

**Amy Litt**  
**Curriculum Vitae**

Director of Plant Genomics and Cullman Curator  
The New York Botanical Garden  
Bronx, NY 10458  
718-817-8161; alitt@nybg.org

**Professional Preparation**

Brown University, Providence, RI	Biology	B.A., 1975
Yale University, New Haven, CT	Biology	M. Phil., 1982
New York Botanical Garden/City University of New York, Bronx, NY	Plant Sciences	Ph.D., 1999
Yale University, New Haven, CT	Plant Molecular Biology	Post-doc., 1999-2004

**Appointments**

2012-        Program Officer, National Science Foundation, Divisions of Integrated  
                 Organismal Systems and Environmental Biology, Arlington, VA

2009-        Adjunct Associate Professor, Fordham University, Bronx, NY

2005-        Visiting Scientist, New York University, New York, NY

2005-        Doctoral faculty member, City University of New York (Biology Program, Plant  
                 Sciences subprogram), New York, NY

2005 -        Director of Plant Genomics and Cullman Curator. The New York Botanical  
                 Garden, Bronx, NY

2004-2005    Assistant Professor. Department of Biological Sciences, University of Alabama,  
                 Tuscaloosa, AL

2003-2004    Post-Doctoral Associate. Department of Molecular, Cellular, and Developmental  
                 Biology, Yale University, New Haven, CT

1999-2003    Post-Doctoral Fellow. Department of Molecular, Cellular, and Developmental  
                 Biology, Yale University, New Haven, CT

1998-1999    Instructor. Forestry School, Yale University, New Haven, CT

1996-1997    Lewis B. and Dorothy Cullman Fellow in Molecular Systematics. NY  
                 Botanical Garden

1992-1996    Herbarium Assistant. The New York Botanical Garden, Bronx, NY

1993         Instructor. Dept. of Continuing Education, The New York Botanical Garden,  
                 Bronx, NY

1985-1992    Teacher. Horace Mann-Barnard School, Bronx, NY

1984-1985    Teacher. The Chapin School, NY, NY

**Funding**

Joint bryophyte genomics and phylogenetics conference: Moss2012 and 3rd International  
Conference on Molecular Systematics of Bryophytes. National Science Foundation. PIs  
Bernard Goffinet, DorothyBelle Poli, Amy Litt, and Bill Buck. \$38,080.00. 2012.

The role of gene duplication in the floral symmetry pathway in Dipsacaceae”, National Science Foundation. PI Dianella Howarth (St. John’s University), Amy Litt, Senior Personnel. \$10,000. 2012-2014.

The genetic basis of an evolutionary change in response to drought. Eppley Foundation. PI Amy Litt. \$25,000. 2011.

REU Site: Calder Summer Undergraduate Research (CSUR) Program in Conservation and Urban Ecology. National Science Foundation. PIs John D. Wehr and James D. Lewis (Fordham University). Amy Litt, Senior Personnel. 2011-2017.

Functional evolution of the *APETALA1/FRUITFULL* gene lineage. National Science Foundation. PI Amy Litt. \$420,000. 2009–2013.

microMORPH: Microevolutionary Molecular and Organismic Research in Plant History. Research Coordination Network, National Science Foundation. PIs William Friedman and Pamela Diggle. Amy Litt, Senior Personnel. 2010-2015.

MRI: Acquisition of a High Performance Computer Cluster for The New York Botanical Garden. National Science Foundation. PIs Damon Little and Amy Litt. \$416,718. 2009–2013

NESCent (National Evolutionary Synthesis Center) Catalysis Meetings. Floral Assembly: Quantifying the composition of a complex adaptive structure. Collaborator, with PIs Charles Fenster, Pamela Diggle, W. Scott Armbruster. 2008-2010.

USDA-CSREES 2001-35304-09901. Evolution and expression of the *APETALA1* gene family in angiosperms. (post-doctoral research award) PI Amy Litt. 2000-2002.

NSF POWRE Award. Evolution and expression of the *APETALA1* gene family in angiosperms. (post-doctoral research award) PI Amy Litt. 2000.

NSF Dissertation Improvement Grant 9520713. Systematics of Vochysiaceae: small family, big questions. 1995-1997.

**Publications** (\*not yet published)

- \*O’Meara, B. C., S. D. Smith, W. S. Armbruster, L. D. Harder, C. Hardy, L. C. Hileman, L. Hufford, A. Litt, S. Magallón, S A. Smith, P. F. Stevens, C. B. Fenster , P. K. Diggle. Submitted. How micro and macroevolutionary processes, and a long extinct flower, shape extant floral diversity. *Science*.
- \*Welt, R., A. Litt, and S. Franks. Submitted. Population genetic changes following rapid evolution of flowering time in *Brassica rapa*. *Molecular Ecology*.
- \*Poli, DB, S. McDaniel, P. Szovenyi, A. Litt, W. Buck, and B. Goffinet. Submitted. Using the structure of professional meetings and a (forced) creative use of time to aid graduate student professional life training. *Life Science Education – Cell Biology Education*.
- \*Meyer, R. S., M. Bamshad, D. Q. Fuller, and A. Litt. Accepted pending minor revision. Uses of eggplant (*Solanum melongena* L.) in China, India, and the Philippines: comparisons in the context of multiple origins. *Economic Botany*.
- \*Wu, S-B., R. S. Meyer, B. D. Whitaker, A. Litt, and E. J. Kennelly. In press. A new liquid chromatography-mass spectrometry-based strategy to integrate chemistry, morphology, and evolution of eggplant (*Solanum*) species. *Journal of Chromatography A*.
- \*Pabón-Mora, N, O Hidalgo, S. Gleissberg, and A. Litt. In press. Duplication and sequence diversification of *FUL*-like genes in the Ranunculales. *Frontiers in Plant Development and Evolution*.

