Curriculum Vitae: Thomas Jack

Current Appointment
Department of Biological Sciences
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Education

1982	B.S., Biology. Haverford College. Haverford, Pennsylvania Graduated with high honors, magna cum laude
1990	Ph.D. Yale University. New Haven, Connecticut Department of Molecular Biophysics and Biochemistry

Academic and Research Experience

2006-2012	Chair, Department of Biological Sciences, Dartmouth College
2009-2010	Program Director, Integrative Organismal Systems, Developmental Systems Cluster, Biology Directorate, National Science Foundation
2011-present	Professor, Department of Biological Sciences, Dartmouth College
1999-2010	Associate Professor, Department of Biological Sciences, Dartmouth College
1993-1998	Assistant Professor, Department of Biological Sciences, Dartmouth College
1990-1993	Postdoctoral Research, California Institute of Technology Subject: Molecular and genetic analysis of the *APETALA3* gene of Arabidopsis In the lab of Dr. Elliot Meyerowitz
1984-1989	Graduate Research, Yale University Ph.D. thesis: Studies on the establishment of expression of the Drosophila homeotic gene *Deformed* In the lab of Dr. William McGinnis
1982-1984	Research Associate, Biogen Incorporated. Cambridge, MA

Scholarships and Honors

2012-2013	Partnership for Undergraduate Life Sciences Education (PULSE) Vision and Change Leadership Fellow
2001	Floren Faculty Award, Dartmouth College
1997	Dartmouth College Junior Faculty Fellowship
1990-1993	NIH postdoctoral fellowship
1984-1988	NIH predoctoral training grant

Professional Service

Program Director, Developmental Systems Cluster, Biology Directorate, National Science Foundation. 2009-2010.

Member Editorial Advisory Board, *The Open Plant Science Journal*, 2008-2011.

Advisory Editor for *Plant Molecular Biology*, 1999-2002.

Ad hoc grant proposal review for NSF, USDA, DOE (US Department of Energy), BARD, Israeli Science Foundation, Australian Research Council, and others.

Panel member (*ad hoc*), NIH Biology-1 Study Section, NSRA postdoctoral proposals in Genetics 11/99 and 7/00. Panel member (*ad hoc*) DEV-1 RO1 panel, 10/04. Panelist NSF Eukaryotic Genetics Panel, 4/03 and 10/03, US Department of Agriculture/CSREES, Developmental Processes of Crop Plants, 6/04 and 5/05, Panelist NSF Plant and Developmental Mechanisms Panel, 4/07.

Manuscript review for *Science*, *Nature*, *Plant Cell*, *Development*, *Developmental Cell*, *Genetics*, *Genes and Development*, *Proceedings of the National Academy of Sciences USA, Nature Biotechnology, Nature Protocols, Nucleic Acids Research, Plant Molecular Biology, Plant Journal, Plant Physiology*, *Trends in Plant Science*, *Plant Science*, *Molecular Plant*, *International Journal of Plant Science*, *Plant Cell and Environment*, *Functional and*

Integrative Genomics, *Developmental Genetics, Developmental Biology, Molecular Plant Microbe Interactions, PLoS Genetics*, *PLoS Computational Biology*, *BMC Genomics*, *Microscopy Research and Technique*, *Sexual Plant Reproduction, Planta, Plant Science, Plant and Cell Physiology, American Journal of Botany, Journal of Experimental Botany, Journal of American Horticulture, Flowering Newsletter, Proceedings of the Indian Institute of Science* and *Biological Chemistry.*

Co-organizer (with Drs. Caren Chang and Jose-Luis Riechmann) of a one-day meeting on "Plant Development" to celebrate Elliot Meyerowitz' 60th birthday. Pasadena, CA. May 23, 2011.

