CURRICULUM VITAE

Mary M. Guisinger

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311 Biological Laboratories
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The University Of Texas at Austin
Austin, Texas 78712

Education

2003 – present	Ph.D. candidate, Plant Biology, University of Texas at Austin. Advisor: Dr. Robert Jansen
1998	M.S., Botany, Miami University, Oxford, Ohio 45056. Thesis: The influence of microgravity and spaceflight on columella cell ultrastructure in starch-deficient mutants of *Arabidopsis*. Advisor: Dr. John Z. Kiss
1996	B.S., Botany major, German minor. Miami University, Oxford, Ohio 45056

Research Interests
Molecular evolution, systematics, cell and molecular biology, and plastid genomics and evolution.

Professional Societies
American Association for the Advancement of Science, American Society of Plant Biologists, Botanical Society of America, Society of Systematic Biology

Research Experience

Summer 2007	Guest Researcher. Finishing rearranged and repeat-rich plastid genomes. The DOE's Joint Genome Institute, Walnut Creek, California.
2004-present	Organization and evolution of plastid genomes in the flowering plant family Geraniaceae.
2003-2004	Chloroplast genomics, molecular evolution, and phylogenetics in the flowering plant family Geraniaceae and in the Australian fan flower, *Scaevola* (Goodeniaceae).
1996-1998	Influence of microgravity from space flight specimens on plastid and starch development in *Arabidopsis* root caps.
1996	Research Assistant to Dr. Andreas Sievers, Botanisches Institut, Friedrich-Wilhelm Universitaet, Bonn, Germany.
1995-1996	Preparation for two space flights on the Space Shuttle/Mir and examination of *Arabidopsis* starch deficient mutants for starch content and the effects on gravitropic response and curvature.

Teaching Experience

2006	Graduate Teaching Assistant for "Structure, Physiology and Reproduction of Seed Plants", The University of Texas, Austin, Texas.

1996-1998	Graduate Teaching Assistant for General Botany courses and "Plants, Humanity, and the Environment", Miami University, Oxford, Ohio.
1995	Undergraduate Teaching Assistant for General Botany lab course, Miami University, Oxford, Ohio.

Publications

Guisinger M. M., T. W. Chumley, J. V. Kuehl, J. L. Boore, and R. K. Jansen. Hey, why the long branch? Rates and patterns of plastid genome evolution in the grasses. Molecular Biology and Evolution. *in review*.

Cai Z., **M. Guisinger**, H. Kim, E. Ruck, J. C. Blazier, V. McMurtry, J. V. Kuehl, J, Boore, and R. K. Jansen. Extensive reorganization of the plastid genome of *Trifolium subterraneum* (Fabaceae) is associated with numerous repeated sequences and novel DNA insertions. Journal of Molecular Evolution. *available online*.

Guisinger M. M., J. L. Boore, J. V. Kuehl, and R. K. Jansen. 2008. Genome-wide analyses of Geraniaceae plastid DNA reveal unprecedented patterns of increased nucleotide substitutions. Proceedings of the National Academy of Sciences. 105(47): 18424-18429.

Steele P. R., **M. Guisinger-Bellian**, C. R. Linder, and R. K. Jansen. 2008. Phylogenetic utility of 141 low-copy nuclear regions in taxa at different taxonomic levels in two distantly related families of rosids. Molecular Phylogenetics and Evolution. 48(3): 1013-1026.

Jansen R. K., Z. Cai, L. A. Raubeson, H. Daniell, C. W. dePamphillis, J. Leebens-Mack, K. F. Müller, **M. Guisinger-Bellian**, R. C. Haberle, A. K. Hansen, T. W. Chumley, S. Lee, R. Peery, J. McNeal, J. V. Kuehl, and J. L. Boore. 2007. Analysis of 81 genes from 64 plastid genomes resolves relationships in angiosperms and identifies genome-scale evolutionary patterns. Proceedings of the National Academy of Sciences. 104(49): 19369-19374.

