, Ames, Iowa, March 13, 2014.

26. Lutzoni, F. 2013. Many Fungi = Less Characters: The phylogenetic challenges of capturing a hyperdiverse fungal biodiversity. CBS Spring Symposium entitled "One fungus = which gene(s)". Amsterdam, The Netherlands, April 10-11, 2013.

INVITED ORAL PRESENTATIONS (continued)

27. Bellenger, J.-P., Darnajoux, R., Hodkinson, B., Miadlikowska, J., and Lutzoni, F. 2013. Metal homeostasis in the tri-membered lichen *Peltigera aphthosa*: another demonstration of the potential importance of vanadium to N2 fixation worldwide. As part of a symposium entitled "Metal speciation in living cells" at the 96th Canadian Chemistry Conference, Québec city, Canada, May 26-30, 2013.

28. Armaleo, D., Lutzoni, F., Mueller O., Martin, F., Blanc, G., Lopez, D., Merchant, S., and Collart, F. 2012. Decoding symbiosis: The genomes of the lichen-forming fungus *Cladonia grayi* and its algal partner *Asterochloris* sp. Annual Scientific meeting of the British Mycological Society, University of Alicante, Spain, September 3-6, 2012. I had to cancel this talk because of a last minute invitation to participate in a DFG review panel in Germany, which was scheduled nearly at the same time as this meeting.

29. Lutzoni, F., Nowak, M., Alfaro, M., U'Ren, J., Arnold, A. E., Miadlikowska, J., and Magallon, S. 2012. A multidimentional exploration of plant-fungal symbioses and their associated shifts in diversification rate. As part of a symposium entitled "Interdisciplinary approaches to symbiotic inquiry: Revealing earth biodiversity" at the 7th International Symbiosis Society Congress, Krakow, Poland, July 22-28, 2012. I was invited to organize this symposium with the expectation from the organizational committee that I would be giving a talk at the beginning of that symposium.

30. Lutzoni, F. 2012. An evolutionary, ecological and genomic exploration of the lichen symbiosis and its microbiome. Department of Biology, University of Copenhagen, May 11, 2012. I had to cancel this talk because I did not have my passport, due to problems in obtaining a visa to conduct field work in Brazil for an NSF funded project.

31. Lutzoni, F., Magallon, S., Nowak, M., Alfaro, M., McDonald, T., Miadlikowska, J., Reeb. V. 2012. The Dating of fungi and plants. As part of a symposium entitled "Molecular Phylogenetics" at the 7th International Association for Lichenology Symposium, Bangkok, Thailand, January 9-13, 2012.

32. Lutzoni, F., Miadlikowska, J., Reeb, V., Nowak, M., Molnar, K., U'Ren, J., Kauff, F., Gaya, E., Alfaro, M., Magallón, S., and Arnold, A. E. 2011. A comprehensive phylogenetic overview of spatial and host distribution of endolichenic and endophytic fungi based on 15,000 tissue samples. As part of a symposium entitled "Mechanisms of fungal-plant interactions: perspectives from the interface of ecology, evolutionary biology, and genomics" at the annual meeting of the Mycological Society of America, Fairbanks, Alaska, August 1-6, 2011.

33. Mueller, O., Blanc, G., Collart, F., Larsen, P., Martin, F., Morin, E., Lutzoni, F., and Armaleo, D. 2011. Evolutionary insights from comparative genomics of lichen symbioses**.** As part of a symposium entitled "Mechanisms of fungal-plant interactions: perspectives from the interface of ecology, evolutionary biology, and genomics" at the annual meeting of the Mycological Society of America, Fairbanks, Alaska, August 1-6, 2011.

34. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., and Arnold, A. E. 2011. Diversity and biogeography of endophytic and endolichenic fungal communities. As part of a symposium entitled "Molecular ecology and biodiversity of arctic and boreal fungi" at the annual meeting of the Mycological Society of America, Fairbanks, Alaska, August 1-6, 2011.

35. Lutzoni, F. and Armaleo D. 2011. Lichen genomics. Pacific Northwest National Laboratory. This talk was given through an online system to PIs of the foundational scientific focus area (FSFA) under DOE–BER's genomic sciences program; Co–evolved autotroph–heterotroph associations (AHAs); April 28, 2001.

36. Lutzoni, F. 2011. Origin of the lichen symbiosis and contribution of the lichen microbiome to fungal and bacterial diversity. Finnish Museum of Natural History. Helsinki, Finland, March 9, 2011.

37. Lutzoni, F., and Armaleo, D. 2010. Symbiosis genomics: Lichens as a model system for mutualism between heterotrophs and photoautotrophs. Research Presentation. Duke Institute for Genome Sciences and Policy, as part of their annual retreat; November 15, 2010.

INVITED ORAL PRESENTATIONS (continued)

38. McDonald, T., Armaleo, D., Dietrich, F., and Lutzoni, F. 2010. Horizontal gene transfer in the evolutionary history of ammonium transporters in fungi. As part of a symposium entitled "Comparative evolutionary genomics & the fungal tree of life." The 9th International Mycological Congress (IMC9), Edinburgh, UK, 1–6 August, 2010.

39. Magallón, S., Reeb, V., Nowak, M., James, T., and Lutzoni, F. 2010. A comprehensive estimation of divergence time for the fungi and their coevolution with land plants. As part of a symposium entitled "Origin and co–evolution of lichen and mycorrhizal fungi with plants." The 9th International Mycological Congress (IMC9), Edinburgh, UK, 1–6 August, 2010.

40. Joneson, S., Armaleo, D., and Lutzoni, F. 2010. Fungal–Algal Interactions in Lichen Symbiosis. As part of a symposium entitled "The fungal–plant interface in mycorrhizal & lichen associations." The 9th International Mycological Congress (IMC9), Edinburgh, UK, 1–6 August, 2010.

41. Arnold, A. E., U'Ren, J. M., Kauff, F., Miadlikowska, J., Molnar, K., and Lutzoni, F. 2010. Origins and co–evolution of endolichenic and endophytic fungi. As part of a symposium entitled "Origin and co–evolution of lichen and mycorrhizal fungi with plants." The 9th International Mycological Congress (IMC9), Edinburgh, UK, 1–6 August, 2010.

42. Lutzoni, F. 2010. (Plenary lecture.) Invited by Pedro Crous chair of the plenary session entitled "Fungal Diversity and Evolution" to give a lecture entitled "Macroevolution as a unifying framework for integrative studies of fungal symbiotic systems" at the 10th European Conference on Fungal Genetics (ECFG10). The Netherlands.

43. Lutzoni, F., Joneson, S., McDonald T., Armaleo, D. 2009. Macroevolution as a unifying framework for integrative studies of symbiotic systems. As part of a symposium focusing on symbiotic evolutionary innovations. The 6th International Symbiosis Society Congress, University of Wisconsin–Madison.