- \*Meyer, R., E. McCarthy, M. Strahl, N. Pabon-Mora, A. Mohamed, C. Piccirillo-Stosser, N. Naghshineh, and A. Litt. Invited manuscript due January 2014. Candidate gene function in the evolution of dry and fleshy fruit in Solanaceae. *Frontiers in Plant Science*.
- Meyer, R. S., S. Knapp, A. Litt, K. G. Karol, D. P. Little, and M. Nee. 2013. Reply to J. Samuels: Taxonomic notes on several wild relatives of *Solanum melongena* L. *Molecular Phylogenetics and Evolution* 69:306-307.
- Knapp, S., and A. Litt. 2013. Fruit evolution and diversity. In *Fruit Ripening: Molecular Biology and Biochemistry*. J. J. Giovannoni, M. Poole, G. B. Seymour, and G. A. Tucker eds. Wiley and Sons, Inc.
- Doyle, V. P., P. V. Oudemans, S. A. Rehner, and A. Litt. 2013. Habitat and host indicate lineage identity in *Colletotrichum gloeosporioides* s.l. from wild and agricultural landscapes in North America. *PLoS ONE* 8(5): e62394. doi:10.1371/journal.pone.0062394.
- Pabón-Mora, N., B. Sharma, L. Holappa, E. Kramer, and A. Litt. 2013. The *Aquilegia FRUITFULL*-like genes play key roles in leaf morphogenesis and inflorescence development. *Plant Journal* 74(2):197-212.
- Litt, A. 2013. Comparative evolution of land plant genomes. In *Comparative Development of Land Plants*. B. Ambrose and M. Purugganan, eds. Wiley and Sons, Inc.
- Wu, S., R. Meyer, B. Whitaker, A. Litt and E. Kennelly. 2012. Antioxidant glucosylated caffeoylquinic acid derivatives in the invasive tropical soda apple, *Solanum viarum*. *Journal of Natural Products* 75: 2246-2250.
- Gramzow, L., E. Barker, C. Schulz, B. Ambrose, N. Ashton, G. Theißen, and A. Litt. 2012. *Selaginella* genome analysis – entering the ‘homoplasy heaven’ of the MADS world *Frontiers in Plant Science* 3:214. doi: 10.3389/fpls.2012.00214.
- Ahmed, Selena, Peters, C. M, Chunlin, L., Meyer, R.; Unachukwu, U., Litt, A., Kennelly, E., and Stepp, J. R.. 2012. Biodiversity and phytochemical quality in indigenous and state-supported tea management systems of Yunnan, China. *Conservation Letters* doi: 10.1111/j.1755-263X.2012.00269.x.
- Pabón-Mora, N., B. Ambrose, and A. Litt. 2012. Functional characterization of poppy *FRUITFULL*-like genes and implications in the evolution of the *APETALA1/FRUITFULL* gene lineage. *Plant Physiology* 158: 1685-1704.
- Cohen, J., J. Davis, and A. Litt. 2012. Comparative floral development of heterostylous and homostylous species of *Lithospermum* L. (Boraginaceae) and implications for the evolution and development of heterostyly. *American Journal of Botany* 99: 797-805.
- Meyer, R., M. Nee, K. Karol, D. Little, Z. Fan, and A. Litt. 2012. Phylogeographic relationships among Asian eggplants and new perspectives on eggplant domestication. *Molecular Phylogenetics and Evolution* 63: 685-701.
- Quirin, E., H. Mann, R. Meyer, A. Traini, M. L. Chiusano, A. Litt, and J. Bradeen. 2012. Evolutionary meta-analysis of Solanaceous R Gene and *Solanum* RGA sequences and a practical framework for cross-species comparisons. *Molecular Plant-Microbe Interactions* 25: 603-612.
- Pabón-Mora, N. and A. Litt. 2011. Comparative anatomical and developmental analysis of dry and fleshy fruits of Solanaceae. *American Journal of Botany* 98: 1415-1436.
- Banks, J. et al. 2011. The *Selaginella* genome identifies changes in gene content associated with the evolution of vascular plants. *Science* 332: 960-963.
- Constantelos, D., V.P. Doyle, A. Litt, and P.V. Oudemans. 2011. First Report of *Gliocephalotrichum bulbilium* causing cranberry fruit rot in New Jersey and Massachusetts. *Plant Disease Notes* 95(5): 618.