Outside Ph.D. thesis examiner

1) John Alvarez, graduate student of Dr. David Smyth, Department of Genetics and Developmental Biology, Monash University, Clayton, Melbourne, Victoria, Australia. Received Ph.D. in October, 1997.
2) Theresa Hill, graduate student of Dr. Vivian Irish, Department of Cell and Developmental Biology, Yale University, New Haven, CT. Received Ph.D. in June, 2000.
3) Jeffrey Pylatuik, graduate student of Dr. Peta Bonham-Smith, Department of Botany, University of Sasketchewan, Saskatoon, Sasketchewan. Received Ph.D. in August, 2001.
4) P. Sriram, graduate student of Dr. Usha Vijayraghavan, Indian Institute of Science, Bangalore, India. 2006.
5) Chloe Diamond Mara, graduate student of Dr. Vivian Irish, Department of Cell and Developmental Biology, Yale University, New Haven, CT. Received Ph.D. in June, 2008.

Grant Support

Previous

NSF. Developmental Mechanisms Program. "Analysis of floral organ identity in Arabidopsis". 9/15/94-8/31/99. $315,000 direct plus indirect. Principle Investigator.

USDA/CSREES. Plant Growth and Development. "Use of enhancer traps to isolate novel floral control genes" 10/1/96-10/31/00. $92,220 direct plus indirect. Principle Investigator.

NSF. Eukaryotic Genetics. MCB-0090742 "Dimerization of floral organ identity proteins in Arabidopsis". 3/15/01-2/28/04. $357,418 direct plus indirect. Principle Investigator.

USDA/CSREES. Plant Growth and Development. "Molecular and genetic characterization of the REM gene family in Arabidopsis". 9/03-8/06. $150,000 direct plus indirect. Principle Investigator.

NSF, Plant and Microbial Developmental Mechanisms. "Molecular and genetic analysis of the AP3/PI pathway in Arabidopsis". 9/05-8/08. $440,000 direct plus indirect. Principle Investigator.

Active

NSF, Plant and Microbial Developmental Mechanisms. "Role of miR319a in petal and stamen development in Arabidopsis" 7/09-6/13. $620,157 direct plus indirect. Principle Investigator.

US Department of Education, Graduate Assistance in Areas of National Need (GAANN). "Increasing Graduate Education in the Biological Sciences". 8/15/09-8/14/13. $522,624. Project Director.

NSF, Division of Biological Infrastructure. "PULSE Working Group Workshop". 1/15/13-1/14/14. $15,017 direct plus indirect. Principle Investigator.

Publications

Research Publications in Refereed Journals

[1] Jack, T., Regulski, M., and McGinnis, W. (1988). Pair-rule segmentation genes regulate the expression of the homeotic selector gene *Deformed*. *Genes & Dev*. 2, 635-651.

[2] Barad, M., Jack, T., Chadwick, R., and McGinnis, W. (1988). A novel, tissue-specific Drosophila homeobox gene. *EMBO J.* 7, 2151-2161.

[3] Jack, T., and McGinnis, W. (1990). Establishment of the *Deformed* expression stripe requires the combinatorial action of coordinate, gap, and pair-rule proteins. *EMBO J.* 9, 1187-1198.

[4] Chadwick, R., Jones, B., Jack, T., and McGinnis, W. (1990). Ectopic expression from the *Deformed* gene triggers a dominant defect in Drosophila adult head development. *Dev. Biol.* 141, 130-140.

