

**Curriculum Vitae**  
**Karen M. McGinnis**

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**General Information**

University address: Biological Science  
College of Arts & Sciences  
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**Professional Preparation**

2000 Ph.D., Arizona State University. Major: Biology.

1995 B.S., Arizona State University. Major: Biology.

**Professional Experience**

2008–present Assistant Professor, Biological Science, Florida State University.

2002–2008 Assistant Research Scientist, University of Arizona. Functional genomics of chromatin in maize.

2000–2002 Postdoctoral Associate, USDA-ARS/ Washington State University. Molecular genetics of plant hormone response.

**Fellowship(s)**

Biology Research Experience for Undergraduates Award from Howard Hughes Medical Institute, at Arizona State University (1994–1995).

**Honors, Awards, and Prizes**

Graduate Research Grant, Office of the Graduate Student Affairs Vice President, Arizona State

University (1999).  
Michael A. Cichan Memorial Award, Department of Plant Biology, Arizona State University (1999).  
Achievement Rewards for College Scientists Scholarship (1998).  
Gertrude Claypool Scholarship, Arizona Federation of Garden Clubs (1996).  
Achievement Award in Biology, Department of Botany, Arizona State University (1995).  
Regents' Scholarship, Arizona State University (1995).  
Induction, Phi Kappa Phi Honor Society (1994).  
Induction, Phi Beta Kappa Honor Society (1994).

## Research and Original Creative Work

### Publications

#### Refereed Journal Articles

- Labonne, J. D. J., Dorweiler, J. E., & McGinnis, K. M. (in press). Changes in nucleosome position at transcriptional start sites of specific genes in *Zea mays* mediator of paramutation1 mutants. *Epigenetics*.
- Boerner, S. L., & McGinnis, K. M. (2012). Computational Identification and Functional Predictions of Long Noncoding RNA in *Zea mays*. *PLoS One*, 7(8), e43047.
- Eichten, S. E., Ellis, N. A., Makarevitch, I., Yeh, C-T., Gent, J. I., Guo, L., McGinnis, K. M., Zhang, X., Schnable, P. S., Vaughn, M. W., Dawe, R. K., & Springer, N. M. (2012). Spreading of heterochromatin is limited to specific families of maize retrotransposons. *PLoS Genetics*, 8(12), e1003127. doi:10.1371/journal.pgen.1003127
- Madzima, T. F., Mills, E. S., Gardiner, J. M., & McGinnis, K. M. (2011). Identification of epigenetic regulators of a transcriptionally silenced transgene in maize. *G3*, 1(1), 75-83.
- McGinnis, K. M. (2010). RNAi for functional genomics in plants. *Briefings in Functional Genomics*, 9, 111-117.
- Barbazuk, W. B., Fu, Y., & McGinnis, K. M. (2008). Genome-wide analyses of alternative splicing in plants: opportunities and challenges. *Genome Research*, 18, 1381-1392.
- Bowler, C., Allen, A. E., Badger, A. E., Grimwood, J., Jabbari, K., Kuo, A., Maheswari, U., Martens, C., Maumus, F., Otiillar, R. P., Rayko, E., Salamov, A., Vandepoele, K., Beszteri, B., Gruber, A., Heijde, M., Katinka, M., Mock, T., Valentin, K., Verret, F., Berges, J. A., Brownlee, C., Cadoret, J.-P., Chiovitti, A., Choi, C. J., Coesel, S., De Martino, A., Detter, J. C., Durkin, C., Falciatore, A., & et al. (2008). The *Phaeodactylum* genome reveals the evolutionary history of diatom genomes. *Nature*, 456, 239-244.