44. Lutzoni, F., Miadlikowska, J., U'Ren, J.M., Molnar, K., Gaya, E., Arnold, A.E. 2009. The lichen microbiome and the evolution of fungi. As part of a symposium entitled "Unusual Fungal Niches." Mycological Society of America annual meeting, Snowbird, Utah.

45. Arnold, A. E., Miadlikowska, J, U'Ren, J.M, Del Olmo–Ruiz, M., Hoffman, M.T., Gaya, E., Lutzoni, F. 2009. Evolutionary perspectives on the origins of endophytic fungi. As part of a symposium entitled "Phylogenetic and functional patterns of host plants and their associated fungi: Implications for symbiotic co–evolution, community interactions, and ecosystem processes." Mycological Society of America annual meeting, Snowbird, Utah.

46. Lutzoni, F. January 2008. Developing a lichen model system and a new scheme to assemble the tree of life. Departmental Seminar series. Department of Ecology and Evolutionary Biology, Yale University.

47. Lutzoni, F. March 2008. Developing a lichen model system and a new scheme to assemble the tree of life. Invited talk and lecture (as part of a graduate course entitled Fungal Biology) at the University of Minnesota in Minneapolis.

48. Lutzoni, F. July 2008. A mutualistic approach to the study of lichens. One of two keynote addresses at the Sixth International Association for Lichenology meeting in Asilomar, California.

49. Lutzoni, F. August 2008. Large–scale data management and visualization of phylogenetic inference for multidisciplinary mycological research. As part of a symposium entitled "Progress in the phylogeny of fungi: One gene, four genes, genomes. International Union of Microbiological Societies (IUMS) symposium (focusing on medical mycology), Istanbul, Turkey.

50. Gueidan, C., and Lutzoni, F. August 2008. Extremotolerance as a possible source of virulence factors in the Chaetothyrialean black yeast: evidence from molecular phylogenetic studies. I was invited to give this second talk at the IUMS meeting, but I convinced the organizers to let Cécile Gueidan (who completed her Ph.D. in my lab in Dec. 2007) to give this talk. This talk was part of a symposium entitled "Black yeast: life on the extreme". IUMS meeting (focusing on medical mycology), Istanbul, Turkey.

INVITED ORAL PRESENTATIONS (continued)

51. Ball, B., and Lutzoni, F. August 2008. Priming the fungal tree of life. As part of a symposium entitled "Resolving the evolutionary history of the Fungi". Annual meeting of the Mycological Society of America, Penn. State University.

52. Lutzoni, F., Kauff, F., Oliver, J., Miadlikowska, J., Lenards, A., Maddison, D. August 2008. Past, present, and future of AFToL phyloinformatics. As part of a symposium entitled "Resolving the evolutionary history of the Fungi". Annual meeting of the Mycological Society of America, Penn. State University.

53. Lutzoni, F. September 2008. I was invited to give the keynote address for the session entitled "Taxonomie, Biodiversité et Écologie" as part of the "Journées du Réseau de Mycologie de la Société Française de Microbiologie" in Brest, France. This meeting was cancelled.

54. Lutzoni, F. November 2008. Macroevolution as the unifying framework for integrative studies of symbiotic systems. I was a Keynote speaker for this Darwin–Day symposium at the Universidad de los Andes in Bogota, Colombia. More than 400 people attended this symposium.

55. Lutzoni, F. December 2008. A mutualistic approach to the study of symbiotic systems. Invited by the Department of Biology, University of William and Mary, Williamsburg, Virginia.

56. Lutzoni, F. 2008. I was invited to give a talk at George Washington University as part of a seminar series on High Performance Computing. My talk would have focused on the bioinformatic data management and processing pipeline (WASABI) that we developed for Assembling the Fungal Tree of Life project. I declined the invitation because I could not schedule this trip. I propose to postpone this seminar to spring of 2009. They seem interested in this possibility, but did not contacted me.

57. Lutzoni, F. Feb. 2008. I was invited to give a seminar at Rutgers, which would be part of a Seminar Course for the Plant Biology Graduate Students organized by Lena Struwe and James White held in the Department of Plant Biology and Pathology. (I declined this invitation because I was unable to fit this seminar in my schedule for the Spring semester of 2008).

58. Lutzoni, F., Kauff, F., and Cox, C. 2007. AFToL and WASABI. First Processing Phylodata (pPOD) Community meeting. National Evolutionary Synthesis Center (NESCent), North Carolina.

59. Lutzoni, F. 2007. WASABI as a bioinformatic pipeline for large–scale DNA sequencing of biodiversity. Smithsonian Museum of Natural History, Washington, DC.

60. Lutzoni, F. 2007. Alternative markers to COI for lichen-forming fungi and Ascomycota in general. The All–Fungi Barcode Initiative Workshop. Smithsonian Conservation Research Center, Front Royal, Virginia.

61. Lutzoni, F. 2007. Developing phyloinformatic tools for an evolutionary understanding of molecular diversity: a case study of hyperdiverse cryptic fungi and evolution of pathogenicity. Molecular Biodiversity and DNA Barcode Workshop, Rome, Italy.

62. Lutzoni, F. and Gueidan, C. 2007. Principles and practices for the establishment of a phylogenetically based classification of the Verrucariales. Second workshop on the Verrucariales, Akureyri, Iceland.

63. Gueidan, C., Roux, C., and Lutzoni, F. 2007. Generic delineation and character evolution in the Verrucariaceae. Second workshop on the Verrucariales, Akureyri, Iceland.

64. Gueidan, C., Ruibal, C., de Hoog, G. S., Untereiner, W. A., Gorbushina, A., and Lutzoni, F. 2007. Lifestyle evolution and substrate transition in the herpotrichiellaceous black yeast fungi and related taxa. Second workshop on Black Yeast Fungi, Utrecht, The Netherlands.

65. Joneson, S., Dietrich, F., Lutzoni, F., Armaleo, D. 2007. Differentially regulated genes and lichen symbiosis. As part of the symposium entitled "Fungal Evolutionary Genomics". Annual meeting of the Mycological Society of America, Baton Rouge, Louisiana.

66. Gueidan, C., Ruibal, C., de Hoog, G. S. and Lutzoni, F. 2006. Phylogenetic relationships and the evolution of lifestyles within the Eurotiomycetes (Fungi, Ascomycota). 8th International Mycological Congress. Cairns, Australia.

INVITED ORAL PRESENTATIONS (continued)

67. Gueidan, C., Roux, C. and Lutzoni, F. 2006. Molecular phylogeny of the Verrucariales and the transition from mutualism to parasitism in the Chaetothyriomycetidae. First workshop on Black Yeast Fungi, Graz, Austria.

68. O'Brien, H. E., and Lutzoni F. 2006. Are symbionts less diverse than their hosts? Insights from molecular systematics. 8th International Mycological Congress. Cairns, Australia.

69. Miadlikowska, J., Arnold, A. E., and Lutzoni, F. 2006. Leaves and lichens are cradles of fungal diversification. 8th International Mycological Congress. Cairns, Australia.