[5] Bowman, J. L., Sakai, H., Jack, T., Weigel, D., and Meyerowitz, E. M. (1992). *SUPERMAN*, a regulator of floral homeotic genes in Arabidopsis. *Development* 114, 599-615.
[6] Jack, T., Brockman, L. L., and Meyerowitz, E. M. (1992). The homeotic flower gene *APETALA3* of *Arabidopsis thaliana* encodes a MADS box and is expressed in petals and stamens. *Cell* 68, 683-697.
[7] Jack, T., Fox, G. L., and Meyerowitz, E. M. (1994). Arabidopsis homeotic gene *APETALA3* ectopic expression: transcriptional and post-transcriptional regulation determine floral organ identity. *Cell* 76, 703-716.
[8] Jack, T., Sieburth, L., and Meyerowitz, E. M. (1997). Targeted misexpression of *AGAMOUS* in whorl 2 of Arabidopsis flowers. *Plant Journal* 11, 825-839.
[9] Tilly, J., Allen, D. W., and Jack, T. (1998). The CArG boxes in the promoter of the Arabidopsis floral organ identity gene *APETALA3* mediate diverse regulatory effects. *Development* 125 1647-1657.
[10] Yi, Y., and Jack, T. (1998). An intragenic suppressor of the Arabidopsis floral organ identity mutant *apetala3-1* functions by suppressing defects in splicing. *Plant Cell* 10, 1465-1477.
[11] Campisi, L., Yang, Y., Yi, Y., Heilig, E., Herman, B., Cassista, A. J., Allen, D. W., Xiang, H., and Jack, T. (1999). Generation of enhancer trap lines in Arabidopsis and characterization of expression patterns in the inflorescence. *Plant J.* 17, 699-707.
[12] Swaminathan, K., Yang, Y., Grotz, N., Campisi, L., and Jack, T. (2000). An enhancer trap line associated with a D class cyclin gene in Arabidopsis. *Plant Phys.*124, 1658-1667.
[13] He, Y., Tang, W., Swain, J., Green, A., Jack, T., and Gan, S. Networking senescence-regulating pathways by using Arabidopsis enhancer trap lines. (2001). *Plant Phys*. 126, 707-716.
[14] Yang, Y., Fanning, L., and Jack, T. (2003a). The K domain mediates heterodimerization of the Arabidopsis floral organ identity proteins, APETALA3 and PISTILLATA. *Plant J.* 33, 47-60. (Work featured in cover photograph.)
[15] Yang, Y., Xiang, H., and Jack, T. (2003b). *pistillata-5*, an Arabidopsis floral organ identity mutant with defects in petal development. *Plant J.* 33, 177-188.
[16] Yang, Y., and Jack, T. (2004). Defining subdomains of the K domain important for protein-protein interactions of plant MADS proteins. *Plant Mol. Biol*. 55, 45-59.
[17] Nag, A., Yang, Y., and Jack, T. (2007). The AP2 gene *DORNRÖSCHEN-LIKE* is necessary for stamen emergence in Arabidopsis. *Plant Mol. Biol.* 65, 219-232. (Work featured in cover photograph.)
[18] Piwarzyk, E., Yang, Y., and Jack, T. (2007). The conserved C-terminal motifs of the Arabidopsis proteins AP3 and PI are dispensable for function. *Plant Phys.* 145, 1495-1505. (This work received a Faculty of 1000 citation)
[19] Swaminathan, K., Peterson, K., and Jack, T. (2008). The plant B3 superfamily. *Trends in Plant Science* 13, 647-655.
[20] Nag, A., King. S., and Jack, T. (2009). miR319a targeting of *TCP4* is critical for petal growth and development in Arabidopsis. *Proc. Natl. Acad. Sci. USA* 106, 22534-22539.

Book Chapters and Reviews (peer reviewed)

[1] Meyerowitz, E. M., Bowman, J. L., Brockman, L. L., Drews, G. N., Jack, T., Sieburth, L. E., and Weigel, D. (1991). A genetic and molecular model for flower development in *Arabidopsis thaliana*. *Development Supplement* 1, 157-167.
[2] Jack, T., Sieburth, L., and Meyerowitz, E. M. (1993). Genes that control flower development in Arabidopsis. *Seminars in Dev. Bio.* 4, 51-63.
[3] Jack, T. (2001). Relearning our ABCs: new twists on an old model. *Trends in Plant Science* 6, 311-316.
[4] Jack, T. (2001). Plant development going MADS. *Plant Mol. Biol*. 46, 515-520.
[5] Jack, T. (2002). New members of the floral organ identity AGAMOUS pathway. *Trends in Plant Science* 7, 286-287.
[6] Jack, T. (2004). Molecular and genetic mechanisms of floral control. *Plant Cell* 16, S1-S17.
[7] Nag, A., and Jack, T. (2010). Sculpting the flower: the role of miRNAs in flower development. *Current Topics Dev. Biol.* 91, 349-378.

[8] Prunet, N. and Jack, T. (2013). Flower development in Arabidopsis – there's more to it than learning your ABCs. *Methods in Molecular Biology* (F. Wellmer and J.-L. Riechmann editors), in press.

