

MADELAINE E. BARTLETT

Biology Department, University of Massachusetts Amherst
 374 Morrill South, 611 North Pleasant Street
 Amherst, MA 01003
mbartlett@umass.edu ■ 413.545.2235 (office)

EDUCATION

- PhD Plant Biology, 2010
University of California Berkeley, USA
 Advisor: Dr. Chelsea Specht
- BSc (Hons) Genetics and Developmental Biology, 2005, with distinction
University of the Witwatersrand, South Africa.
 Advisor: Dr. Tracy McLellan
- BSc Molecular and Cell Biology, 2004, with distinction
University of the Witwatersrand, South Africa.

PROFESSIONAL EXPERIENCE

- 2020 – present *Associate Professor.* Biology Department, University of Massachusetts Amherst.
- 2014 – 2019 *Assistant Professor.* Biology Department, University of Massachusetts Amherst.
- 2010 – 2013 *Postdoctoral Fellow.* Biology Department, Brigham Young University
 Advisor: Dr. Clinton Whipple
- 2005 – 2010 *Graduate Student Researcher,* Department of Plant and Microbial Biology,
 University of California Berkeley
- 2001 - 2005 *Mathematics, Chemistry, and Physics Tutor,* Genius 1on1 Tuition, Johannesburg,
 South Africa
- 2004 *High School Chemistry and Physics Teacher,* British International College, South
 Africa

AWARDS AND HONORS

Fellowships and honors since arriving at UMass:

- 2019 UMass Lilly teaching fellow
- 2018 Nominated for the UMass Distinguished Teaching Award
- 2018 Botanical Society of America Emerging Leader Award
- 2015 UMass Student Centered Teaching and Learning Fellowship

Select postdoc and graduate student awards:

- 2008 – 2010 National Research Foundation (South Africa) Scholarship for Study Abroad (One of 12
 awarded countrywide in 2008.)
- 2007 UC Berkeley Outstanding Graduate Student Instructor Award

PUBLICATIONS

*Bartlett lab undergraduate, ** Bartlett lab graduate student or postdoc, ¹co-first authors, [§]UMass
 affiliation for **Bartlett**, Corresponding Author

Submitted manuscripts:

- Huang W, Zhang L, Columbus JT, Hu Y, Zhao Y, Tang L, Guo Z, Chen W, McKain M, **Bartlett ME**[§],
 Huang C, Li D, Ge S, Kellogg EA, Ma H (submitted). Well-supported nuclear phylogeny of
 Poaceae and implications for the evolution of C4 photosynthesis.

Manuscripts published since earning tenure:

Hendelman A, Zebell S, Rodriguez-Leal D, Dukler N, Robitaille G, Wu X, Kostyun J**, Tal L, Wang P, **Bartlett ME**[§], Eshed Y, Efroni I, Lippman ZB (2021). Conserved pleiotropy of an ancient plant homeobox gene uncovered by cis-regulatory dissection. *Cell*.

Liu L, Gallagher J**, Demesa Arevalo E, Chen R, Skopelitis T, Wu Q, **Bartlett ME**[§], David Jackson (2021). Enhancing grain yield traits by CRISPR/Cas9 promoter editing of maize CLE genes. *Nature Plants*.

- Featured in Nature Plants ‘News and Views’, ASPB’s ‘The Signal’ newsletter, and got significant media attention.

Abraham-Juarez MJ**, Schragar-Lavelle A**, Man J**, Whipple CJ, Handakumbura P**, Babbitt CC, **Bartlett ME**[§] (2020). Evolutionary variation in MADS-box dimerization affects floral development and protein degradation dynamics. *The Plant Cell*. DOI: 10.1105/tpc.20.00300

- Featured in The Plant Cell ‘In Brief’, was The Plant Cell’s article of the week.