- Kavalier, A., A. Litt, C. Ma, N. Pitra, E. Kennelly, and P. Matthews. 2011. Phytochemical and morphological characterization of hop (*Humulus lupulus* L.) cones over five developmental stages using high performance liquid chromatography coupled to time-of-flight mass spectrometry, ultra-high performance liquid chromatography photodiode array detection, and light microscopy techniques. *Journal of Agricultural and Food Chemistry* 59:4783-4793.
- Kramer, E. and A. Litt. 2009. The ABC model: beyond the core eudicots. In: The evolution of plant development, B. Davies Ed. *Seminars in Cell and Developmental Biology*: 21:120-137.
- Litt, A. 2007. An evaluation of A function: evidence from the *APETALA1* and *APETALA2* gene lineages. *International Journal of Plant Sciences* 168(1): 73-91.
- Hileman, L.C., J. Sundstrom, A. Litt, M. Chen, T. Shumba, and V. F. Irish. 2006. Molecular and phylogenetic analyses of the MADS-box gene family in tomato. *Molecular Biology and Evolution* 23: 2245-2258.
- Hileman, L. C., S. Drea, G. de Martino, A. Litt, and V.F. Irish. 2005. Virus induced gene silencing is an effective tool to assay gene function in the basal eudicot *Papaver somniferum* (opium poppy). *Plant Journal* 44(2):334-41.
- Irish, V. F., and A. Litt. 2005. Flower development and evolution: gene duplication, diversification, and redeployment. *Current Opinions in Genes and Development* 15:454-60.
- Liu, Y., Nakayama, N., Schiff, M., Litt, A., Irish, V.F. and Dinesh-Kumar, S.P. 2004. Virus induced gene silencing of a *DEFICIENS* ortholog in *Nicotiana benthamiana*. *Plant Molecular Biology* 54:701-711.
- Sytsma, K. J., A. Litt., M. Zjhra, J. C. Pires, M. Nepokroeff, E. Conti, J. Walker, and P. Wilson. 2004. Clades, clocks, and continents: historical and biogeographical analysis of Myrtaceae, Vochysiaceae, and relatives in the southern hemisphere. *International Journal of Plant Sciences* 165 (4 Suppl.) S85-S105.
- Litt, A. *Vochysiaceae* and *Euphroniaceae*. 2004. in *Flowering Plants of the Neotropics*, N. Smith, S. A. Mori, A. Henderson, D. W. Stevenson, and S. Heald, eds. Princeton University Press, Princeton.
- Litt, A. and V. F. Irish. 2003. Duplication and divergence in the *APETAL1/FRUITFULL* gene lineage: implications for the evolution of floral development programs. *Genetics* 165:821-833.
- Litt, A. and D. W. Stevenson. 2003. Floral morphology of Vochysiaceae I. Position of the single fertile stamen. *American Journal of Botany* 90:1533-1547.
- Litt, A. and D. W. Stevenson. 2003. Floral morphology of Vochysiaceae II. Structure of the gynoecium. *American Journal of Botany* 90:1548-1559.
- Litt., A. and M. Cheek. 2002. *Korupodendron songweangum*, a new genus and species of Vochysiaceae from West-Central Africa. *Brittonia* 54:13-17.
- Litt, A. 1999. Systematics and Floral Morphology of Vochysiaceae. Dissertation. City University of New York.
- Litt, A. and M. W. Chase. 1999. The systematic position of *Euphronia*, with comments on the position of *Balanops*: an analysis based on *rbcL* sequence data. *Systematic Botany* 23: 401-409.
- Conti, E., A. Litt, P.G. Wilson, S.A Graham, B.G. Briggs, L.A.S. Johnson, and K.J. Sytsma. 1997. Interfamilial relationships in Myrtales: molecular phylogeny and patterns of morphological evolution. *Systematic Botany* 22: 629-647.
- Conti, E., A. Litt, and K. J. Sytsma. 1996. Circumscription of the Myrtales and their relationships to other Rosids: evidence from *rbcL* data. *American Journal of Botany* 83: 221-233.

## Popular publications and book reviews

Litt, A. 2006. Origins of floral diversity. *Natural History* 115(5): 34-40.

Litt, A. 2009. Review: Understanding Flowers and Flowering: An Integrated Approach by Beverley J. Glover. *The Quarterly Review of Biology* 84: 206.

## Media links

*CBS Sunday Morning:*

<http://www.cbsnews.com/video/watch/?id=50145319n> 2012. Interview about the ways in which plants sense and respond to their environment, based on the book *What a Plant Knows* by Dr. Danny Chamowitz (time point 3:00, 30 seconds of interview).

*WNYC public radio, New York, The Leonard Lopate Show:*

<http://www.wnyc.org/shows/lopate/2009/mar/20/please-explain-flowers/> 2009.

Interview with call-in questions for the segment “Please Explain” on flowers, with Kristen Schleiter (The New York Botanical Garden).

<http://www.wnyc.org/shows/lopate/2008/oct/10/please-explain-photosynthesis/> 2008.

Interview with call-in questions for the segment “Please Explain” on photosynthesis”, with Jamie Boyer (The New York Botanical Garden)

*LiveScience:*

<http://livescience.com/5014-surprising-truths-fruits-vegetables.html> 2008. Interview with livescience.com on “Surprising Truths about Fruits and Vegetables”; picked up by Huffington Post ([www.huffingtonpost.com/2008/08/06/some-surprising-truths-ab\\_n\\_117313.html](http://www.huffingtonpost.com/2008/08/06/some-surprising-truths-ab_n_117313.html)).

*Channel 13 public television:*

<http://www.thirteen.org/curious/survival/web-exclusive-it-all-starts-with-the-sun/> 2007.

Interview about photosynthesis, part of documentary about artificial photosynthesis for the series *Curious*.

*NY1 cable television:*

<http://www.nyl.com/content/pages/59552/scientists-get-to-work-on-plants-at-new-lab-at-botanical-garden> 2006. Interview for morning news show on research at the newly opened laboratory building at The New York Botanical Garden.