Book Chapters and Reviews (not peer reviewed)

[1] McGinnis, W., Jack, T., Chadwick, R., Regulski, M., Bergson, C., McGinnis, N., and Kuziora, M. A. (1990). Establishment and maintenance of position-specific expression of the Drosophila homeotic selector gene *Deformed*. In *Genetic Regulatory Hierarchies in Development* (T. R. F. Wright ed.). Academic Press, San Diego.

[2] Jack, T. (2003). Book review of *Patterns in Plant Development* by Ottoline Leyser and Stephen Day. *Quarterly Review of Biology* 78, 99-100.

[3] Jack, T. (2003). Flower development. *Encyclopedia of Plant and Crop Science* (R. Goodman, editor) 464-467.

Meeting Abstracts

[1] Jack, T., Barad, M., Chadwick, R., and McGinnis, W. Isolation and molecular characterization of new homeobox containing genes. 27th Annual Drosophila Conference, Asilomar, California. April, 1986.

[2] Jack, T., Regulski, M., and McGinnis, W. Pair-rule segmentation genes regulate the expression of the homeotic selector gene *Deformed*. 28th Annual Drosophila Conference, Chicago, Illiinois. May, 1987.

[3] Jack, T., Brockman, L., and Meyerowitz, E. M. Molecular analysis of the *APETALA3* gene of *Arabidopsis thaliana*. 3rd International Conference for Plant Molecular Biology, Tuscon, Arizona. October, 1991.

[4] Jack, T., Sieburth, L., and Meyerowitz, E. M. Ectopic expression of floral homeotic genes. 5th International Conference on Arabidopsis Research, Columbus, Ohio. August, 1993.

[5] Jack, T., Cassista, A. J., and Tilly, J. Regulation of the Arabidopsis floral organ identity gene *APETALA3*. 6th International Conference on Arabidopsis Research, Madison, Wisconsin. May, 1995.

[6] Jack, T., Cassista, A. J., and Tilly, J. Regulation of the Arabidopsis floral organ identity gene *APETALA3*. Plant Molecular Biology Gordon Conference, Meredith, New Hampshire. June, 1995.

[7] Jack, T., Yi, Y., Cassista, A.J., and Campisi, L. Use of enhancer traps to isolate novel genes in flower development. 8th International Conference on Arabidopsis Research, Madison, Wisconsin. June, 1997.

[8] Jack, T., and Tilly, J. Regulation of the floral organ identity gene *APETALA3*. 8th International Conference on Arabidopsis Research, Madison, Wisconsin. June, 1997.

[9] Xiang, H., and Jack, T. Enhancement of the fourth whorl phenotype of 35S::UFO by 35S::PI. 9th International Conference on Arabidopsis Research, Madison, Wisconsin. June, 1998.

[10] Campisi, L., Yi, Y., Cassista, A. J., Heilig, E., Herman, B., Allen, D. W., Xiang, H., and Jack, T. Generation of enhancer trap lines and characterization of expression patterns in the inflorescence. 9th International Conference on Arabidopsis Research, Madison, Wisconsin. June, 1998.

[11] Xiang, H., and Jack, T. Characterization of suppressors of *terminal flower 1* mutants. 10th International Conference on Arabidopsis Research. Melbourne, Australia. June, 1999.

[12] Yang, Y., Xiang, H., and Jack, T. *pistillata-5*, an Arabidopsis floral organ identity mutant with defects in a single floral whorl. Northeast Regional Developmental Biology Meeting, Woods Hole, Massachusetts. March 2000.

[13] * Yang, Y., Fanning, L., and Jack, T. "Heterodimerization of the floral organ identity proteins APETALA3 and PISTILLATA in Arabidopsis". Northeast Regional Developmental Biology Meeting, Woods Hole, Massachusetts. March, 2000.
* This poster won second prize in the graduate student poster competition.

[14] Yang, Y., Xiang, H., and Jack, T. "*pistillata-5*, an Arabidopsis floral organ identity mutant with defects in a single floral whorl". 11th International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2000.

[15] Yang, Y., Fanning, L., and Jack, T. "Heterodimerization of the floral organ identity proteins APETALA3 and PISTILLATA in Arabidopsis". 11th International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2000.