70. Lutzoni, F. April 7, 2006. Automation of large–scale phylogenetic studies and its contribution to ecological and evolutionary studies. Dept. of Ecology and Evolution, University of Lausanne, Lausanne, Switzerland.

71. Lutzoni, F. Feb. 2006. Major innovation in assembling the fungal tree of life and its contribution to ecological and evolutionary studies. Universidad Complutense, Madrid, Spain.

72. Lutzoni, F. Feb. 2006. Major innovation in assembling the fungal tree of life and its contribution to ecological and evolutionary studies. Departament de Biologia Vegetal, Universitat de Barcelona, Spain.

73. Lutzoni, F., Arnold, A. E., Kauff, F., Miadlikowska, J., Reeb, V. Nov. 2005. Symbioses and their roles in the origin and maintenance of diversity. Symposium 14: Phylogeny and biodiversity science. Organized by Michael J. Donoghue. First DIVERSITAS Open Science Conference. Oaxaca, Mexico.

74. Lutzoni F. Nov. 2005. Assembling the fungal tree of life and its use in evolutionary studies. Symposium on Fungal Evolution. Centraal Bureau voor SchimmelculturesUppsalalaan 8, 3584 CT Utrecht, The Netherlands.

75. Lutzoni, F., V. Reeb, F. Kauff, and J. Miadlikowska. July 2005. A pluralistic approach as a global solution for phylogenetic analysis of complex data sets. As part of a symposium entitled "Character coding in phylogenetic inference". XVII International Botanical Congress, Vienna, Austria.

76. Lutzoni, F. July 2005. Keynote Speaker for symposium entitled "Evolution of Fungal Symbioses with photosynthetic organisms". XVII International Botanical Congress, Vienna, Austria.

77. Lutzoni, F. March 2005. Toward a comprehensive understanding of fungal symbioses: Integrating evolutionary biology into genomic and genetic studies. Division of plant Pathology and Microbiology, University of Arizona, Tucson.

78. Arnold, A. E., and F. Lutzoni. November 2004. Fungal endophyte diversity across a latitudinal gradient. Asian Mycological Congress, Chiang Mai, Thailand.

79. Kauff, F., C. Cox, and F. Lutzoni. November 20, 2004. The bioinformatics structure of Assembling the Fungal Tree of Life (AFToL). Assembling the Tree of Life – PI meeting. National Science Foundation, USA.

80. Lutzoni, F. November 19, 2004. Assembling the Fungal Tree of Life (AFToL). Assembling the Tree of Life – PI meeting. National Science Foundation, USA.

81. Lutzoni, F. February 2004. What can we learn from lichens about the origin, maintenance and loss of mutualism? Department of Ecology and Evolutionary Biology. University of Michigan, USA.

82. Lutzoni , F. January 2004. Where are we in large–scale phylogenetic studies and assembling the fungal tree of life. As part of the Biology Colloquium series entitled "Evolution and differentiation – new aspect through bioinformatics". University of Kaiserslautern, Germany.

83. O'Brien, H., J. Miadlikowska, and F. Lutzoni. August 2004. Patterns of specificity in cyanobacterial lichen symbioses. Fifth congress of the International Association for Lichenology, Tartu, Estonia.

84. Lutzoni F., October 2003. What can we learn form lichens about the origin, maintenance and loss of mutualism? The Field Museum Research Seminar Series. The Field Museum, Chicago, IL USA.

INVITED ORAL PRESENTATIONS (continued)

85. Lutzoni F., August 2003. What can we learn from lichens about the origin, maintenance and loss of mutualism? Symposium entitled "Are transmission modes important for the evolution of mutualistic symbioses? European Society for Evolutionary Biology. University of Leeds, England.

86. Lutzoni, F. June 2003. Paradise lost: Secondary fungal metabolism and loss of the lichen symmbiosis. Gordon Research Conference: Mycotoxins and Phycotoxins. Colby College, Maine, USA.

87. Alfaro, M, S. Zoller and F. Lutzoni. 2003. Bayes or bootstrap? A simulation study comparing the performance of Bayesian Markov chain Monte Carlo sampling and bootstrapping in assessing phylogenetic confidence. Symposium on new frontier in phylogenetic methods. Mycological Society of America, Asilomar, California. Inoculum 54:10.

88. O'Brien, H., J. Miadlikowska and F. Lutzoni. 2003. A multi–locus study of cyanobacterial specificity associated with four closely related species of lichen-forming fungi. Symposium on lichen symbiosis. 4th International Symbiosis Society Congress Halifax, Nova Scotia, Canada.

89. Lutzoni. F., M. Pagel and V. Reeb. August 2002. Major fungal lineages are derived from lichen symbiotic ancestors. Congress Symposium entitled "Comparative analyses of evolutionary trends in fungi" organized for the Seventh International Mycological Congress (IMC7), Oslo, Norway.

90. Lutzoni, F. July 2002. Invited by the Japanese Society for Lichenology to give a talk part of a symposium entitled "Prospective of Lichenology in 21st Century" at the inaugural annual meeting of this society, Kochi, Japan. I was unable to accept this invitation.

91. Lutzoni, F. May 2002. Contribution of the lichen symbiosis to the diversification of fungi: A new comparative method accommodating phylogenetic uncertainty. Botany Department, University of Washington. "Jill Adams Seminar" annual speaker. Invited by vote of the graduate students.

92. Lutzoni, F. March 2002. Assessing phylogenetic uncertainty: from multiloci congruence to topological accuracy. Invited by the Duke University Program in Genetics (UPG).

93. Lutzoni, F. Feb. 2002. What can we learn about fungal pathogens from lichen symbioses? Invited by the Duke University Mycological Research Unit (DUMRU).

94. Lutzoni, F. October 2001. Major fungal lineages are derived from lichen symbiotic ancestors: A new comparative method accommodating phylogenetic uncertainty. Department of Environmental, Population & Organismic Biology. University of Colorado at Boulder. EPOB Colloquium Series. Invited by vote of the graduate students.

95. Lutzoni, F. January 2001. Contribution of the lichen symbiosis to the diversification of ascomycetes: A new approach to determining confidence levels for ancestral character states. Department of Biological Sciences, University of Minnesota. Invited by vote of the graduate students.

96. Lutzoni, F., M. Pagel and V. Reeb. January 2001. Contribution of the lichen symbiosis to the diversification of fungi: A new approach to determining confidence levels for ancestral character states. Invited by Dr. Mary Saffo for a symposium on Symbioses for the Society for Integrative and Comparative Biology annual meeting, Chicago, Illinois.

97. Lutzoni, F. February, 2000. Resolving alignment ambiguity and determining confidence levels for ancestral character states in assessing how lichenization contributed to the diversification of ascomycetes. . Department of Botany, Duke University. Job interview seminar.

98. Lutzoni, F. November, 1999. Evolutionary consequences of transitions to mutualism, Louisiana State University, Department of Biological Sciences.

