

Margaret Frank

CV

Education

- 2003 - 2007 **Barnard College**, Bachelor of Arts, Biology Major.
2008 - 2014 **Cornell University**, Doctor of Philosophy, Plant Biology.

Research

- 2014 - **Natural variation of desert adapted traits in *S. pennellii***, Donald Danforth Plant Science Center, Post doctoral researcher
Advisor: Dan Chitwood
Evolution of desert-adapted traits in the wild tomato species *Solanum pennellii*
- 2008 - 2014 **Plant Evolution and Development, Cornell University, PhD Thesis**
Advisor: Mike Scanlon
Macroevolution of shoot meristem programs in morphologically distinct and evolutionarily divergent land plant lineages.
- 2007 - 2008 **Molecular Systematics, Harvard University, Research Technician**
Employers: Drs. Jianhua Li and Sarah Mathews
Contributed to resolving relationships within the *Araucariaceae* for the Gymnosperm Tree of Life. Identified molecular markers for resolving phylogenetic relationships within *Acer*.
- 2006 - 2007 **Plant Conservation, Barnard College, Senior Thesis**
Advisors: Drs. Matthew Palmer and Hilary Callahan
Studied the influence of hydrology and soil chemistry on the fecundity of *Rhynchospora knieskernii*, a rare sedge that is endemic to southern New Jersey.
- Summer 2006 **Microbiology, Einstein College of Medicine, REU**
Advisor: Dr. Howard Steinman
Researched the effect of a second secretion system (the *LVH* locus) on the virulence of *Legionella pneumophila*, the causative agent of Legionnaires' Disease.
- 2005 - 2006 **Plant Development, Barnard College, REU**
Advisor: Dr. Kristen Shepard
Investigated the functional divergence of *CLAVATA2* (*CLV2*), a protein involved in maintaining the meristematic cell population of the shoot apical meristem in *Arabidopsis thaliana*.

■ Presentations

- Summer 2013 **Transcriptomics of diverse land plant shoot meristems**
Poster: ASPB *Providence, RI*
Poster: FASEB *Saxton River, VT*
Talk: MOSS 2013 *Prague, CZ*
- May 2013 **Shared gene expression patterns across diverse meristems**
Talk: University of Pennsylvania, Plant Biology Seminar Series *Philadelphia, PA*
- April 2013 **Transcriptomics of the land plant shoot meristem**
Talk: Cornell University Evolution Seminar *Ithaca, NY*
- June 2012 **Evolution of structure-function relationships in diverse shoot apices**
Poster: International Meeting of Bryophyte Systematics *New York, NY*
- June 2012 **A new mutant to study developmental patterning in *Physcomitrella***
Talk: MOSS 2012 *New York, NY*
- Sept 2011 **A genomic and genetic approach to understanding shoot apical function in diverse land plants**
Poster: MOSS 2011 *Freiburg, Germany*
- January 2010 **Evolution of structure-function relationships in the land plant shoot apex**
Talk: MORPH - Evolution of the Leaf Symposium *Boulder, CO*
- July 2008 **Maple phylogenetics inferred from sequences of nuclear and chloroplast genomes**
Poster: Botanical Society of America *Vancouver, BC*
- July 2007 **Life history of *Rhynchospora knieskernii*, a rare early-successional sedge**
Poster: BSA-ASPB Joint Congress *Chicago, IL*
Talk: Plant Biology and Conservation Symposium *Chicago, IL*

■ Service and Leadership

- 2012-13 Cornell Graduate Student Advocacy Committee
- 2012-13 Organized Plant Biology Student and Faculty Journal Club
- 2011-13 BioBus Volunteer Instructor (<http://biobus.org/>)
- 2012 Plant Biology Graduate Student Treasurer
- 2009-10 Plant Biology Graduate Student President
- 2009 Teacher for GRASSHOPR - Designed and taught Botany courses in a rural NY state high school (<https://sites.google.com/site/grasshopratcornell/>)

■ Undergraduate Mentorship

- Summer 2014 **Donald Danforth Plant Science Center REU Student, Carolyn Highland**
Natural variation of stomatal spacing in introgression lines between the desert-adapted tomato, *S. pennellii* and the domesticated tomato, *S. lycopersicum*
- 2009-12 **Cornell University Undergraduate Researcher, Molly Edwards**
Transcriptomics of *Equisetum* shoot meristems

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Summer 2009 **Boyce Thompson Institute REU Student, Eric Schultz**
Evolution of Lipid Transfer Proteins in *Selaginella* and *Physcomitrella*

Teaching

- Fall 2009 **Introduction to Botany Lab**
Professor Karl Niklas
- Spring 2009 **Introduction to Plant Function and Growth Lab**
Professor Peter Davies
- Spring 2011 **Plant Biotechnology Lab**
Professors Mikhail and June Nasrallah
- Fall 2012 **Foundations in Biology**
Professors Mike Scanlon and Bob Turgeon
- Spring 2012 **Plant Evolution and the Fossil Record**
Professors Karl Niklas and Bill Crepet

Grants and Awards

- 2013 MOSS Meeting Best Presentation by a Young Investigator
- 2011, 2012 MOSS Meeting Graduate Fellowship
- 2009 Outstanding Graduate Teaching Assistant - Cornell Agriculture and Life Science
- 2007 MORPH Travel Grant
- 2007 Hermann Botanical Prize
- 2006 Edna Henry Bennett Summer Research Grant
- 2006 Donald and Nancy Ritchie Summer Research Grant

Training

- Fall 2011 **Research Exchange: *Agrobacterium*-mediated transformation of *Marchantia polymorpha***
Jane Langdale's lab *Oxford, UK*
- Spring 2010 **Constructing Illumina RNA-Seq Libraries**
Neelima Sinha's lab *Davis, CA*
- Fall 2011 **Programming For Biology**
CSHL Course *Cold Spring Harbor, NY*