[16] Swaminathan, K., Yang, Y., Grotz, N., and Jack, T. "An enhancer trap line associated with a D class cyclin gene in Arabidopsis". 11th International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2000.

[17] Moskal, W. A., Eshed, Y., Bowman, J. L., Jack, T., and Smart, L. B. "Identification of guard cell specific genes and enhancer elements from *Arabidopsis thaliana* by enhancer trap tagging". Northeast Regional Plant Physiology Meeting, Worcester Massachusetts, May, 2001. Plant Biology / ASPB Annual Meeting, Providence, Rhode Island, July, 2001..

[18] He, Y., Jack, T., and Gan, S. "Networking senescence-regulating pathways by using Arabidopsis enhancer trap lines. Plant Biology / ASPB Annual Meeting, Providence, Rhode Island, July, 2001.

[19] Yang, Y., Fanning, L., and Jack, T. "Dimerization of the Arabidopsis MADS proteins APETALA3 and PISTILLATA". Plant Biology / ASPB Annual Meeting, Providence, Rhode Island, July, 2001.

[20] Swaminathan, K., and Jack, T. "Molecular and genetic characterization of the REM gene family in Arabidopsis. Plant Biology / ASPB Annual Meeting, Providence, Rhode Island, July, 2001.

[21] Yang, Y., Fanning, L., and Jack, T. "Dimerization of the Arabidopsis MADS proteins APETALA3 and PISTILLATA". Plant Reproduction 2002, State College, Pennsylvania, May, 2002.

[22] Swaminathan, K., and Jack, T. "Molecular and genetic characterization of the REM gene family in Arabidopsis". XIII International Conference on Arabidopsis Research, Seville, Spain, June, 2002.

[23] Swaminathan, K., Clark, L., Geise, G., and Jack, T. "Molecular and genetic characterization of the REM gene family in Arabidopsis". XIV International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2003.

[24] Yang, Y., and Jack, T. "The role of the K domain in mediating the formation of the AP3/PI/SEP ternary complex". XIV International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2003.

[25] Swaminathan, K., Clark, L., and Jack, T. "Molecular and genetic characterization of the REM gene family in Arabidopsis". Plant Biology / ASPB Annual Meeting, Orlando, Florida, July, 2004.

[26] Swaminathan, K., Clark, L., and Jack, T. "Molecular and genetic characterization of the REM gene family in Arabidopsis". FASEB Summer Conference on "Mechanisms in Plant Development", Saxons River, Vermont, August, 2004.

[27] Nag, A., Xin, N., Liu, J., Yang, Y., Dunets, M., and Jack, T. "Molecular and genetic characterization of the *B CLASS MODIFIER* (*BCM*) genes". XVI International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2005.

[28] Piwarzyk, E., and Jack, T. "Isolation of AP3/PI protein complexes from floral extracts". XVI International Conference on Arabidopsis Research, Madison, Wisconsin, June, 2005.

[29] Piwarzyk, E.C., Morrissey, J., Yang, Y., Jack, T. (2005) The C-terminal domain of the Arabidopsis floral organ identity proteins APETALA3 and PISTILLATA is not necessary for function. American Society of Developmental Biologist - Southwest Regional Meeting, Boulder CO, October, 2005.

[30] Nag, A., Yang, Y., and Jack, T. "The AP2 family gene *DORNRÖSCHEN-LIKE* is necessary for proper stamen development in Arabidopsis". 16th Penn State Symposium in Plant Physiology - RNA Biology: Novel Insights from Plant Systems, State College, Pennsylvania, May, 2006.

[31] Piwarzyk, E.C., Morrissey, J., Yang, Y., Jack, T. The C-terminal domain of the Arabidopsis floral organ identity proteins APETALA3 and PISTILLATA is not necessary for function. American Society of Plant Biology - Plant Biology 2006, Boston, MA, August 2006.

[32] Nag, A., King, S., and Jack, T. "A loss-of-function mutant in *miR319a* exhibits defects in petal and stamen development". XIX International Conference of Arabidopsis Research, Montreal Quebec Canada, July 2008.

[33] Prunet, N., Morel, Pl, Champelovier, P., Thierry, A.-M., Negrutiu, I., Jack, T. P., and Trehin, C. "*SQUINT* is required for *CLAVATA* signaling". Cold Spring Harbor Conference "Biology of Plants", May 2012.