99. Lutzoni, F. November, 1999. Evolutionary consequences of transitions to mutualism. University of Louisiana at Lafayette, Biology Department.

100. Lutzoni, F. October, 1999. Origin of lichen symbiosis and its evolutionary consequences. Department of Biology, University of Michigan.

101. Lutzoni, F. September, 1999. Contribution of lichenization to fungal diversity. University of Illinois at Chicago, Ecology and Evolution program.

INVITED ORAL PRESENTATIONS (continued)

102. Lutzoni, F. August, 1999. Contribution of lichenization to the diversification of ascomycetes. XVI International Botanical Congress, St. Louis.

103. Lutzoni, F. March 19, 1999. What can we learn from the nrRNA small subunit about the origin of lichens? Department of Botany, Erindale College, University of Toronto, Canada.

104. Lutzoni, F. March 17, 1999. Accelerated evolution as a consequence of transitions to mutualism. Department of Zoology, St.George Campus, University of Toronto, Canada.

105. Lutzoni, F. October 1998. Accelerated evolution as a consequence of transitions to mutualism. Department of Biology, University of Oregon, Eugene.

106. Lutzoni, F. October 1998. Molecular phylogeny of Ascomycetes and the origin of lichen symbioses. Department of Botany and Plant Pathology, Oregon State University, Corvallis.

107. Lutzoni, F. September 1998. Phylogenetic screening: A new approach to the study of genetic mechanisms essential to lichen symbioses. Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf Switzerland.

108. Lutzoni, F. April 1998. Evolutionary consequences of transitions to a lichen symbiotic state and the integration of ambiguously aligned nucleotide sequences in phylogenetic analyses. Dept. of Botany, University of Wisconsin, Madison.

109. Lutzoni, F. November 1997. Origin of lichens and the evolutionary consequences of a transition to a symbiotic state. Committee on Evolutionary Biology; Evolutionary Morphology seminar series. University of Chicago.

110. Lutzoni, F. September 1997. What can we learn from lichen symbioses? Field Museum Founder's Council, Chicago.

111. Lutzoni, F. April 1997. Origin of lichen symbiosis and its impact on fungal diversity and molecular evolution. Invitation from the Department of Systematics and Ecology, University of Kansas.

112. Lutzoni, F. March 1997. Omphalina/Coccomyxa a new model system for the study of mycobiont–photobiont symbiotic interactions. Invitation from the Department of Botany and Plant Pathology, Michigan State University.

113. Lutzoni, F. 1996. Origin of lichen symbiosis and its impact on fungal diversity and molecular evolution. Invitation from the Department of Biology, Arizona State University.

114. Lutzoni, F. 1995. Evolutionary consequences of a transition to mutualism in the lichen model system Omphalina/Coccomyxa (Basidiomycota/Chlorophyta). Job interview seminar at The Field Museum of Natural History, Chicago.

115. Lutzoni, F. and Vilgalys, R. 1994. Integration of morphological and molecular datasets in estimating fungal phylogenies. Paper presented in the Congress Symposium entitled "Phenotype and genotype: integrating morphological and molecular characters" of the Fifth International Mycological Congress (Vancouver, Canada); Abstracts page 130.

116. Lutzoni, F., and R. Vilgalys. 1992. Phylogenetics of *Omphalina* (Basidiomycotina, Agaricales) and the evolution of lichenization: Evidence from morphological and anatomical data, and nuclear rDNA sequences. Second International Lichenological Symposium (Båstad, Sweden); abstracts page 10.

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS

(This is in addition to presentations listed under "Invited Oral Presentations" [see above section]. The name of the speaker or presenter is underlined for multi-author presentations)

1. Bellenger, J.-P., Darnajoux, R., Magain, N., Renaudin, M., Lutzoni, F., Zhang, X. 2020. Ecosystem scale evidence for the contribution of vanadium-based nitrogenase to biological nitrogen fixation. EGU General Assembly 2020 meeting. Vienna, Austria, 3-8 May 2020. (Oral Presentation.)

2. Pardo-De La Hoz, C., Medeiros, I., Gibert, J.-P., Chagnon, P.-L., and Lutzoni, F. 2019. A new metric for quantifying specialization in symbiotic systems. Duke Microbial Genomics Lunch Seminar, Dec. 18, 2019. (Oral presentation.)

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

3. Pardo-De La Hoz, C., Medeiros, I., Chagnon, P.-L., and Lutzoni, F. 2019. Using phylogenetic specificity symmetry to compare bipartite networks of lichens, endophytes and mycorrhizae. Annual meeting of the Mycological Society of America, Minneapolis, MN, August 2019. (Oral presentation.)
4. Pardo-De La Hoz, C., Medeiros, I., Chagnon, P.-L., and Lutzoni, F. 2019. Using phylogenetic specificity symmetry to compare bipartite networks of lichens, endophytes and mycorrhizae. 43th *New Phytologist* Symposium: Interaction networks and trait evolution, Zürich, Switzerland, July 1-4, 2019. (Poster presentation.)
5. Pardo-De La Hoz, C., Magain, N., Miadlikowska, J., and Lutzoni, F. 2018. Using a phylogenetic framework to assess the role of symbiotic specificity in shaping evolutionary and spatial patterns of associations in trimembered lichens. Presented at the Eleventh International Mycological Congress (IMC11), San Juan, Puerto Rico, 16-21 July, 2018. (Poster presentation.) (**Best Poster Award.**)
6. Magain, N., Miadlikowska, J., Chagnon, P.-L.., Truong, C., Pardo-De La Hoz, C., Cornet, L., Baurain, D., Darnajoux, R., Medeiros, I., Lu, J., Sérusiaux, E., and Lutzoni, F. 2018. Worldwide eco-evolutionary dynamics of the *Peltigera-Nostoc* symbiosis. Presented at the Eleventh International Mycological Congress (IMC11), San Juan, Puerto Rico, 16-21 July, 2018. (Poster presentation.)
7. Chen, K.-H., Liao, H., Korotkin, H., Wu, S., Matheny, P., and Lutzoni, F. 2018. Differential gene expression linked to fungal trophic switches (symbiotrophism and saprotrophism) using the moss *Dicranum scoparium* and its associated fungi. Presented at the Eleventh International Mycological Congress (IMC11), San Juan, Puerto Rico, 16-21 July, 2018. (Poster presentation.)
8. Medeiros, I., Magain, N., Miadlikowska, J., Haugland, D., and Lutzoni, F. 2018. Factors shaping the distribution of *Peltigera* spp. (Lecanoromycetes) and their *Nostoc* symbionts at an inter-biome scale in Alberta, Canada. Presented at the Eleventh International Mycological Congress (IMC11), San Juan, Puerto Rico, 16-21 July, 2018. (Poster presentation.)
9. Lu, J., Magain, N., Miadlikowska, J., Coyle, J., Truong, C., and Lutzoni, F. 2018. Bioclimatic factors at an intra-biome scale are more limiting than cyanobiont availability for the lichen-forming genus *Peltigera*. Presented at the Eleventh International Mycological Congress (IMC11), San Juan, Puerto Rico, 16-21 July, 2018. (Poster presentation.)
10. Shuzo, O., U'Ren, J., Lutzoni, F., Miadlikowska, J., Trouet, V., and Arnold, A. E. 2018. Relationships of foliar endophyte communities in Picea mariana to tree age, biomass, and latitude. 9th International Symbiosis Society Congress, Oregon State University, Corvallis, Oregon, July 15-20. (Poster.)
11. Simon, D. M., Codina, A., Johnson, D., Kleier, D., Miadlikowska, J., Gaya, E., Hartman, S., Lutzoni, F. Degeneration of a nuclear rRNA group I intron in *Teloschistes chrysophthalmus*. Evolution 2017 meeting, Portland, Oregon, June 23-27. (Poster.)
12. Darnajoux, R., Zhang, X., Magain, N., McRose, D., Miadlikowska, J., Kraepiel, A., Lutzoni, F., Bellenger, J.-P. 2017. Vanadium nitrogenase in boreal cyanolichens: activity and regulation. Goldschmidt Conference, Paris, France, August 13-18. (Poster.)
13. Chen, K.-H., Liao, H.-L., Korotkin, H. B., Matheny, P. B., Lutzoni, F. 2017. Functional ecology of mycobiome shifts associated with plant senescence - linking environmental and experimental re-synthesis metatranscriptomics. Fungal Genetics Conference, Asilomar, CA, March 14-19. (Oral presentation.)
14. Chen, K.-H., Liao, H.-L., Korotkin, H. B., Matheny, P. B., Lutzoni, F. 2017. Functional ecology of mycobiome shifts associated with plant senescence - linking environmental and experimental re-synthesis metatranscriptomics. Fungal Genetics Conference, Asilomar, CA, March 14-19. (Poster.)
15. Chen, K.-H., Liao, H.-L., Arnold, A. E., Lutzoni, F. 2016. Metatranscriptomic analysis of the moss Dicranum scoparium reveals active fungal communities and functionalities across a senescence gradient. Presented at the annual meeting of the Mycological Society of America, University of California, Berkeley, August 7-11. (Oral Presentation.)