Henkhaus N, **Bartlett ME**[§], Gang D, Grumet R, Haswell E, Jordon-Thaden I, Lorence A, Lyons E, Miller S, Murray S, Nelson A, Specht C, Tyler B, Wentworth T, Ackerly D, Baltensperger D, Benfey P, Birchler J, Chellamma S, Crowder R, Donoghue M, Dundore-Arias JP, Fletcher J, Gillespie K, Guralnick L, Hunter M, Kaeppler S, Kepinski S, Li F-W, Mackenzie S, McDade L, Min Y, Nemhauser J, Pearson B, Petracek P, Rogers K, Sakai A, Sickler D, Spady T, Taylor C, Wayne L, Wendroth O, Zapata F, and Stern D (2020). Plant Science Decadal Vision 2020-2030: Reimagining the Potential of Plants for a Healthy and Sustainable Future. *Plant Direct*. DOI: 10.1002/pld3.252

Man**, J, Gallagher, JP**, **Bartlett, ME**[§] (2020). Structural variation in the LRR-RLK gene family drives receptor diversification. *New Phytologist*. DOI: 10.1111/nph.16455

- Highlighted in Plant Science Research Weekly

Bartlett, ME[§] and Patterson E** (2020). Many ways to drop a fruit: the evolution of abscission zones in the grasses. *New Phytologist*. 225: 1799–1815. (Invited commentary – not peer reviewed)

Manuscripts published prior to earning tenure (Bartlett at UMass):

Bartlett, ME[§] (2019). Looking back to look forward: protein–protein interactions and the evolution of development. *New Phytologist*. DOI: 10.1111/nph.16179 (Invited Tansley Insight)

Man, J** and **Bartlett, ME**[§] (2019). Efficient assembly of large multiplex CRISPR/Cas9 guide arrays for maize genome editing. *Bio-Protocols*. DOI: 10.21769/bioprotoc.3223

Rodriguez-Leal¹, D, Xu¹, C, Kwon, C-T, Soyars, C, Demesa Arevalo, E, Man, J**, Lei, L, Lemmon, ZH, Jones, DS, Van Eck, J, Jackson, DP, **Bartlett, ME**[§], Nimchuk, ZL, and Lippman, ZB (2019). Evolution of buffering in a genetic circuit controlling plant stem cell proliferation. *Nature Genetics*. 51:786–792. DOI: 10.1038/s41588-019-0389-8

Vofely, RV¹, Gallagher, JP**¹, Pisano, GD*, **Bartlett, ME**[§], Braybrook, SA (2018). Of puzzles and pavements: a quantitative exploration of leaf epidermal cell shape. *New Phytologist*. DOI: 10.1101/361717.

- Cover article for first New Phytologist issue of 2019. Featured as a Nature Plants Research Highlight and in ASPB Plantae's 'What We're Reading'

Klein, HR**, Xiao, Y, Conklin, P, Govindarajulu, R, Kelly, J, Scanlon, M, Whipple, CJ, and **Bartlett, ME**[§] (2018). Bulk-Segregant Analysis Coupled to Whole Genome Sequencing (BSA-Seq) for Rapid Gene Cloning in Maize. *G3: Genes Genomes Genetics*. DOI: 10.1101/357384