Invited Seminars / Oral Presentations:

7/88 29th Annual Drosophila Conference. Toronto, Ontario (15 minutes)
9/88 MIT, Whitehead Institute, Department of Biology, Cambridge, MA
10/88 Carnegie Institute, Department of Embryology, Baltimore, MD
12/89 Yale University, Department of Molecular Biophysics and Biochemistry, New Haven, CT
5/92 West Coast Regional Developmental Biology Conference, Fallen Leaf Lake, CA (30 minutes)
7/92 Animal Cells and Viruses Gordon Conference, New London, NH (30 minutes)
1/93 University of North Carolina, Department of Biology, Chapel Hill, NC
Iowa State University, Department of Biology, Ames, IA
University of Connecticut, Department of Biology, Storrs, CT
2/93 Pennsylvania State University, Department of Biology, State College, PA
Haverford College, Department of Biology, Haverford, PA
University of West Virginia, Department of Biology, Morgantown, WV
Dartmouth College, Department of Biology, Hanover, NH
1/94 New England Area Arabidopsis Meeting, Boston MA (40 minutes)
9/94 University of New Hampshire, Department of Biochemistry, Durham, NH.
10/94 Yale University, Department of Biology, New Haven, CT
3/95 McGill University, Department of Biology, Montreal, Quebec, Canada
3/96 New England Area Arabidopsis Meeting, Boston MA (40 minutes)
4/97 Northeast Regional Developmental Biology Conference, Woods Hole, MA (30 minutes)
2/98 New England Area Arabidopsis Meeting, Boston MA (40 minutes)
4/98 Northeast Regional Developmental Biology Conference, Woods Hole, MA. Chair of Session on Morphogenesis and Organogenesis
4/98 Salk Institute, Section of Plant Biology, La Jolla, CA
10/98 Cornell University, Department of Plant Biology, Ithaca, NY
7/99 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, lecturer in summer Arabidopsis course (2 hours)
2/00 New England Area Arabidopsis Meeting, Boston MA (45 minutes)
3/00 Northeast Regional Developmental Biology Conference, Woods Hole, MA. Chair of Session on Early Induction and Pattern Formation
7/01 EMBO Meeting on the Floral Transition, Norwich, UK. (15 minutes)
3/03 University of Massachusetts, Amherst MA
7/03 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, lecturer in summer Arabidopsis course (2 hours)
3/04 Yale University, Department of Molecular, Cellular, and Developmental Biology, New Haven, CT
6/05 *In Vitro* Biology Meeting, Baltimore, Maryland (30 minutes)
7/05 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, lecturer in summer Arabidopsis course (2 hours)
10/05 MADS 2005 Meeting, Gargnano, Italy (30 minutes)
11/05 University of Vermont, Department of Botany, Burlington, VT
12/05 Harvard University, Department of Organismal and Evolutionary Biology, Cambridge, MA
7/06 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, lecturer in summer Plant Biology course (2 hours)
6/07 University of Cologne, Department of Developmental Biology, Cologne, Germany
6/07 Molecular Mechanisms Controlling Flower Development Meeting, Maratea, Italy (40 min)
9/08 National Science Foundation, Arlington, VA
12/09 University of Pennsylvania, Department of Biology, Philadelphia PA

2/10 University of Arizona, Department of Plant Science, Tuscon, AZ
3/10 University of Maryland Baltimore County, Baltimore MD
3/10 Mid Atlantic Section of American Society of Plant Biologists Annual Spring Meeting (25 min)