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

16. Magallón, S., Quandt, D., Krug, M., Lewis, L., Lutzoni, F. 2016. The diversification of green plants (Viridiplantae). Presented at the Botany 2016 meeting, Savannah, Georgia, July 30 - August 3. (Oral presentation.)

17. Magain, N., Gajdeczka, M., Mueller, O., Truong, C., Miadlikowska, J., Lutzoni, F. 2016. Conserved genomic collinearity in Pezizomycotina to develop broadly applicable fast-evolving markers to resolve species complexes: a case study in *Peltigera*. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Poster.)

18. Darnajoux, R., Zhang, X., McRose, D., Miadlikowska, J., Kraepiel, A., Lutzoni, F., Bellenger, J.-P. 2016. The importance of Vanadium-based nitrogen fixation in boreal cyanolichens: a case study using *Peltigera aphthosa* (L.) Willd. s.l. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Poster.)

19. Lu, J., Magain, N., Miadlikowska, J., Coyle, J., Truong, C., Lutzoni, F. 2016. Patterns of symbiotic associations among *Peltigera* and *Nostoc* partners along a 1200 km South-North transect crossing the circumboreal belt. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Poster.)

20. Magain, N., Lutzoni, F., Sérusiaux, E., Truong, C., Pardo-De la Hoz, C., Niu, D., Goward, T., Zhurbenko, M., Goffinet, B., Vitikainen, O., Miadlikowska, J. 2016. The importance of spatio-temporal photobiont patterns for phylogenetic revisions and macroevlutionary studies of lichens: a worldwide case study of *Peltigera*. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Oral presentation.)

21. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Ashton, L., May, G., Carbone, I., Arnold, A. E. 2016. Boreal endolichenic fungal communities structure at local, regional, and global scales. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Oral presentation.)

22. Pardo-De la Hoz, C. J., Magain, N., Lutzoni, J., Restrepo, S., Miadlikowska, J. 2016. Cryptic biodiversity and symbiotic patterns of association within the trimembered section *Chloropeltigera*. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Oral presentation.)

23. Heidmarsson, S., Miadlikowska, J., Lutzoni, F. 2016. Molecular study of Verrucariaceae: an Icelandic perspective. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Oral presentation.)

24. Chagnon, P.-L., Magain, N., Miadlikowska, J., Lutzoni, F. 2016. Network analyses of lichens and their contribution to theoretical studies on mutualism. Presented at the Eight Congress of the International Association for Lichenology (IAL8), Helsinki, Finland, August 1-5, 2016. (Oral presentation.)

25. Chen, K.-H., Liao, H.-L., Arnold, A. E., Lutzoni, F. 2015. Using metatranscriptomics to characterize functional shifts in endophytic fungi at plant senescence: Are endophytic fungi latent saprotroph? Presented at the Botany 2015 Congress, Edmonton, Canada, 25-29 July, 2015. (Oral presentation.)

26. Magain, N., Miadlikowska, J. Goffinet, B., Sérusiaux, E., Lutzoni, F. 2015. Evolution of specificity in the lichen-forming genus *Peltigera* and its cyanobacterial partner: consequences on speciation rate and geographical range. Presented at the Botany 2015 Congress, Edmonton, Canada, 25-29 July, 2015. (Oral presentation.)

27. Arnold, A. E., U'Ren, J. M., Miadlikowska, J., Carbone, I., and Lutzoni, F. 2015. Progress toward capturing the biodiversity of fungal endophytes. Special session – Integrating unknown fungi into the tree of life: A perspective from endophytes. Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015. (Oral presentation.)

28. Lutzoni, F., Carbone, I., White, J. B., Miadlikowska, J., U'Ren, J., and Arnold, A. E. 2015. Challenges to speeding up the naming of unknown fungal species. Special session – Integrating unknown fungi into the tree of life: A perspective from endophytes. Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015. (Oral presentation.)

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

29. Carbone, I., White, J. B., Miadlikowska, J., U'Ren, J., Arnold, A. E., Lutzoni, F. 2015. New online tools for species delimitation and classification of unknown fungal endophytes. Special session – Integrating unknown fungi into the tree of life: A perspective from endophytes. Second International Workshop on Ascomycete Systematics. Amsterdam, The Netherlands, April 22-24, 2015. (Oral presentation.)