*NYBG Plant Talk Blog Posts* (about our research or by or about me)

[Tea Horse Road: China’s Ancient Trade Road to Tibet](#)

Selena Ahmed, 2011 (served on her graduate committee and supervised her genetic diversity analyses)

[NYBG Scientists Help Lycophyte Genome See the Limelight](#)

Amy Litt, 2011

[Did You Know the Botanical Garden Has a Lab?](#)

Amy Litt, 2011

[Window Garden Wednesday: Amy Litt](#)

Staff, 2011 (Interview)

[High School Intern at the Garden Named A Finalist in 2011 Intel Science Contest](#)

Amy Litt, 2011

[The Study of Cryptic Diversity: From Field to Lab](#)

Vinson Doyle, 2011 (graduate advisor)

[Empowering Girls Through Flowers](#)

Elizabeth McCarthy, 2011 (post-doc advisor)

[Tip of the Week: Edible Garden Features Eggplants](#)

Sonia Uyterhoeven, 2010 (information about graduate student Rachel Meyer's project)

[Searching for a Wild Ancestor](#)

Rachel Meyer, 2009 (graduate advisor)

## **Teaching**

Plant Development (City University of NY, 2008, 2010, 2012)

Plant Evolution and Morphology (City University of NY, 2007, 2009, 2011)

Molecular controls of organism form and function (New York University, 2007)

Introductory Biology (University of Alabama, 2005)

Plant Systematics (Yale University School of Forestry, 1998, 1999)

Basic Botany (The New York Botanical Garden Continuing Education Program, 1993)

7<sup>th</sup> and 8<sup>th</sup> grade Science, 9<sup>th</sup> grade Biology, 10<sup>th</sup> grade Chemistry (Horace Mann-Barnard School, 1985-1992)

4<sup>th</sup> grade greenhouse class, 7<sup>th</sup> grade Science, 9<sup>th</sup> grade Biology (The Chapin School, 1984-1985)

Teaching Assistant:

Plant Systematics (Yale University School of Forestry, 1996, 1997)

Systematics, Mammalogy (Yale University, 1979-1981)

Ecology (Brown University, 1975)

## **Supervising and Mentoring**

Doctoral students, primary mentor: Natalia Pabón-Mora (faculty, University of Antioquia, Medellin, Colombia), Rachel Meyer (NSF Plant Genome Research Post-doctoral fellowship, NYU), Vinson Doyle (post-doctoral researcher, Louisiana State), Annie Virnig (current).

Served on doctoral committees of 11 additional students at City University, Cornell University, New York University, St. John's University, and University of Alabama.

Other doctoral students supervised while working at NYBG: Jeff Gordon (Cornell), Jim Cohen (Cornell), Irvin Pan (Yale), Andreina Fuentes (Georgia Southern), Adam Kavalier (CUNY), Niamh O'Hara (SUNY Stony Brook), Geraldine Boyden (St. John's), Selena Ahmad (CUNY), Rachel Welt (Fordham; masters' student).

Post-doctoral researchers: Abeer Mohamed (faculty, University of Alexandria, Egypt), Elizabeth McCarthy (current), Catarina Lira (current).

Undergraduates and post-graduates (from 12 different schools including Fordham, Yale, Fort Valley State, John Jay, and schools in Colombia and Brazil): Rolando Rojas, Jennifer Scheinhorn, Simon Uribe, Gustavo Shimizu, Jennifer Shelton, Jennifer Scheinhorn, Shannon Morath, Simon Gunner, Joseph Dewitt, Thalyana Smith-Vikos, India Brown, Rebecca Lalchan, Kimberly Barnum, Kevin Jordan, Lolita Feld, Jackie Gutkin, Savannah Coe, Maria Rodenberg, Kerry Gunsalus.

High school students: *Nightingale-Bamford School*: Ariana Jenkins, Dordi Farsinal, Alexandra Kassidis\*, Nina Naghshineh\*. *Mamaroneck High School*: Ben Viagas, Kobi Shevin (first place, WESEF), Rebecca Volpano (first place, WESEF), Rahul Panicker, Jennifer Fasman (First place, WESEF; Intel semi-finalist), Grace Phillips\* (Intel finalist). *Ossining High School*: Amelia Clements\* (first place, WESEF; chosen for ISEF; Intel semi-finalist), Caitlin Piccirillo-Stosser\* (first place, WESEF). *Bronx High School of Science*: Tiffany Win (honorable mention, NYCSEF), Christian Carrasco\*, Louisa Maciejak. *Fairfield Preparatory School*: Nicholas Hilton. *Fort Lee High School*: Tiffany Zhu\* (first place, New Jersey science fair). *New York*

*Academy of Science*: Rebecca Guenoun. *Edgemont High School*: Eugene Kim (First place, WESEF). *Fox Lane High School*: Denisse Gayoso-Lucano. (\* two summers)