Guisinger M. M. and J. Z. Kiss. 1999. The influence of microgravity and spaceflight on columella cell ultrastructure in starch-deficient mutants of *Arabidopsis*. The American Journal of Botany 86(10): 1357-1366.

Kiss J. Z., R. E. Edelmann, **M. M. Guisinger**, W. J. Katembe, and P.C. Wood. 1999. Graviperception studies in Biorack with wild-type and starch-deficient mutants of *Arabidopsis*. In Biorack on Spacehab, 205-219, European Space Agency, Noordwijk, The Netherlands.

Kiss J. Z., **M. M. Guisinger**, and A. J. Miller. 1998. What is the threshold amount of starch necessary for full gravitropic sensitivity? Advances in Space Research 21: 1197-1202.

Kiss J. Z., **M. M. Guisinger**, A. J. Miller, and K. S. Stackhouse. 1997. Reduced gravitropism in hypocotyls of starch-deficient mutants of *Arabidopsis*. Plant and Cell Physiology 38(5): 518-525.

Presentations and Published Abstracts

Guisinger-Bellian M. M., J. Boore, J. V. Kuehl, and R. K. Jansen. 2008. Genome-wide analyses reveal patterns of increased nonsynonymous substitutions in plastids of the flowering plant family Geraniaceae. Botanical Society of America, Vancouver, B. C., Canada.

Steele R., M. M. Guisinger-Bellian, R. K. Jansen, and R. Linder. 2007. Identifying useful low-copy nuclear markers for examining phylogenetic relationships within angiosperms. Botany and Plant Biology, Chicago, Illinois.

Guisinger-Bellian M. M., T. W. Chumley, Z. Cai, J. L. Boore, J. V. Kuehl, and R. K. Jansen. 2006. Organization and evolution of chloroplast genomes in the flowering plant family Geraniaceae. Annual Meeting for the Society for Molecular Biology and Evolution, Tempe, Arizona.

Guisinger M. M., T. W. Chumley, J. L. Boore, J. V. Kuehl, and R. K. Jansen. 2006. Organization and evolution of chloroplast genomes in the flowering plant family Geraniaceae. CIPRES: Cyberinfrastructure for Phylogenetic Research Annual Meeting, Austin, Texas.

Guisinger, M. M. 2005. Comparative chloroplast genomics of the flowering plant family Geraniaceae. The University of Texas Graduate Student Symposium, Austin, Texas.

Guisinger M. M., R. K. Jansen, J. L. Boore, and J. V. Kuehl. 2005. Organization and evolution of the chloroplast genome of *Erodium texanum* (Geraniaceae). Botanical Society of America, Austin, Texas.

Guisinger M. M., R. K. Jansen, J. L. Boore, and J. V. Kuehl. 2004. The highly rearranged chloroplast genome of *Scaevola aemula* in the flowering plant family Goodeniaceae. Annual meeting of the Society for the Study of Evolution, Fort Collins, Colorado.

Guisinger M. M. and J. Z. Kiss. 1997. Gravitropism in plastid mutants of *Arabidopsis*. Supplement to Plant Physiology 114(3): 133.

Kiss J. Z., M. M. Guisinger, and J. B. Wright. 1996. What is the threshold of starch necessary for full gravitropic sensitivity? International Committee on Space Research (COSPAR) Meeting in Birmingham, England. COSPAR Abstract Book: 315.

Guisinger M. M., A. J. Miller, and J. Z. Kiss. 1996. The response to gravity is correlated to the amount of starch in *Arabidopsis* hypocotyls. American Society of Plant Physiologists, Midwestern Section, Urbana, Illinois. ASPP Midwest Abstract Book: 7.