30. Chen, K.-H., Liao, H.-L., Arnold, A. E., Lutzoni, F. 2015. Using metatranscriptomics to characterize functional shifts in endophytic fungi at plant senescence: Are endophytic fungi latent saprotrophs? Presented at the 28th Fungal Genetics Conference, Pacific Grove, Asilomar, California, March 17-22, 2015. (Poster)

31. Magain, N., Miadlikowska, J. Goffinet, B., Sérusiaux, E., Lutzoni, F. 2014. Evolution of specificity within the lichen-forming genus *Peltigera* and its cyanobacterial partner: consequences on speciation rate and geographical range. Presented at the Tenth International Mycological Congress (IMC10), Bangkok, Thailand, 3-8 August, 2014. Program p. 207. (Oral presentation.)

32. Arnold, A. E., U'Ren, J. M., Wong, V. L., Lefèvre, E., Arendt, K. R., Chen, K.-H., Oono, R., Miadlikowska, J., Carbone, I., May, G., Baltrus, D., Lutzoni, F. 2014. What can >50,000 cultures tell us about the ecological specificity of endophytes are related fungi? Presented at the Tenth International Mycological Congress (IMC10), Bangkok, Thailand, 3-8 August, 2014. Program p. 208. (Oral presentation.)

33. Gaya, E., Fernandez-Brime, S., Lachlan, R., Gueidan, C., Vargas, R., Ramirez-Mejia, M., Lutzoni, F. 2014. From shade to sun: Evolution of the Teloschistales. Presented at the Tenth International Mycological Congress (IMC10), Bangkok, Thailand, 3-8 August, 2014. Program p. 380. (oral presentation.)

34. Magain, N., Lutzoni, F., Goffinet, B., Sérusiaux, E., Miadlikowska, J. 2014. Two are better than one: Delimiting cryptic lichen-forming fungal species using DNA sequence data from the fungal and cyanobacterial partners of Peltigera section Polydactylon (Ascomycota, Lecanoromycetes). Presented at the Tenth International Mycological Congress (IMC10), Bangkok, Thailand, 3-8 August, 2014. Program p. 630. (Poster presentation.)

35. *Chen, K.-H., Miadlikowska, J., Molnar, K., Arnold, A. E., U'Ren, J. M., Gaya, E., Lutzoni, F. 2014. Phylogenetic placement of endophytic and endolichenic fungi within Eurotiomycetes reveals a new order – Phaeomoniellales. Presented at the Tenth International Mycological Congress (IMC10), Bangkok, Thailand, 3-8 August, 2014. Program p. 688. (Poster presentation.) (**Best Poster Award.**)

36. Oono, R., Lefèvre, E., Simha, A., Lutzoni, F. 2014. Community species richness of foliar fungal endophytes decrease from seedling to adult pine needles. Presented at the annual meeting of the Mycological Society of America (MSA), Michigan State University, East Lansing, 8-11 June, 2014. Inoculum 65: 44. (Oral presentation.)

37. Darnajoux, R., Miadlikowska, J., Lutzoni, F., and Bellenger, J.-P. 2014. The importance of vanadium-based nitrogen fixation in the boreal biome: a case study using the tri-membered lichen *Peltigera aphthosa*. 18th annual meeting of Chapitre Saint-Laurent. Québec city, Québec, Canada, June 5-6, 2014. (Oral presentation.)

38. Gaya, E., Fernandez-Brime, S., Gueidan, C., Vargas, R., Ramirez-Mejia, M., and Lutzoni, F. 2014. From shade to sun: Evolution of the Teloschistaceae. Annual meeting of the British Lichen Society (BLS), University of Nottingham, UKI, 10 and 11 January, 2014. (Oral presentation.)

39. Magain, N., Lutzoni, F., Sérusiaux, E., and Miadlikowska, J. 2014. Evolution of specificity in fungi-cyanobacteria symbioses: a case study in *Peltigera* section *Polydactylon*. Annual meeting of the British Lichen Society (BLS), University of Nottingham, UKI, 10 and 11 January, 2014. (Oral presentation.)

40. Chen, K.-H., Miadlikowksa, J., Molnár, K., Arnold, A. E., U'Ren, J., Gaya, E., and Lutzoni, F. 2013. Phylogenetic relationships of endophytic and endolichenic fungi reveal a new order within the class Eurotiomycetes. Presented at the joint annual meeting of the American Phytopathological Society (APS) and the Mycological Society of America (MSA), Austin, Texas, 10-14 August, 2013. Program p. 28. (Oral presentation.)

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

41. Wong, V. L., U'Ren, J. M., Miadlikowska, J., Monacell, J. T., Arendt, K., Shaffer, J. P., Arnold, A. E., Lutzoni, F., Carbone, I., and May, G. 2013. Genomic comparison of closely related boreal endophytes. Presented at the joint annual meeting of the American Phytopathological Society (APS) and the Mycological Society of America (MSA), Austin, Texas, 10-14 August, 2013. Program p. 33. (Oral presentation.)

42. U'Ren, J. M., Massimo, N., Riddle, J. M., Steen, C., Arendt, K., Huang, Y. L., Miadlikowska, J., Lefevre, E., Ball, B., Wong, V. L., Monacell, J., Carbone, I., Lutzoni, F., May, G., and Arnold, A. E. 2013. A culture-based and culture-free assessment of the geographic and temporal variation of boreal endophytic and endolichenic fungal communities. Presented at the joint annual meeting of the American Phytopathological Society (APS) and the Mycological Society of America (MSA), Austin, Texas, 10-14 August, 2013. Program p. 42-443. (Oral presentation.)

43. Truong, C., Miadlikowska, J., Gajdeczka, M., Rivas-Plata, E., Magain, N., and Lutzoni, F. 2013. Resolving species boundaries in the lichen-forming Peltigera canina complex (Lecanoromycetes, Ascomycota). Presented at the joint annual meeting of the American Phytopathological Society (APS) and the Mycological Society of America (MSA), Austin, Texas, 10-14 August, 2013. Program p. 74. (Poster presentation.)

44. Lefèvre, E., Arendt, K., Ball, B., Miadlikowska, J., Picard, K., U'Ren, J. M., Arnold, E., Lutzoni, F. 2013. Understanding the spatial scaling of boreal endophytic fungal communities using environmental cloning and Ion Torrent targeted amplicon sequencing. Presented at the 98th Annual Meeting of the Ecological Society of America (ESA), Minneapolis, Minnesota, 4-9 August, 2013. Program p. 67 (Oral presentation.)

45. Oono, R., Arnold, A. E., May, G., Lutzoni, F., Carbone, I. 2012. Population structure from mountain to coast of *Lophodermium* sp., a common fungal endophyte in pine needles. Presented at the 7th International Symbiosis Society Congress, Krakow, Poland, 22-28 July, 2012. (Poster presentation.)

46. Arnold, A. E., U'Ren, J. M., Riddle, J. M., Arendt, K., Miadlikowska, J., Ball, B., Lefevre, E., Carbone, I., May, G., Lutzoni, F. 2012. Emerging perspectives on endophytic and endolichenic symbioses. Presented at the 7th International Symbiosis Society Congress, Krakow, Poland, 22-28 July, 2012. (Oral presentation.)