**Presentations** (\*invited)

- 2000 \*Phylogeny and floral morphology of Vochysiaceae. Departmental seminar, Department of Organismal and Evolutionary Biology, Harvard University.
- 2002 \*Duplication and diversification in the *APETALAI* gene lineage. Plant Reproduction: From Evolutionary and Physiological Analyses to Molecular Genetic Studies, Penn State University,
- 2004 \*Gene diversification and the evolution of flower development. City College of New York.
- 2004 \*Gene diversification and the evolution of flower development. University of Alabama.
- 2004 \*Duplication and divergence in the *APETALAI* gene lineage: implications for the evolution of floral development. Departmental seminar, Department of Ecology and Evolution, Yale University.
- 2004 Divergence in the *APETALAI* homeotic gene lineage: implications for the evolution of floral development. New York Area Plant Molecular Biologists meeting.
- 2004 \*Evolutionary changes in a MADS-box gene lineage: implications for the evolution of floral developmental mechanisms. The New York Botanical Garden seminar series.
- 2004 \*Evolutionary changes in a MADS-box gene lineage: implications for the evolution of floral developmental mechanisms Symposium: Plant development and evolution: Lessons learned from candidate genes, Botany2004, Snowbird, UT.
- 2004 \*Development and evolution of different flower forms. University of Alabama Departmental seminar.
- 2004 \*Evolutionary development. University of Alabama Tri-Beta and Freshman Seminar.
- 2004 \*Phylogeny and floral development of Vochysiaceae. Symposium: Evolution of Neotropical Plants: the Phylogenetic Perspective. IIIrd Colombian Botanical Congress, Popayan, Colombia.
- 2004 \*Mechanisms and evolution of floral development. Symposium: Evolution of Neotropical Plants: the Phylogenetic Perspective. IIIrd Colombian Botanical Congress, Popayan, Colombia.
- 2005 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, New York University Biology Department.
- 2005 \*Evolution of plant development: genomic and candidate gene approaches. Harvard University Herbarium seminar.
- 2006 \*Development and evolution of different flower forms. University of Puerto Rico, MORPH Outreach workshop.
- 2006 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, Cornell University Plant Sciences Department.
- 2006 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, Rutgers University Plant Sciences Department.
- 2006 Comparative morphological and transcriptional analysis of fruit development in *Solanum lycopersicum* and *Nicotiana glauca*. Botany2006, Chico, CA.
- 2006 Comparative morphological and transcriptional analysis of fruit development in *Solanum lycopersicum* and *Nicotiana glauca*. Solanaceae Genome Conference, Madison, WI.
- 2006 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, Lehman College of The City University of New York Biology Department.

- 2006 \*Evolution of plant development: genomic and candidate gene approaches. SUNY Stony Brook Department of Ecology and Evolution colloquium.
- 2007 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, Purdue University Department of Horticulture and Landscape Architecture.
- 2007 \*Evolution of plant development: genomic and candidate gene approaches. Departmental seminar, Fordham University Department of Biology.
- 2007 \*Functional evolution of the *APETALA1* gene lineage. Departmental seminar, Lehman College Biology Department.
- 2007 \*Comparative morphological, transcriptional, and functional analysis of fruit development in tomato and flowering tobacco. Departmental seminar, New York University Biology Department.
- 2007 \*What genomics can tell us about tulips and tomatoes. Collegium for Lifelong Learning, Westchester Community College.
- 2007 \*Evolution and function of the *APETALA1* gene lineage. Annual meeting of the Northeast Society of Developmental Biologists, Woods Hole, MA.
- 2007 Comparative morphological and transcriptome analysis of fruit development in Solanaceae. New York Area Plant Molecular Biology meeting, Yale University.
- 2007 Comparative morphological and transcriptome analysis of fruit development in Solanaceae. Second Workshop on Molecular Mechanisms Controlling Flower Development, Acquafredda di Maratea, Italy.
- 2007 \*The genetic basis of flower structure and diversity. Pace University Freshman Science Seminar and Tri-Beta meeting.
- 2007 \*Gene duplication, diversification, and redployment. MORPH workshop, "Investigating the Evolution of Plant Form: Conceptual Integration from the Molecular to the Ecological", Boulder, CO.
- 2008 \*The molecular basis of floral diversity. Salem State College Darwin Festival, Salem, MA.
- 2008 \*The evolution and development of different flower and fruit forms. Nightingale-Bamford School, New York, NY.
- 2008 \*The molecular basis of plant diversity: genomic and candidate gene approaches. Departmental seminar, University of Miami.
- 2008 \*The evolution of flower structure: a molecular perspective. Symposium. Botany2008. Vancouver BC.
- 2008 \*The evolution of flower development: evidence from the *APETALA1/FRUITFULL* gene lineage. Departmental seminar, St. John's University.
- 2008 \*Gene duplication and diversification in flower evolution. The American Museum of Natural History.
- 2009 \*Homology in the Molecular Age. MORPH Workshop: Homology: Conceptual Integration from the Morphological to the Molecular. University of Colorado.
- 2009 \*The genetic basis of flower evolution. Fordham University Ecological Genetics Group.
- 2009 \* Floral Mutants and the genetic basis of floral diversity. Symposium: Darwin's Botany. Vth Colombian Botanical Congress, Pasto, Colombia.
- 2009 \*How genes make flowers. Collegium for Lifelong Learning, Westchester Community College.
- 2009 Functional divergence of *APETALA1* and *FRUITFULL*: sequence vs regulation. Fourth biennial workshop on Molecular Mechanisms of Flower Development, Aiguablava, Spain. June 8-12