- McGinnis, K., Murphy, N., Carlson, A. R., Akula, A., Akula, C., Basinger, H., Carlson, M., Hermanson, P., Kovacevic, N., McGill, M. A., Seshadri, V., Yoyokie, J., Cone, K., Kaeppler, H. F., Kaeppler, S. M., & Springer, N. M. (2007). Assessing the efficiency of RNA interference for maize functional genomics. *Plant Physiology*, *143*, 1441–1451.
- Alleman, M. A., Sidorenko, L., McGinnis, K., White, J., Seshadri, V., Dorweiler, J., Sikkink, K., & Chandler, V. (2006). An RNA-dependent RNA polymerase is required for paramutation in maize. *Nature*, *442*, 295–298.
- McGinnis, K. M., Springer, C., Lin, Y., Carey, C. C., & Chandler, V. L. (2006). Transcriptionally silenced transgenes in maize are activated by three mutations defective in paramutation. *Genetics*, *173*, 1637–1647.
- McGinnis, K., Chandler, V., Cone, K., Kaeppler, H., Kaeppler, S., Kerschen, A., Pikaard, C., Richards, E., Sidorenko, L., Smith, T., Springer, N., & Wulan, T. (2005). Transgene-induced RNA interference as a tool for plant functional genomics. *Methods In Enzymology*, *392*, 1–24.
- Strader, L. C., Ritchie, S., Soule, J. D., McGinnis, K. M., & Steber, C. M. (2004). Recessive-interfering mutations in the gibberellin signaling gene SLEEPY1 are rescued by overexpression of its homologue, SNEEZY. *Proceedings of the National Academy of Sciences of the USA*, *101*, 12771–12776.
- McGinnis, K. M., Thomas, S. G., Soule, J. D., Strader, L. C., Zale, J. M., Sun, T.-P., & Stebe, C. M. (2003). The *Arabidopsis* SLEEPY1 gene encodes a putative F-box subunit of an SCF E3 ubiquitin ligase. *Plant Cell*, *15*, 1120–1130.
- McGinnis, K. M., Dempster, T. A., & Sommerfeld, M. R. (1997). Characterization of the growth and lipid content of *Chaetoceros muelleri*. *Journal of Applied Phycology*, *9*, 19–24.

### **Invited Book Chapters**

- Irsigler, A., & McGinnis, K. M. (2011). Genetic resources for the study of epigenetic gene regulation in maize. In Craig, J., & Wong, N. (Eds.), *Epigenetics: A Resource Manual*. Norwich, U.K.: Caister Academic Press.
- McGinnis, K. M. (2009). Use of transgene induced RNAi to regulate endogenous gene expression. In Scott, M. P. (Ed.), *Methods in Molecular Biology 526, Transgenic Maize: Methods and Protocols*. Totowa, New Jersey: Humana Press.

## **Presentations**

### **Invited Keynote and Plenary Presentations at Conferences**

McGinnis, K. M. (presented 2010, July). *Keynote address*. Keynote presentation at Annual Meeting, American Peanut Research and Education Society, Clearwater, Florida. (National)

### **Invited Presentations at Symposia**

McGinnis, K. M. (presented 2011, October). Epigenetic regulation of gene expression in maize. In Plant Sciences Graduate Student Council at UW-Madison (Chair), *Modern Tools for Plant Genetic Improvement*. Presentation at the meeting of University of Wisconsin-Madison, Madison, WI. (National)

McGinnis, K. M. (presented 2007, November). Invited presentation. In *Epigenetic: Untapped Potential for Crop Improvement*. Presentation at the meeting of Crop Sciences Society of America. (National)

### **Nonrefereed Presentations at Conferences**

Madzima, T. M., Fincher, J. A., Vera, D., Dorweiler, J., Bass, H. W., Dennis, J. H., & McGinnis, K. M. (presented 2012, March). *Genome-wide effect of the mop1-1 mutation on chromatin structure in maize*. Presentation at 54th Annual Maize Genetics Conference, Maize Genetics Research Cooperative, Portland, OR. (International)