47. Lutzoni, F., Nowak, M., Alfaro, M., U'Ren, J., Arnold, A. E., Miadlikowska, J., and Magallon, S. 2012. A multidimensional exploration of plant-fungal symbioses and their associated shifts in diversification rate. Presented at the 7th International Symbiosis Society Congress, Krakow, Poland, 22-28 July, 2012. (Oral presentation.)

48. Armaleo, D., Mueller, O., Lutzoni, F., Martin, F., Morin, E., Blanc, E., et al. 2012. Decoding symbiosis: The two genomes of the lichen *Cladonia grayi*. Presented at the 7th International Symbiosis Society Congress, Krakow, Poland, 22-28 July, 2012. (Oral presentation.)

49. Rivas Plata, E., Lutzoni, F., Vitikainen, O., Goward, T., Sérusiaux, E., Magain, N., Miadlikowska, J. 2012. Cophylogenetic study of the lichen-forming fungus *Peltigera* and its cyanobiont *Nostoc* at an intercontinental spatial scale. Presented at the annual meeting of the Mycological Society of America (MSA), Yale University, Connecticut, 15-18 July, 2012. Inoculum 63: 40. (Poster presentation.)

50. *Picard, K., Stern, R. F., and Lutzoni, F. 2012. Investigating early-diverging fungi from marine and estuarine habitats in North America and Europe. Presented at the annual meeting of the Mycological Society of America (MSA), Yale University, Connecticut, 15-18 July, 2012. Inoculum 63: 38. (Oral presentation.) **(Best talk award.)**.

51. Mueller, O., Baker, S., Blanc, G., Collart, F., Dietrich, F., Larsen, P., Magnuson, J., Martin, F., Morin, E., Lutzoni, F., and Armaleo, D. 2012. Insights from comparative genomics in lichen symbiosis. Presented at the annual meeting of the Mycological Society of America (MSA), Yale University, Connecticut, 15-18 July, 2012. Inoculum 63: 34. (Oral presentation.)

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

52. Miadlikowska, J., Ball, B., Lopez-Giraldez, F., Townsend, J. P., Gaya, E., McDonald, T., Joneson, S., Gryganskyi, A., Porter, T. M., Matheny, B., Kobert, K., Stamatakis, A., Robbertse, B., Spatafora, J., Hibbett, D., Vilgalys, R., and Lutzoni, F. 2012. Novel molecular markers and their utility in molecular systematics of fungi. Presented at the annual meeting of the Mycological Society of America (MSA), Yale University, Connecticut, 15-18 July, 2012. Inoculum 63: 32. (Oral presentation.)

53. Heidmarsson, S., Perez-Ortega, S., Thüs, H., Gueidan, C., de Los Rios, A., Lutzoni, F., 2012. Diversity and phylogeny of marine and freshwater Verrucariaceae. Presented at the annual meeting of the Mycological Society of America (MSA), Yale University, Connecticut, 15-18 July, 2012. Inoculum 63: 21. (Oral presentation.)

54. Lutzoni, F., Magallon, S., Nowak, M., Alfaro, M., McDonald, T., Miadlikowska, J., Reeb. V. 2012. The Dating of fungi and plants. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

55. Gueidan, C., Thüs, H., Muggia, L., Perez-Ortega, S., Favero-Longo, S., Joneson, S., O'Brien, H., Nelsen, M., Duque-Thüs, R., Grube, M., Friedl, T., Brodie, J., Andrew, C. J., Lücking, R., and Lutzoni, F. 2012. Evolution of photobiont associations in the family Verrucariaceae. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

56. Magain, N., Miadlikowska, J., Lutzoni, F., Goffinet, B. and Sérusiaux, E. 2012. Multilocus-based phylogeny and species recognition within the cosmopolitan *Peltigera neopolydactyla-dolichorhiza* complex. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Poster presentation.)

57. Heidmarsson, S., Gueidan, C., Miadlikowska, J., Thüs, H., and Lutzoni, F. 2012. Phylogeny of marine Verrucariaceae based on multilocus analyses. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Poster presentation.)

58. Heidmarsson, S., Miadlikowska, J., and Lutzoni, F. 2012. Identity of *Endocarpon pulvinatum*, the only subfruticose Verrucariaceae. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Poster presentation.)

59. Gaya, E., Högnabba, R., Ramirez-Mejia, M., Holguin, A., Molnar, K., Fernandez-Brime, S., Stenroos, S., Arup, U., Søchting, U., Van Den Boom, P., Lücking, R., Vargas, R., Sipman, H., Lutzoni, F. 2012. Systematics and evolution within the order Teloschistales and family Teloschistaceae (Ascomycota, Fungi) with a multi-locus supermatrix approach. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

60. Armaleo, D., Mueller, O., Lutzoni, F., Martin, F., Blanc, G., Merchant, S., Collart, F. 2012. Decoding symbiosis: The two genomes of the lichen *Cladonia grayi*. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

61. Hodkinson, B. P., Gottel, N. R., Schadt, C. W., and Lutzoni, F. 2012. Pyrosequencing reveals previously unknown phylogenetic, metabolic and ecological complexity within the lichen microbiome. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

62. U'Ren, J., Lutzoni, F., Miadlikowska, J. and Arnold, A. E. 2012. Diversity and Biogeography of endophytic and endolichenic fungal communities. Presented at the 7th International Association for Lichenology Symposium (IAL7), Bangkok, Thailand, 9-13 January, 2012. (Oral presentation.)

63. Lutzoni, F., Miadlikowska, J., Reeb, V., Nowak, M., Molnar, K., U'Ren, J., Kauff, F., Gaya, E., Alfaro, M., Magallón, S., and Arnold, A. E. 2011. A comprehensive phylogenetic overview of spatial and host distribution of endolichenic and endophytic fungi based on 15,000 tissue samples. Presented at the annual meeting of the Mycological Society of America (MSA), Fairbanks, Alaska. Inoculum 62: 30.

PUBLISHED ABSTRACTS FOR SCIENTIFIC MEETINGS (continued)

64. Mueller, O., Blanc, G., Collart, F., Larsen, P., Martin, F., Morin, E., Lutzoni, F., and Armaleo, D. 2011. Evolutionary insights from comparative genomics of lichen symbioses. Presented at the annual meeting of the Mycological Society of America (MSA), Fairbanks, Alaska. Inoculum 62: 34.

65. Oono, R., Arnold, A. E., May, G., Lutzoni, F., and Carbone, I. 2011. Population structure in *Lophodermium* sp., a dominant fungal endophyte of loblolly pine. Presented at the annual meeting of the Mycological Society of America (MSA), Fairbanks, Alaska. Inoculum 62: 36.

66. U'Ren, J. M., Lutzoni, F., Miadlikowska, J., and Arnold, A. E. 2011. Diversity and biogeography of endophytic and en- dolichenic fungal communities. Presented at the annual meeting of the Mycological Society of America (MSA), Fairbanks, Alaska. Inoculum 62: 45.