Kiss J. Z., M. M. Guisinger, A. J. Miller, and J. B. Wright. 1995. The response to gravity is correlated to the amount of starch in *Arabidopsis* intermediate-starch mutants. American Society for Gravitational Space Biology, Arlington, Virginia. ASGSB Bulletin 9: 38.

Professional Meetings Attended

2008	Botanical Society of America 2005. Vancouver, B. C., Canada
2006	Society for Molecular Biology and Evolution. Tempe, Arizona
2006	CIPRES: Mini-symposium and Workshop on Evolutionary Simulations. University of Pennsylvania, Philadelphia, Pennsylvania
2005	Botanical Society of America 2005. Austin, Texas
2004	Evolution 2004. Fort Collins, Colorado
1996-1998	Missouri Botanical Garden 43rd-45th Annual Systematics Symposium. St. Louis, Missouri
1997	Plant Biology 1997. Vancouver, B. C., Canada
1996	International Workshop on Plant Biology in Space. Bad Honnef, Germany
1996	American Society of Plant Physiologists, Midwestern Section. Urbana, Illinois

Grants and Fellowships

Summer 2008	Integrative Graduate Education and Research Traineeship (IGERT). The University of Texas. Evaluating rates and patterns of chloroplast genome evolution in the Geraniaceae within a phylogenetic framework. Summer stipend and expenses.
2007	Phylogeny and Chloroplast Genome Evolution in Geraniaceae. Designated Graduate Research Assistant funded by NSF grant 0717372.
2007	Integrative Graduate Education and Research Traineeship (IGERT). The University of Texas. $7000.
2004-2006	Integrative Graduate Education and Research Traineeship (IGERT). The University of Texas. Evaluating rates and patterns of chloroplast genome evolution in the Geraniaceae within a phylogenetic framework. Two-year stipend and expenses.
2003-2004	Research Internship. The University of Texas. Stipend and expenses.

1997 Academic Challenge, Miami University. The influence of microgravity on plastid and starch development in roots of *Arabidopsis* seedlings: a stereological study. $700.
1996 Academic Challenge, Miami University. Evaluation of *Arabidopsis thaliana* plastid mutants for gravitropism studies. $250.
1996 Miami University Undergraduate Research Grant. $400.
1995 Howard Hughes Research Grant. $2500.

Travel Grants

2008 Travel expenses to collect endemic Hawaiian *Geranium* material. Kaua'i, Hawai'i
2008 Awarded by The University of Texas Plant Biology Graduate Program to attend BSA 2008. Vancouver, BC, Canada
2007 $900 to conduct research at The DOE's Joint Genome Institute
2006 Awarded by The University of Texas Plant Biology Graduate Program to attend SMBE 2006. Tempe, Arizona
2005 Awarded by The University of Texas Plant Biology Graduate Program to attend BSA 2005. Austin, Texas
2004 Awarded by Lorraine I. Stengl Endowment to attend Evolution 2004. Fort Collins, Colorado
1996-1998 Awarded by Miami University to attend Missouri Botanical Garden 43rd-45th Annual Systematics Symposium. St. Louis, Missouri
1997 Awarded by Miami University Botany Department to attend Plant Biology 1997. Vancouver, BC, Canada
1996 Awarded by Botanisches Institut, Friedrichs-Wilhelms-Universitaet to cover expenses for summer research at Botanisches Institut, Friedrichs-Wilhelms-Universitaet, Bonn, Germany
1996 Roschman Fund Grant for summer research at Botanisches Institut, Friedrichs-WilhelmsUniversitaet, Bonn, Germany
1996 Awarded by Miami University Botany Department to attend American Society of Plant Physiologists, Midwestern Section. Urbana, Illinois

Service

2008 Organizing Chair for Integrative Biology Graduate Research Symposium
2007 Graduate student representative to The Section of Integrative Biology faculty meetings

Awards

2007 One year membership to AAAS/Science through the AAAS/Science Program for Excellence in Science.
1996 Young Botanist Recognition Award, Botanical Society of America.