### **Invited Lectures and Readings of Original Work**

McGinnis, K. M. (2012, November). *Epigenetic gene regulation and phenotype in maize*. Delivered at University of Florida, Institute of Genetics, University of Florida, Gainesville, FL. (Regional)

McGinnis, K. M. (2012, September). *Epigenetic Regulation of Transgene Expression in Maize*. Delivered at Dow Agrosiences Indianapolis, Indiana, Indianapolis, Indiana. (Regional)

McGinnis, K. M. (2011, December). *Epigenetic gene regulation in maize*. Delivered at University of Minnesota, St. Paul, MN. (Local)

McGinnis, K. M. (2008, October). *Invited lecture*. Delivered at University of Florida, Horticultural Sciences Department, Gainesville, Florida. (Local)

## **Contracts and Grants**

### **Contracts and Grants Funded**

Bass, Henry W. (PI), McGinnis, K. M., & Dennis, J. H. (Sep 2010–Aug 2011). *Chromatin Structure and Genome Response in Maize*. Funded by National Science Foundation. Total award \$1,453,109.

McGinnis, Karen M. (PI). (Mar 2010–Feb 2013). *CAREER: Genetic Analysis of Epigenetic Gene Regulation i*. Funded by National Science Foundation. Total award \$596,710.

McGinnis, K. M. (Aug 2009–Aug 2009). *Travel Grant for travel to Holderness, NH Gordon Research Conference on Epigenetics*. Funded by FSU-Office of the Provost. Total award \$450.

McGinnis, K. M. (May 2009–Aug 2009). *Epigenetic regulation of a silent transgene in maize*. Funded by FSU CRC—FYAP Program. Total award \$17,000.

## **Postdoctoral Supervision**

Madzima, T. F. (Feb 2009–present).

Labonne, J. J. D. (Jan 2011–Jan 2013).

Irsigler, A. S. (May 2010–Jan 2011).

## **Service**

### **Florida State University**

#### **FSU University Service**

Panelist, Office of Research NSF-CAREER workshop (2011).

Panelist, Office of Research NSF-CAREER workshop (2010).

#### **FSU Department Service**

Member, First Year Advisory Committee (2012–present).

member, Integrating Genotype and Phenotype Faculty Search Committee (2008–present).

Member, Chair Search Advisory Committee (2012).

member, Executive Committee (2010–2011).

member, Curriculum Retreat Committee (2011).

member, Elections Committee (2009–2010).

## **The Profession**

### **Editor for Refereed Journals**

Associate Editor, *BMC Plant Biology* (2011–present).

### **Editorial Board Membership(s)**

*Maize Genetics Database (MaizeGDB) Working Group* (2010–present).

*Maize Genetics and Genomics Database* (2006).

### **Guest Reviewer for Refereed Journals**

*Plant Cell Reports* (2013–present).

*Nature Communications* (2012–present).

*The Plant Journal* (2012–present).

*BMC Plant Biology* (2005–present).

*BMC Genomics* (2003–present).

*Genome Biology* (2000–present).

*Molecular Plant* (2000–present).

*Molecular Plant Physiology* (2000–present).

*Plant Cell* (2000–present).

*Plant Physiology* (2000–present).

### **Reviewer for Textbooks**

*Genetics 5th edition (Macmillan Publishers) (2012).*

### **Reviewer or Panelist for Grant Applications**

National Science Foundation (2000–present).

The United States-Israel Binational Agricultural Research & Development Fund (2000–present).

USDA-ARS (2000–present).

### **The Community**

Video participant, Acted as interview subject and expert on topics related to K12 science education standards. Videos available to students and teachers through CPALMS website, CPALMS, Florida State University (2012–2013).

Instructor, Teaching a course on crop biotechnology to lifelong learners, Osher Lifelong Learning Institute (2012).

Guest Presenter, Read a book, planted seeds, and discussed plant biology with 2 kindergarten classes at local elementary school, Buck Lake Elementary School, Tallahassee, FL (2009).