67. Gaya, E., Holguin, A., Ramírez-Mejia, M., and Lutzoni, F. 2011. Resolving phylogenetic relationships within the lichen-forming order Teloschistales and the evolutionary history of Teloschistaceae with a seven-locus supermatrix. Presented at the annual meeting of the Mycological Society of America (MSA), Fairbanks, Alaska. Inoculum 62: 19.

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71. Gaya, E., Ball, B., Holguin, A., Villagra, S., and Lutzoni, F. 2010. Revisiting the classification of Teloschistales (ascomycota, lichen-forming fungi) and its evolution based on multiple and new phylogenetic loci. The 9th International Mycological Congress (IMC9), Edinburgh, UK, 1–6 August, 2010. (Poster.)

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73. Lutzoni, F., Joneson, S., McDonald T., Armaleo, D. 2009. Macroevolution as a unifying framework for integrative studies of symbiotic systems. As part of a symposium focussing on symbiotic evolutionary innovations. The 6th International Symbiosis Society Congress, University of Wisconsin–Madison.

74. McDonald, T., Armaleo, D., and Lutzoni, F. 2009. DNA methylation in the lichen-forming fungus Cladonia grayi. The 6th International Symbiosis Society Congress, University of Wisconsin–Madison. (Poster.)

75. U'Ren, J.M., Lutzoni, F., Miadlikowska, J. and Arnold, A.E. 2009. Community analysis of symbiotrophic and saprotrophic Ascomycota from multiple biogeographic provinces reveals the ecological novelty of the endolichenic symbiosis. Mycological Society of America annual meeting, Snowbird, Utah.

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80. McDonald, T., Armaleo, D., Dietrich, F., Joneson, S., and Lutzoni, F. 2009. Is the acquisition of plant ammonium transporter genes by fungi key to the origin of the lichen symbiosis? Mycological Society of America annual meeting, Snowbird, Utah.

81. McDonald, T. R., Armaleo, D. and Lutzoni, F. 2008. DNA methylation in lichen-forming fungus *Cladonia grayi*. Mycological Society of America annual meeting, Pennsylvania State University, State College, Pennsylvania.

82. Gaya, E., Ball, B. , and Lutzoni, F. 2008. Resolving deep internodes in the Teloschistales with a multi–gen approach. Mycological Society of America annual meeting, Pennsylvania State University, State College, Pennsylvania.

83. Joneson, S., Lutzoni, F. and Armaleo, D. 2008. Upregulated fungal genes in early lichen symbiosis. Mycological Society of America annual meeting, Pennsylvania State University, State College, Pennsylvania.

84. *Hodkinson, B. P. and Lutzoni, F. 2008. Lichen-associated non–photobiont bacteria: The third symbiont? Mycological Society of America annual meeting, Pennsylvania State University, State College, Pennsylvania. (**Best talk award**.)

85. Armaleo, D., Joneson, S., McDonald, T., Wray, G., Dietrich, F., Miadlikowska, J., Lutzoni, F. 2008. Decoding symbiosis: sequencing the two genomes of the lichen *Cladonia grayi*. The sixth International Association for Lichenology Symposium and Annual Meeting of the American Bryological and Lichenological Society, Asylomar, California.

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97. Gueidan, C. and Lutzoni, F. 2006. Molecular phylogeny of the Verrucariales (Ascomycota) and the evolution of nutritional modes in the Chaetothyriomycetidae. Mycological Society of America, Québec, Canada.

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122. Reeb, V., P. Haugen, F. Lutzoni and D. Bhattacharya. 2004. Phylogeography of homing endonucleases found in *Pleopsidium* (Acarosporaceae) and its implications for group I intron mobility. Fifth congress of the International Association for Lichenology, Tartu, Estonia. Book of Abstracts page 42.

123. Miadlikowska, J., A. E. Arnold, V. Hofstetter, and F. Lutzoni. 2004. High diversity of cryptic fungi inhabiting healthy lichen thalli in a temperate and tropical forest. Fifth congress of the International Association for Lichenology, Tartu, Estonia. Book of Abstracts page 43.

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134. Rydholm, C., M. Paoletti, P. Dyer and F. Lutzoni. 2004. Recombination and mating loci in the "asexual" *Aspergillus fumigatus* and sexual *Neosartorya fischeri* species pair. Inoculum 55(4):33.

135. Arnold, A. E., J. Miadlikowska and F. Lutzoni. 2004. High diversity of cryptic fungi inhabiting healthy lichen thalli in a temperate and tropical forest. Association for tropical biology and conservation, Miami, Florida.

136. Miadlikowska, J., E. Arnold, V. Hofstetter, and F. Lutzoni. 2003. Endolichenic fungi: Morphological and molecular diversity of fungi from surface–sterilized lichens of the genus *Peltigera* in a temperate and tropical forest. Inoculum 54(3):36.

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138. Rydholm, C., T. Mitchell, R. Vilgalys, and F. Lutzoni. 2003. Is local adaptation present in the pan–global pathogenic mold Aspergilus fumigatus? Inoculum 54(3):43. (poster).

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144. O'Brien, H. E., J. Miadlikowska and F. Lutzoni. 2002. Use of multi–gene phylogenies to study patterns of specificity and geographic structure in symbiotic cyanobacteria. CYANOFIX Final Symposium. Tomar, Portugal (poster).

145. Reeb, V., P. Haugen, D. Bhattacharya and F. Lutzoni. 2002. Group I intron evolution as mobile and non–mobile elements within the lichen-forming fungal family Acarosporaceae. International Mycological Congress VII Book of Abstracts (Oslo, Norway) p. 228 (poster).

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149. Kauff, F., F. Lutzoni and B. Büdel. 2002. Phylogeny of Ostropales and Gyalectales – evidence from molecular and ontogenetical data. International Mycological Congress VII Book of Abstracts (Oslo, Norway) p. 91–92

150. Lutzoni, F., M. Pagel, V. Reeb. 2002. Major fungal lineages are derived from lichen symbiotic ancestors. International Mycological Congress VII Book of Abstracts (Oslo, Norway) p. 35–36.

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152. Lutzoni, F., M. Pagel, and V. Reeb. 2000. Contribution of the lichen symbiosis to the diversification of ascomycetes: A new approach to determining confidence levels for ancestral character states. Botany 2000 Meeting, Portland, Oregon. American Journal of Botany 87:140–141.

153. Lutzoni, F., P. Wagner, and V. Reeb. 2000. Integrating ambiguously aligned regions of DNA sequences in phylogenetic analyses without violating positional homology. Botany 2000 Meeting, Portland, Oregon. American Journal of Botany 87:140.

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156. Buschbom, J., and F. Lutzoni. 2000. A molecular phylogeny of the genus *Porpidia* (Porpidiaceae, Ascomycota). The Fourth Congress of the International Association for Lichenology. Barcelona, Spain. Book of abstracts p. 23.

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