- Je, BI, Xu, F, Wu, Q, Liu, L, Meeley, R, Gallagher, JP**, Corcilius, L, Payne, R, **Bartlett, ME[§]**, **Jackson, D** (2018). The CLAVATA receptor FASCIATED EAR2 responds to distinct CLE peptides by signaling through two downstream effectors. *eLife*. DOI: 10.7554/eLife.35673
- van Gisbergen, PAC, Wu, S-Z, Chang, M, Pattavina, KA, **Bartlett ME[§]**, **Bezanilla, M** (2018). Evolution of a fusion between the exocyst and formin reveals a connection between exocytosis and actin. *Journal of Cell Biology*. DOI: 10.1083/jcb.201705084
- Rodriguez-Leal, D, Lemmon, ZH, Man, J**, **Bartlett, ME[§]**, **Lippman, ZB** (2017) Engineering quantitative trait variation for crop improvement by genome editing. *Cell*. DOI:10.1016/j.cell.2017.08.030
- Featured in Journal of Experimental Botany's 'Flowering Highlights' and in ASPB Plantae's 'What We're Reading'
- Schrager-Lavelle, A**, Klein, H**, Fisher, A, **Bartlett ME[§]** (2017). Grass Flowers: An Untapped Resource for Floral Evo-Devo. *Journal of Systematics and Evolution*. DOI: 10.1111/jse.12251
- Bartlett, ME[§]** (2017). Changing MADS-box transcription factor protein-protein interactions as a mechanism for generating floral morphological diversity. *Journal of Integrative and Comparative Biology*. DOI: 10.1093/icb/ix067
- Yang, CJ, Kursel, LE, Studer, AJ, **Bartlett, ME[§]**, Whipple, CJ, and **Doebley, JF** (2016). A gene for genetic background: fine-mapping *enhancer of teosinte branched1.2 (etb1.2)* to a YABBY class transcription factor. *Genetics* 204:1573-1585. doi: 10.1534/genetics.116.194928
- Bartlett, ME[§]**, Thompson, B, Brabazon, H, Del Gizzi, R**, Zhang, T*, and **Whipple, CJ** (2016). Evolutionary dynamics of floral homeotic transcription factor protein-protein interactions. *Molecular Biology and Evolution* 33:1486-1501.
- Featured in Journal of Experimental Botany's 'Flowering Highlights'
- Je, BI, Gruel, J, Eveland, AL, Lee, YK, Bommert, P, Meeley, R, **Bartlett, ME[§]**, Komatsu, M, Sakai, H, Jonsson, H, and **Jackson, DP** (2016). Signaling from maize organ primordia via FASCIATED EAR3 regulates stem cell proliferation and yield traits. *Nature Genetics* 48:785-791
doi:10.1038/ng.3567
- Faculty of 1,000 pick
- Bartlett, ME[§]**, Williams, SK¹, Taylor, Z, Deblasio, S, Goldshmidt, A, Hall, DH, Schmidt, RJ, Jackson, DP, and **Whipple, CJ** (2015). The Maize *PI/GLO* Ortholog *Zmm16/sterile tassel silky ear1* Interacts with the Zygomorphy and Sex Determination Pathways in Flower Development. *The Plant Cell* 27:3081-3098.
- Bartlett ME[§]**, Thompson B (2014). Meristem identity and phyllotaxis in inflorescence development. *Frontiers in Plant Science* 5. (Invited Review)
- Peer reviewed manuscripts published prior to arriving at UMass:*
- Bartlett ME**, **Whipple CJ** (2013). Protein change in plant evolution: tracing one thread connecting molecular and phenotypic diversity. *Frontiers in Plant Science* 4.
- Cron G¹**, **Pirone C¹**, **Bartlett ME**, Kress J, and Specht CD (2012). A phylogeny of the Strelitziaceae. *Systematic Botany* 37:606-619.
- Bartlett ME** and Specht CD (2011) Changes in expression pattern of the *TEOSINTE BRANCHEDI*-like genes in the Zingiberales provide a mechanism for evolutionary shifts in symmetry across the order. *American Journal of Botany* 98:227-243

Bartlett ME and Specht CD (2010). Evidence for the involvement of *GLOBOSA*-like gene duplications and expression divergence in the evolution of floral morphology in the Zingiberales. *New Phytologist*. 187: 521-541

Specht CD and **Bartlett ME** (2009). Flower Evolution. *Annual Review of Ecology, Evolution and Systematics* 40: 217-43

Kirchoff BK, Lagomarsino LP, Newman WH, **Bartlett ME** and **Specht CD** (2009). Early floral development of *Heliconia latispatha* (Heliconiaceae), a key taxon for understanding the evolution of flower development in the Zingiberales. *American Journal of Botany* 96: 580-593.

Bartlett ME, Kirchoff B and Specht CD (2008). Epi-illumination microscopy linked to *in situ* hybridization and its utility in the study of evolution and development in non-model species. *Development, Genes and Evolution* 218: 273-279

GRANT FUNDING

Current Grant Support (PI or Co-PI):

National Science Foundation (IOS-1652380). *CAREER: Protein-Protein Interactions Driving the Evolution of Gene Regulation*. Total Budget: \$837,011. 5/14/2017 – 5/13/2022

National Science Foundation (IOS-1546837). *PGRP: Dissecting the genomic architecture of functional redundancy to modulate meristem homeostasis and crop yields*. PI: David Jackson; Co-PIs: Madelaine Bartlett, Zachary Lippman, Zachary Nimchuk. Total Budget: \$4,614,864. To Co-PI Bartlett: \$801,316. 9/1/2016 – 8/31/2021 (in a one year no-cost extension).