Courses Taught

1993-1994	Biochemistry 101, MCB Graduate Core Course (team taught)
	Biology 63/163, Developmental Genetics (with Eric Lambie)
1994-1995	Biology 23, Molecular Biology (with Bob Gross)
	Biochemistry 101, MCB Graduate Core Course (team taught)
	Guest Lectures in Molecular Genetics of Prokaryotes-Biology 61/161 (6 hours) and Plant Physiology-Biology 41 (2 hours)
1995-1996	Biology 23, Molecular Biology (with Bob Gross)
	Biochemistry 101, MCB Graduate Core Course (team taught)
	Biology 78, Biochemistry II (with Mary Lou Guerinot and Patrick Dolph)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes (with Mary Lou Guerinot)
	Biology 87, supervised one honors thesis
1996-1997	Biology 23, Molecular Biology (with Bob Gross)
	Guest Lecture in Genetics and Society-Biology 4 (1 hour)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology 87, supervised one honors thesis
1997-1998	Biology 23, Molecular Biology
	Guest Lectures in Biology 4, (1 hour), Biology 61 (4 hours) and Biology 41 (1 hour)
	Biology 87, supervised two honors theses
1998-1999	Biology 23, Molecular Biology (with Bob Gross)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
1999-2000	Biology 23, Molecular Biology (with Bob Gross)
	Guest Lecture in Biology 4 (2 hours)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall, Winter, and Spring terms)
	Biology 87, supervised one honors thesis
2000-2001	Biology 23, Molecular Biology (with Sharon Bickel)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall and Spring terms)
	Biology 87, supervised two honors theses
2001-2002	Biology 23, Molecular Biology (with Sharon Bickel)
	Guest Lecture in Genetics and Society-Biology 4, (2 hours)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall and Spring terms)
	Biology 87, supervised one honors thesis
2002-2003	Biology 23, Molecular Biology (with Sharon Bickel)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology/Biochemistry 102. Cell, and Molecular Biology II (Core Course for First Year MCB Graduate Students) One lecture in team-taught course.
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall and Spring terms)
2003-2004	Biology 23, Molecular Biology (with Sharon Bickel)
	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology/Biochemistry 102. Cell, and Molecular Biology II (Core Course for First Year MCB Graduate Students) One lecture in team-taught course.
	Guest Lecture in Genetics and Society-Biology 4 (2 hours)

	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall, Winter, and Spring terms)
	Biology 87, supervised one honors thesis
2004-2005	Biology 61/161, Molecular Genetics of Prokaryotes and Lower Eukaryotes
	Biology 16, Genetics (with Patrick Dolph)
	Biology/Biochemistry 102. Cell, and Molecular Biology II (Core Course for First Year MCB Graduate Students) One lecture in team-taught course.
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall, Winter, and Spring terms)
	Biology 85, supervised one independent study student
2005-2006	Biology 16, Genetics (with Ed Berger)
	Biology 42/142, Plant Development
	Genetics 102. Cell, and Molecular Biology II (Core Course for First Year MCB Graduate Students) One lecture in team-taught course.
	Biology 269, Current Readings in Plant Molecular Biology (course director in Fall 2005)
	Biology 87, supervised one honors thesis
2006-2007	Biology 11, "DNA to Diversity" (with David Peart)
	Biology 269, Current Readings in Plant Molecular Biology (course director in Winter 2007)
	Genetics 102. Cell, and Molecular Biology II (Core Course for First Year MCB Graduate Students) One lecture in team-taught course.
2007-2008	Biology 11, "DNA to Diversity" (with David Peart)
	Biology 269, Current Readings in Plant Molecular Biology (course director in Winter 2008)
2008-2009	Biology 11, "DNA to Diversity" (with David Peart)
	Biology 269, Current Readings in Plant Molecular Biology (course director in Spring 2009)
2009-2010	on leave from Dartmouth
2010-2011	Biology 11, "DNA to Disease" (with Andrew Kern)
	Biology 99, "Senior Seminar in Biology"
2011-2012	Biology 11, "DNA to Diversity" (with David Peart)
	Biology 269, Current Readings in Plant Molecular Biology (course director in Spring 2012)
2012-2013	Biology 11, "DNA to Disease"
	Biology 269, Current Readings in Plant Molecular Biology (course director in Spring 2013)
	Biology 65.2/165 "Plant Developmental Genetics"

Biology 11 is an introductory topics based course. The offering "DNA to Diversity" focused on the developmental biology and the evolution of animal body plans. The offering "DNA to Disease" focused on the identification of human disease genes and the molecular mechanisms underlying specific human diseases. Enrollment is 110-170.