- 2009 Functional equivalence of *APETALA1* and *FRUITFULL* in Arabidopsis flower development. Botany2009, Snowbird, UT.
- 2009 The genetic basis of an evolutionary response to climate change. Botany2009, Snowbird, UT.
- 2010 \*The history of eggplant domestication: phylogeographic relationships among candidate progenitors and Asian heirloom varieties” Plant and Animal Genome Conference, San Diego CA.
- 2010 Comparative gene function in the development of fleshy and dry fruits in Solanaceae. Botany2010, Providence, RI.
- 2010 The genetic basis of an evolutionary response to drought. Botany2010, Providence, RI.
- 2011 \*What makes a tomato a tomato: Candidate gene analysis of dry and fleshy fruit development in Solanaceae. Departmental seminar, Fordham University.
- 2011 Functional analysis of a *FRUITFULL* gene in dry and fleshy fruit development. Botany2011, St. Louis, MO.
- 2011 \*Comparative gene function in dry and fleshy fruit development in Solanaceae. XVIII International Botanical Congress, Melbourne, Australia
- 2011 \*Comparative gene function in dry and fleshy fruit development in Solanaceae. Harvard University Herbarium Seminar Series.
- 2011 \*What makes a tomato a tomato: Candidate gene analysis of dry and fleshy fruit development in Solanaceae. Departmental Seminar, Pace University.
- 2012 \*What makes a tomato a tomato: Candidate gene function in dry and fleshy fruit development. Departmental Seminar, College of Mt. St. Vincent, NY
- 2012 \*The evolution and development of different flower and fruit forms. Nightingale-Bamford School.
- 2012 \*What makes a petal a petal? Homology in the molecular age. Katherine Esau Symposium, “Integrating Structure and Function in Plants”, Davis CA.
2012. The consequences of gene duplication: Functional divergence of *APETALA1* and *FRUITFULL* in *Arabidopsis thaliana*. Botany2012, Columbus, OH.
2012. The genetic basis of variation in flowering time in *Brassica rapa* populations. Botany2012, Columbus, OH.
- 2012.\*Basics of the National Science Foundation. Fordham University.
- 2013.\*What makes a tomato a tomato: Candidate gene function in dry and fleshy fruit development. Southern Connecticut State College.
- 2013.\*Twenty years of Plant Research. SciTech (students display and discuss results of independent research projects). Horace Mann High School, Bronx NY.
- 2013 The role of *FUL* genes in dry and fleshy fruit development in Solanaceae. Botany2013, New Orleans, LA
2013. \*Candidate gene function in dry and fleshy fruit development in Solanaceae. VIIth Colombian Botanical Congress. Ibagué, Colombia.

### **Other presentations and posters**

- 2007 Natalia Pabón-Mora and Amy Litt. The evolution of capsules and berries in Solanaceae: a histological approach. Botany2007. Chicago, IL.
- 2007 Abeer Mohamed, Elaine McElhinny and Amy Litt. Evolution of the *API/FUL* MADS-box gene lineage and their function in flower development. Poster. Botany2007. Chicago, IL.

- 2007 Rachel Meyer and Amy Litt. The role of ETR4, an ethylene receptor, in the ripening of flowering tobacco (*Nicotiana sylvestris* Speg., Solanaceae) capsules. Poster. Botany2007. Chicago, IL.
- 2007 Christian Schulz, Damon Little, Amy Litt, Eric Brenner, and Dennis Stevenson. Identity genes for male and female organs in Cryptogams: preliminary investigations in MADS-box genes in the lycophyte *Selaginella*. Poster. Botany2007. Chicago, IL
- 2008 Rachel Meyer, Bruce Whitaker, Edward Kennelly, Michael Nee, and Amy Litt. The history of eggplant domestication: an ethnobotanical, phytochemical, and molecular approach. Poster. Society of Economic Botany. Durham, NC.
- 2008 Rachel Meyer, Bruce Whitaker, Edward Kennelly, Michael Nee, and Amy Litt. The domestication of eggplant: phytochemistry, ethnobotany, and molecular biology. Botany2008, Vancouver, BC.
- 2008 Natalia Pabon-Mora and Amy Litt. Functional evolution of *FUL*-like genes in non-core eudicots. Botany2008, Vancouver, BC.
- 2008 Rachel Meyer and Amy Litt. Comparative gene function in Solanaceae fruit development. Poster. Botany2008, Vancouver, BC.
- 2008 James Cohen, Jerrold Davis, Dennis Wm Stevenson, and Amy Litt. A tale of two morphs: heterostyly in *Lithospermum*. Botany2008, Vancouver, BC.
- 2009 Rachel Meyer, Michael Nee, and Amy Litt. The history of eggplant domestication: Phylogeographic relationships among candidate progenitors and Asian heirloom varieties. Botany2009, Snowbird, UT.
- 2009 Natalia Pabón-Mora and Amy Litt. *FUL*-like gene function in *Papaver somniferum*. Botany2009, Snowbird, UT.
- 2010 Natalia Pabón-Mora and Amy Litt. The role of *APETALA1/FRUITFULL* genes in non-core eudicots. Botany2010, Providence, RI.
- 2010 Rachel Meyer, Natalia Pabón-Mora, Abeer Mohamed, Anna Nowogrodzki, and Amy Litt. Analysis of candidate genes implicated in specifying dry versus fleshy fruit development in the Solanaceae. Botany2010, Providence, RI.
- 2010 Rachel Meyer, Bruce Whitaker, and Amy Litt. Diversity of phenolic content in Asian eggplant landraces and near wild relatives. Botany2010, Providence, RI.
- 2010 Rebecca Lalchan, Anna Nowogrodzki, Steven Franks, and Amy Litt. The role of *Brassica rapa* *FLC* orthologs in flowering time divergence due to drought in natural populations in California. Botany2010, Providence, RI.
- 2011 Rachel Meyer, Bruce Whitaker, and A. Litt. Modifications to the phenolic biosynthesis pathway over the course of domestication in eggplant. Botany2011, St. Louis, MO.
- 2011 Natalia Pabón-Mora and Amy Litt. Functional redundancy of non-core Eudicot *FUL*-like paralogs in regulating flowering time and petal development. Botany2011, St. Louis, MO.
- 2011 Geraldine Boyden, Amy Litt, and Dianella Howarth. The role of *CYC* orthologs in flower development in *Fedia cornucopieae*. Botany2011, St. Louis, MO.
- 2012 Rachel Meyer and Amy Litt. An investigation of the molecular and chemical differences among Asian eggplant lineages in the context of their history of domestication and utilization. Society for Economic Botany.
2012. Natalia Pabón-Mora, Bharti Sharma, Elena Kramer, and Amy Litt. Functional analyses of the *API/FUL* homolog of *Aquilegia* uncovers novel roles in leaf morphogenesis. Botany2012, Columbus, OH.
2012. Rachel Meyer, Bruce Whitaker, Damon Little, and Amy Litt. Molecular and chemical differences among Asian eggplants analyzed in a framework of their history of utilization.