### **Consultation**

Dow Agrosiences. Presented a lecture and participated in round table discussion (2012).

### **Teaching**

#### **Courses Taught**

Plant Biology (BOT3015)

Plant Biology Laboratory (BOT3015)

Graduate Tutorial in Biological Science (BSC5932)

General Genetics (PCB3063)

Seminar in Botany (BOT6936)

**Doctoral Committee Chair**

Stroud, L., doctoral student.

**Doctoral Committee Member**

Middlebrooks, J., graduate. (2012).  
Cochran, A., doctoral candidate.  
Druliner, B. R., doctoral candidate.  
Pope, B. D., doctoral candidate.  
Darrow, E. M., doctoral student.

**Master's Committee Chair**

Boerner, S. L., graduate. (2012). *Identification and classification of long non-coding RNAs in Zea mays using computational and bioinformatic approaches.*  
Sloan, A., student.

**Master's Committee Member**

Battaglia, D. A., graduate. (2011).  
Poduch, K. N., graduate. (2010).  
Moore, J. M., graduate. (2009).  
Moseley, S. C., student.

**Bachelor's Committee Chair**

Mills, E. S., graduate. (2011).

**Bachelor's Committee Member**

Reynolds, T., graduate. (2012).  
Elizabeth Howe, graduate. (2010).  
Nicholas Leake, graduate. (2009).

**Supervision of Student Research Not Related to Thesis or Dissertation**

Migliorelli, L. (May 2011–present).



Hammack, C. (2012).

Huang, J. (2012).

McGivern, J. (2012).

Stroud, L. (2011).

Pearson, V. (2010).

Vera, D. (2010).

### **Additional Teaching Not Reported Elsewhere**

McGinnis, K. M. (2012). *Supervisions of Undergraduate Directed Study Colleen Sochacki.*

McGinnis, K. M. (2012). *Presented an overview of my career path and research interests to FSU Biology majors enrolled in BSCC 3930 SEMINAR IN BIOLOGICAL FRONTIERS .*

McGinnis, K. M. (2011). *Supervision of high school NSF Young Scholar Emery Weinstein.*

McGinnis, K. M. (2011). *Supervision of high school NSF Young Scholar Rithu Chandy.*

McGinnis, K. M. (2011). *Supervision of undergraduate Directed Undergraduate Studies student Nowrin Alam.* Florida State University.

McGinnis, K. M. (2010). *Supervision of undergraduate Directed Undergraduate Studies graduate Grant Harris.* Florida State University.

McGinnis, K. M. (2010). *Supervision of undergraduate Directed Undergraduate Studies student Amy Sloan.* Florida State University.

McGinnis, K. M. (2010). *Supervision of undergraduate Directed Undergraduate Studies student Brittany Michael (Women in Math and Science program).* Florida State University.

McGinnis, K. M. (2010). *Supervision of undergraduate Directed Undergraduate Studies student Kelli Sanchez.* Florida State University.

McGinnis, K. M. (2010). *Supervision of high-school NSF Young Scholar Ambika Anand.* Florida State University.

McGinnis, K. M. (2010). *Supervision of high-school NSF Young Scholar Beatriz Barros.* Florida State University.

McGinnis, K. M. (2010). *Supervision of undergraduate Directed Undergraduate Studies student Joel Koshy*. Florida State University.

McGinnis, K. M. (2009). *Supervision of undergraduate Directed Undergraduate Studies student Paymon Faerootsanshad*. Florida State University.

McGinnis, K. M. (2009). *Supervision of undergraduate Directed Undergraduate Studies student Darrow Speyer*. Florida State University.

McGinnis, K. M. (2009). *Supervision of undergraduate Directed Undergraduate Studies student Victoria Jones*. Florida State University.

McGinnis, K. M. (2008). *Presented an overview of my career path and research interests to FSU Biology majors enrolled in BSCC 3930 SEMINAR IN BIOLOGICAL FRONTIERS* .