Department of Energy Community Science Program. *Regulatory genomics of plant biomass accumulation*. PI: Samuel P. Hazen; Co-PIs: Madelaine Bartlett, Siobhan Brady, Ana Caicedo, Christer Jansson, Ludmila Tyler, Bo Zhu. Total Budget: None, the award from this national user facility will provide 10 Tb of sequencing using various NGS methods. 9/1/2018 – 8/31/2021

USDA Hatch. *Identifying the Genes that Control Unisexual Flower Development in Maize*. Budget allocated yearly. 9/1/2020 – 8/31/2024.

Previous grants and awards funding research (at UMass):

USDA Hatch (MAS00501). *Programmed cell death in grass flower development and evolution: leveraging basic research into rational crop design*. Budget allocated yearly. 3/31/2016-9/30/2020

UMass Center for Teaching Excellence and Faculty Development. *Mutual Mentoring Grant: Developing a Support Network in 21st Century Plant Evo-Devo*. Total Budget: \$1,500

Previous grants and awards funding research (prior to UMass):

2011 **MicroMORPH** NSF Research Co-ordination Network. Cross-Disciplinary Training and Research Grant (\$1,800)

2008 **National Science Foundation DDIG: Dissertation Research: Evolution of floral symmetry in the petaloid monocot order Zingiberales**. To Co-PI Bartlett: \$12,000.

2008 **Heliconia Society International** Graduate Student Research Grant (\$500)

Previous grants and awards funding travel (prior to UMass):

2010 **Botanical Society of America** Women in Science award for travel to Botany meetings

2009 **Botanical Society of America** Graduate Student Research Grant (\$500)

2009 **MORPH** NSF Research Co-ordination Network (USA). Garden grant (\$2,500)

2009 **National Tropical Botanical Garden** Travel Scholarship.

2009, 2007 **Botanical Society of America** Vernon I Cheadle award for travel to Botany 2009, 2007

INVITED SEMINARS

- 2021 University of California Berkeley, California
 2021 University of Edinburgh, Scotland
 2020 University of California Davis, California
 2020 Plant Gene Expression Center, Albany, California
 2019 University of Vermont Marvin Seminar Series, Burlington, Vermont.
 2019 University of Delaware, Delaware
 2019 Wesleyan University, Connecticut
 2018 Donald Danforth Plant Science Center, St Louis, Missouri
 2018 Cornell University, Ithaca, New York
 2018 University of Connecticut, Storrs, Connecticut
 2017 University of California, Riverside, California
 2017 Rancho Santa Ana Botanic Garden, Claremont, California
 2017 Amherst College, Amherst, Massachusetts.
 2016 Arnold Arboretum of Harvard University, Boston, Massachusetts.
 2015 Iowa State University GDCB Departmental Seminar Series, Ames, Iowa.
 2015 University of Vermont Marvin Seminar Series, Burlington, Vermont.
 2015 UMass MCB Graduate Program Retreat, Amherst, Massachusetts.
 2014 Syracuse University Biology Department Seminar Series, Syracuse, New York.
 2014 UMass Stockbridge School of Agriculture, Amherst, Massachusetts.
 2014 Harvard University Herbarium Seminar Series, Cambridge, Massachusetts.

Invited seminars prior to UMass:

- 2013 The College of William and Mary, Williamsburg, Virginia.
 2013 Florida International University, Miami, Florida.
 2013 East Carolina University, Greenville, North Carolina.
 2012 Rancho Santa Ana Botanical Garden, Claremont, California.
 2010 University of St Louis Missouri, St Louis, Missouri.
 2010 Stellenbosch University, South Africa.
 2010 National Tropical Botanical Garden, Kauai, Hawaii.
 2010 Santa Rosa Community College Biology Forum, Santa Rosa, California.