Botany2012, Columbus, OH.

2012. Natalia Pabón-Mora, Bharti Sharma, Elena Kramer, Barbara Ambrose, Amy Litt. Functional analyses of *APETALA1*/*FRUITFULL* genes in basal eudicots. Society for Developmental Biology. Montreal, Canada.
2012. Neil Ashton, Lydia Gramzow, Christian Schulz, Barbara Ambrose, Guenter Theissen, and Amy Litt. *Selaginella* genome analysis- entering the 'homoplasy heaven' of the MADS world International Conference on Arabidopsis Research (ICAR). Poster. Vienna, Austria.
2013. Elizabeth McCarthy, Abeer Mohamed, and Amy Litt. Functional divergence of *APETALA1* and *FRUITFULL* in Arabidopsis. Botany 2013, New Orleans, LA.

### **Fieldwork**

Texas, New Mexico, Arizona, Wyoming, Eastern US and Canada (Nova Scotia to North Carolina), Puerto Rico, Brazil, French Guiana, Colombia, Cameroon

### **Other Activities**

- Chair, Development and Structure Section, Botanical Society of America. (2013-)
- Treasurer, Botanical Society of America. (2010-2013)
- Secretary Treasurer, Development and Structure Section of Botanical Society of America. (2008-2011)
- Co-organizer, joint conference, MOSS2012 and 3<sup>rd</sup> International Symposium on Bryophyte Systematics. NSF Funding obtained for fellowships for 38 students, 50% each genomics and systematics. Students were required attend both meetings and participate in workshops and activities designed to foster interactions and to forge collaborations across these two disciplines. Also included a workshop on using mosses in teaching for K-12 teachers. (2012)
- Member, Teacher Advisory Council at NYBG, convened to "improve programming and evaluation tools related to informal, outdoor education, especially in the realm of science learning." (2013-)
- Plant Sciences faculty representative to committee to evaluate and establish criteria for membership in the Graduate Faculty of the City University of NY as part of restructuring of the graduate program. (2013-)
- Coordinator, TAP program (Teaching Advancement Program), Department of Biological Sciences, University of Alabama (2004-2005)
- Steering Committee Member and Core Network Participant, MicroMorph Research Coordination Network. Co-organized and attended organizational meetings; planned and attended workshops (Boulder CO and Cambridge, MA). Ned Friedman and Pam Diggle, PIs. (2010-)
- Organizer, MORPH-sponsored Minicourse: Homology: Conceptual and Historical Integration from the Morphological to the Molecular. (University of Colorado, Boulder, 2009)
- Participating PI, MORPH (Molecular and Organismic Research in Plant History; Ned Friedman, PI), NSF-supported Research Coordination Network); co-leader of MORPH sponsored one-day workshop at University of Puerto Rico on Evolutionary Development; invited Faculty, workshop on Investigating the Evolution of Plant Form: Conceptual Integration from the Molecular to the Ecological. (2003-2008)
- Organizer and host, New York Area Plant Molecular Biology Conference. (2006)
- Organizer, symposium in honor of Dennis Wm. Stevenson at Botany2008, annual meeting of the Botanical Society of America and other botanical societies. (2008).
- Director, Pfizer Laboratory Internship Program, NYBG. (2007-2009)

Panel Member, National Science Foundation. (2005, 2006, 2010, 2011, 2012)

Consultant, Tree of Life Exhibition at the American Museum of Natural History, New York. (2006)

Committee member, review of botany curriculum for NYBG School of Professional Horticulture and Continuing Education. (2012)

Chair of one search committee and two promotion and retention review committees, served on multiple other review committees. (2007-2011) Member of two NYBG search committees. Served as referee for tenure and promotion decisions for Drs. Allison Miller, Dianella Howarth, and Stefan Gleissberg.