INVITED TALKS AT CONFERENCES *postponed due to COVID-19

- 2020 *Mid-Atlantic Plant Molecular Biology, Maryland, USA*
 2020 *Plant Molecular Biology Gordon Conference, New Hampshire, USA**
 2020 *European EvoDevo Society, Napoli, Italy**
 2019 *Botanical Society of America Annual Meeting, Arizona, USA*
 2019 *Northeast Society for Developmental Biology Annual Meeting, Massachusetts, USA*
 2018 *Monocots VI, Natal, Brazil.*
 2018 *International Plant Molecular Biology, Montpellier, France.*
 2018 *European Evo-Devo Conference, Galway, Ireland. Selected from abstracts.*
 2017 *Cold Spring Harbor Laboratory Plant Genomes and Biotechnology, New York, USA.*
 2017 *Botanical Society of America Annual Meeting, Texas, USA.*
 2017 *Society of Integrative and Comparative Biology Annual Meeting, New Orleans, USA.*
 2016 *Botanical Society of America Annual Meeting, Georgia, USA.*
 2016 *New Phytologist Symposium on Plant Developmental Evolution, Beijing, China.*
 2016 *Northeast Society for Developmental Biology Annual Meeting, Massachusetts, USA.*
 2015 *FASEB Mechanisms in Plant Development, Vermont, USA.*
 2014 *Frontiers in Plant Research, Norwich, United Kingdom. Selected from abstracts.*
 2014 *56th Annual Maize Genetics Conference, Beijing, China. Selected from abstracts.*

Invited talks prior to UMass:

- 2013 *Dynamic Networks in Plant Biology Symposium, Sainsbury Laboratory, Cambridge, United Kingdom.*
- 2013 *FASEB Mechanisms in Plant Development, Vermont, USA.* Selected from abstracts.
- 2009 *Investigating the Evolution of Plant Form 2009: UC Riverside 25th Symposium in Plant Biology. Riverside, USA.* Selected from abstracts.
- 2007 *MORPH workshop: Investigating the Evolution of Plant Form. Boulder, USA.* Selected from abstracts.

SPECIALIZED TRAINING

Workshops:

- Teaching for Understanding in Science: Designing learner-centered instruction, Sep 2011
- Jepson Herbarium Public Programs: Brassicaceae, May 2010; Poaceae, March 2012

Harvard University Summer School: 'Biodiversity of Tropical Plants', a field and laboratory class in tropical botany taught by Dr P. Barry Tomlinson. June 2009.

TEACHING

2014 – present: **Assistant Professor.** UMass Amherst

- *Developmental Biology* (BIO580). An upper-division team-based learning class for 50 students that I developed. Spring 2015, Fall 2015 – 2019, Spring 2021.
- *How to Make the Perfect Plant* (Bio427). 'Plant Diversity' redesigned to include more practical training in molecular biology. The pandemic meant this was taught as a lecture class in Fall 2021
- *Evolutionary Genomics and the Evolution of Development* (BIO791G), *Mechanisms in Plant Development* (BIO791D). Ongoing journal clubs for grad students and advanced undergrads.
- *Plant Biology Grad Core Course.* I developed one module (plant diversity) for incoming Plant Biology graduate students. Fall 2014 - 2019.
- *Dimensions of Plant Diversity* (BIO597PD). An upper-division lab and lecture class for 20 students, taught with T. Seidler in Spring 2016, 2017. Taught alone Fall 2020.
- *Junior Fellows in the Life Sciences* (BIO597K). I co-taught (one other instructor) this year-long class on careers and the practice of science for 15 high-achieving life science majors. 2014/15, 2015/16.
- *Biology of Social Issues* (BIO105). I developed and taught one third of this class for 400 non-majors. Spring 2014.

Teaching prior to UMass:

2008 - 2010: **Instructor.** Mathematics. San Quentin Prison University Project.

2007 - 2010: **Graduate Student Instructor.** UC Berkeley

- *Plant Molecular Genetics.* Discussion. Spring 2010
- *Principles of Plant Morphology.* Laboratory. Spring 2007, Fall 2008.
- *Plant and Animal Microtechnique.* Laboratory. Summer 2007, 2008.

2004: **Teaching Assistant.** *Basic Molecular Biosciences.* University of the Witwatersrand.

2004: **High School Teacher.** *GCSE Chemistry and Physics.* British International College, South Africa.

2001 – 2004: **Tutor.** *Mathematics, Chemistry, Physics.* Genius 1on1 Tuition, South Africa.

MENTORSHIP

*Primary Advisor:***Postdoctoral, Advisor:**

- Joseph Gallagher (08/17 – present)
USDA NIFA Postdoctoral Fellow.
- Jamie Kostyun (07/19 – present)
- Maria Jazmin Abraham Juarez (02/18 – 01/19)
Currently: CONNICYT Fellow, Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosi, SLP, Mexico
- Amanda Schrager-Lavelle (09/16 – 07/18)
USDA NIFA Postdoctoral Fellow.
Currently: Assistant Professor, Colorado Mesa University
- Pubudu Handakumbura (09/14 – 08/15)
Currently: Scientist, PNNL, Pullman, WA

Doctoral, Major Advisor:

- Amber De Neve (Plant Biology) *NIH BTP Fellow*
- Erin Patterson (Plant Biology)
- Harry Klein (Plant Biology) Graduated, Summer 2020
Currently: Dana Farber Cancer Institute
- Jarrett Man (Plant Biology) Graduated, Fall 2020
Currently: Galy Biotech

Masters, Major Advisor:

- Thompson Zhang (Plant Biology) Graduated, Summer 2017
Currently: Xenobiotic Laboratories

Undergraduate Research, Current:

- Adriana Chiaramida
- Isabella Higgins
- Karen Huang (*Commonwealth Honors College Fellowship Recipient*)
- Isabella Rozza
- Noel Taylor (*Commonwealth Honors College Fellowship Recipient*)
- Katie Tumang (*Commonwealth Honors College Fellowship Recipient*)
- Maya Watanabe

Undergraduate Research, Past:

- Diego Arroyo
- Mackenzie Barber *Commonwealth Honors College Fellowship Recipient*
Currently: Anokion Laboratories
- Jessica Brass
- Callan Carr
- Kenechi Chiemelu *Currently: UMass Medical School*
- Ryan Desrochers *Commonwealth Honors College Thesis: 'Sex determination in grasses'*
Currently: Brown Medical School
- Rebecca Goldberg *Currently: UMass MSc program in Public Health*
- Michelle Heeney *(CAFE summer scholar, Commonwealth Honors College Fellowship Recipient, Nutting Award Winner).*
Currently: Inari
- Jeffrey Heithmar *CAFE Summer Scholar, CHC Fellowship Recipient*
Currently: Peace Corps
- Chloe Li

Tiffany Ma *Currently: Pfizer*
 Jessica Mazzola
 Mondonna Mojahed
 Benedikt Nuesslein
 Jennifer Pereira Badji
 Morgan Powell *(CAFE summer scholar)*
 Jamie Richards
 Grace Pisano *Biology Department Research Fellowship Recipient*
Currently: Harvard OEB Graduate Student
 Julianna Rushdi *Currently: Massachusetts General Hospital*
 Kevin White *Currently: UMass Medical School*

*Committee Membership:***Doctoral Thesis Committee:**

Joshua Coomey (PB)
 Stavroula Fili (PB)
 Antonia Gray (PB)
 Michelle Jackson (OEB)
 Rakesh Kumar (PB)
 Kirk MacKinnon (MCB)
 Sandra Romero Gamboa (PB)
 Miriam Hernandez-Romero (PB)
 Ian McCahill (PB)

Masters Thesis Committee:

Celina Abundis (PB)
 Dylan Jockel (OEB)
 Altynay Zhanayeva (PB)

DEPARTMENTAL AND UNIVERSITY SERVICE

Biology Department:

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| 2020 – present | Racial Justice Committee |
| 2019 – present | Department Personnel Committee |
| 2019/2020 | Department Chair Search Committee |
| 2018 - 2020 | Hiring Priorities Committee |
| 2017/18 | Cell Biology faculty search committee (member) |
| 2014/15 | Greenhouse Committee, member and interim chair |
| 2014/15, 2015/16 | Junior Fellows in the Life Sciences, program faculty leader |
| 2014/15 | Personnel Committee, member |
| 2014/15 | Biology Chair Search Committee, member |

College of Natural Sciences:

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| 2020 – present | Plant Biology Graduate Program DEI Committee (chair) |
| 2019 – present | Director of the UMass Natural History Collections |
| 2016 – present | Plant Biology Graduate Program Seminar Co-Organizer |
| 2014 – present | Curator of the UMass Natural History Collections Living Plant Collection. I run a student curators program geared at updating and improving the living plant collections. I also am engaged in fundraising, led the redesign of UMass Natural History Collections website, and designed a plant diversity class (Bio597PD) based on the collection. |
| 2019 – 2020 | CNS Interdepartmental Graduate Program Budget Committee |

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| 2019 | Search committee for NHC admin assistant replacement |
| 2015 – 2019 | Plant Biology Graduate Program Admissions Committee, member |
| 2014 – 2016 | Genetics, Genomics, and Epigenetics Models to Medicine Research Cluster Steering Committee. |
| 2014 | Organizer, UMass Plant Biology Symposium. |

PROFESSIONAL SERVICE

Editorial Board Membership: The Plant Cell (Guest editor, September 2020 - present). Handled 5 manuscripts so far.

Meeting Organization: I am one of two organizers of the Northeastern Regional Meeting of the Society for Developmental Biology. This meeting was supposed to be held in April 2020, but has been postponed to April 2021 because of the COVID-19 pandemic. I also was elected to serve on the Maize Genetics Conference Steering Committee (2020 - present).

Panel Service: National Science Foundation (2015, 2017)

Ad Hoc Reviewer: National Science Foundation, National Research Foundation (South Africa), Deutschen Forschungsgemeinschaft (Germany), Israeli Science Foundation, Netherlands Organisation for Scientific Research

Society Committee Service: Botanical Society of America Kaplan Award Committee (2021-22 chair, 2018 - present); Maize Genetics Co-operation Committee on Diversity Inclusion and Equity (CODIE) (2020 – present); Plant Decadal Vision Plant Summit Participant, Writing Team Member (2018 – 2020); BSA ‘Careers in Botany’ panelist (2019); Botanical Society of America Graduate Student Research Award Committee (2016 - 2018, 2020), *Brachypodium* Meeting organizing committee (2015), Maize Editorial Board, maizegdb.org (2014).

Invited Research Topic Co-Ordinator: Frontiers in Plant Evolution and Development (2013)

Symposium Organizer: I organized meeting symposia at the Botanical Society of America Annual meeting in 2017, at the European EvoDevo meeting in 2018, and have submitted a professional development symposium application for SACNAS 2020.

Textbook Chapter Reviewer: Developmental Biology, 13th edition

Manuscript Reviewer: African Journal of Botany, American Journal of Botany, Annals of Botany, BMC Plant Biology, The Botanical Journal of the Linnean Society, Communications Biology, Current Biology, Development, EvoDevo, FEBS letters, Frontiers in Plant Science, Genome Biology and Evolution, International Journal of Plant Sciences, Molecular Plant, Molecular Phylogenetics and Evolution, Nature Communications, Nature Plants, Nature Scientific Reports, New Phytologist, PeerJ, The Plant Cell, Plant Cell and Physiology, Plant Direct, The Plant Journal, Plant Physiology, PLoS ONE, PNAS, Trends in Genetics, Trends in Plant Science.

OUTREACH

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| 2020 | Presented in the Massachusetts Life Sciences Center ‘Meet the Pros’ event for high school students interested in a career in STEM. |
| 2015 - 2019 | UMass Center for Agriculture, Food and the Environment Field Day. This event showcases ongoing research at the UMass farm for local growers. Our lab presents on our research at this event, and in the last two years has produced informational flyers available on my lab’s website. |
| 2017 - 2019 | Hosted four high school students in the lab each summer through the Massachusetts Life Sciences Center |
| 2018 | UMass Open Classrooms host |

- 2017 Member of scientific panel on genome editing at Baypath Women's college
- 2017 OEB Graduate Program Science Café on flowers.
- 2017 STEM Girls Science camp
- 2015 Organized and ran a one-day workshop on plant diversity for 15 high school girls as part of the Girls Inc. Eureka! program.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Plant Biologists; Botanical Society of America; Society for Developmental Biology; Society for the Study of Evolution