Representative to AWARDS workshop sponsored by American Women in Science; presentation and discussion of implicit bias in determining recipients of awards and unequal representation of women and minorities. (2011)

Participant in Plant Sciences Research Summit, sponsored by ASPB, HHMI. (2011)

Liaison and coordinator, Science Department, for construction of and moving into new laboratory building at NYBG. (2006)

Host, visiting faculty Drs. Michelle Zhrja (Georgia Southern University, MORPH funded), Barbara Ambrose (Massey University, New Zealand, MORPH funded), Giovanna Serino (University of Rome)

Member, Botanical Society of America Karling Award Committee. (2003-2005)

Member, Botanical Society of America, American Society of Plant Taxonomists, and American Society of Plant Biologists.

Associate Editor, *Molecular Phylogenetics and Evolution* (2007-2013). Associate Editor, *Frontiers in Plant Biology* (2011- ). Topic Editor, *Frontiers in Plant Biology (Selaginella)*, 2012)

Assistant and Associate Editor, *Brittonia* (1996-1998)

Reviewer for *Plant Cell*, *Plant Physiology*, *Plant Journal*, *Genetics*, *Genes and Development*, *Journal of Experimental Botany*, *Molecular Biology and Evolution*, *American Journal of Botany*, *Systematic Botany*, *Canadian Journal of Botany*, *Annals of Botany*, *Plant Molecular Biology Reporter*, *BMC Evolutionary Biology*, *PLoS One*, *New Phytologist*, *International Journal of Plant Sciences*, *Development and Embryology*, *Oxford University Press*, and others. Reviewed grant proposals for NSF, USDA, NIH, Gordon Conferences, and others.

## **Outreach**

Gave tour and research demonstration for 15 chefs employed at the restaurants of Mario Batali in NY in conjunction with NYBG's "Wild Medicine" exhibit. (2013)

Participated as judge, Arabidopsis Fair, Marshall High School, Falls Church, VA. 2(013)

Participated in Reverse Science Fair, at which scientists presented their work (through posters and activities) to middle school students. National Science Foundation. (2013)

Reviewed scientific accuracy of two children's books for Holliday House. (2010, 2012)

Participated in "Café Scientifique" during which visitors to NYBG ask questions of a scientist (seated at a table with coffee and cookies). (annual)

Organized "Botanical Research in the 21<sup>st</sup> Century" continuing education course for Collegium for Lifelong Learning, Westchester Community College. (Spring 2007 and Spring 2009).

Gave presentation on studying plants in Brazil for 5<sup>th</sup> graders at Pleasantville Middle School. (2005, 2007, 2011)

Gave multiple presentations and tours annually to NYBG Board, members, visitors including Presidents of the University of Puerto Rico, Lehman College, Fordham University, NY

Public Television, NY Public Library, and the Wildlife Conservation Society, Editor-in-Chief of National Geographic Digital Media, NY Times science writer Carl Zimmer, Director of Edinburgh Botanical Garden, as well as for students from University of Houston Downtown, Columbia University, Taft School, and others. (annual and ongoing)  
Authored “Unanswered Question” for college textbook on biology for CENGAGE learning. (2006, 2009, 2012)  
Mentored and tutored New York City public school students through the Chess-in-the-Schools program (<http://www.chessintheschools.org/>).  
Worked with the NYBG video department to create short videos representing plant sciences research at NYBG. (2012)  
Served as NYBG mentor to incoming employees, one or two annually.  
Wrote posts on our research for the NYBG public blog; supervised graduate students and post-doc in writing blog posts.

### **Awards, and Fellowships**

2003           Brown Postdoctoral Fellowship, Yale University  
1999-2000    Anderson Postdoctoral Fellowship, Yale University  
1996           Fund for Neotropical Plant Studies Award  
1996           Lawrence Memorial Award  
1994-1996    Lewis B. and Dorothy Cullman Fellowship in Molecular Systematics, NY Botanical Garden  
1994           American Society for Plant Taxonomy Research Award  
1993           Lawrence/Conoco/DuPont Award, NY Botanical Garden  
1992-1996    Herbarium Fellow, NY Botanical Garden

### **Current (\*) and Recent Faculty Research Collaborators**

\*Dr. James Lewis, Fordham University: Effects of urbanization on plant and soil microbe diversity/genetic diversity  
\*Dr. Steven Franks: Genetic basis of flowering time variation in *Brassica rapa*  
\*Dr. Elena Kramer, Harvard University: Functional evolution of the *API/FUL* gene family  
\*Dr. Zachary Lippman, Cold Spring Harbor Laboratory: Creation of community resources for research using *Nicotiana obtusifolia*  
\*Dr. Vivian Irish, Yale University: Evolution and dry and fleshy fruit in Solanaceae  
\*Dr. Marc Chapman, University of Southampton: Eggplant domestication and diversification  
\*Drs. Paola Pedraza and Ina Vandebroek (NYBG): Ethnobotany, phytochemistry, and genomics of Andean Ericaceae  
\*Dr. Kikyo Yamamoto (retired), University of Campinas, Brazil: Systematics of Vochysiaceae  
\*Dr. Dianella Howarth: function of *CYC* floral symmetry genes in Dipsacales  
Dr. Guenter Theissen, University of Jena, Germany: Selaginella MADS-box genes  
Dr. Christian Shultz, University of Bochum, Germany: Selaginella MADS-box genes  
Dr. Neil Ashton, University of Calgary, Canada: Selaginella MADS-box genes  
Dr. Stefan Gleissberg, Ohio University: *API/FUL* gene evolution  
Dr. Oriane Hidalgo, Botanical Institute of Barcelona: *API/FUL* gene evolution