Biology 16 is an introductory level course in genetics taken by freshman and sophomore Biology majors and pre-medical students. The course consists of both a lecture and laboratory component. Enrollment varies between 100-120 students per offering.

Biology 23 is an intermediate level course in molecular biology taken by students in the summer term between their second and third years. This course is the third biology course (after Genetics and Cell Biology) taken by Biology majors interested in genetics and biochemistry. The course consists of both a lecture and laboratory component. Enrollment varied between 75-90 students per year.

Biology 65.2/165 (identical to Biology 42/142) is an upper-level course in plant developmental genetics. This course is designed to teach students how to read and critically evaluate papers from the primary literature. There are no formal timed exams in this course; the grade is determined primarily by the performance of the students in four take-home assignments (each

one is based on a single primary literature paper). The overall enrollment in 2006 was 10 students (four graduate, six undergraduate).

Biology 61/161 is an upper-level course in molecular genetics and focuses on bacterial and yeast genetics and molecular biology. This course is designed to teach students how to read and critically evaluate papers from the primary literature. There are no formal timed exams in this course; the grade is determined primarily by the performance of the students in four take-home assignments (each one is based on a single primary literature paper). The overall enrollment varied between 20-36 students, and depending on the year, graduate students have comprised as much as 30% of the class.

Biology 78 is the second term of a two-term biochemistry course sequence. This upper-level course covers metabolism, signal transduction, and molecular machines (e.g. involved in DNA replication, transcription, splicing, recombination, DNA repair). The year I was involved in teaching this course, 65 students were enrolled.

Biology 63/163 is an upper-level course in developmental genetics focusing mainly on model genetic organisms such as *C. elegans*, *D. melanogaster*, *M. musculus*, and *A. thaliana*. This course is literature based. The year I taught this course 5 undergraduate and 6 graduate students were enrolled.

Biology 99 is a seminar course for Biology majors who are completing an undergraduate honors thesis in Biology. The course is focused on preparing students for the written and oral components of their undergraduate thesis work. Enrollment is approximately 15 students.

Biology / Biochemistry 101/102. This is a core course in cell biology, molecular biology, and biochemistry taught to exclusively to first-year graduate students. Enrollment ranges from 20-35 students per year.

Biology 269. This course is a literature-based course for graduate students with a serious interest in plant molecular biology. This course is organized as a journal club format with professors, graduate students, and postdoctoral fellows presenting current papers from the primary literature. Approximately 20 scientists and students participate each term.

Advisees:

Graduate Ph.D. Students

Jody Tilly (1994-2000). Thesis title: "Transcriptional regulation of the *APETALA3* gene of *Arabidopsis thaliana*" Ph.D. awarded June, 2000. Presently a physician-scientist in Department of Dermatology, University of California Irvine.

Yingzhen Yang (1998-2003). Thesis title: "Interactions among floral organ identity MADS proteins in Arabidopsis". Ph.D. awarded June 2003. Presently a staff scientist at the USDA laboratory, Geneva, NY.

Kankshita Swaminathan (1998-2005). Thesis title: "Molecular and genetic characterization of the REM gene family in Arabidopsis". Ph.D. awarded June 2005. Presently a staff scientist at the Bioenergy Institute, University of Illinois.

Eileen Craig Piwarzyk (2003-2008). Thesis title: "Characterization of components of the AP3/PI protein complex". Ph.D. awarded June 2008. Presently employed at Miltenyi Biotech.

Anwesha Nag (2003-2009). Thesis title: "Molecular and genetic characterization of enhancers of *pistillata-5*". PhD awarded April 2009. Presently a postdoctoral fellow at Harvard Medical School.

Graduate MS. Student

Hongjun Xiang (1996-2004). Thesis topic: "Genetic characterization of suppressors of *terminal flower 1* mutants". M.S. completed October 2004. Presently a private businessman in China.

Visiting MS Student

Francisco Vinhas Vasconcelos e Sousa (2010-2011), Wageningen University, Netherlands.

Postdoctoral Research Associate - Ying Yi (1995-1997), Yingzhen Yang (2003), Kankshita Swaminathan (2005), Alicia Manfre (2006), Anwesha Nag (2009-2010), Aubrey Frank (2010-2012), Nathanael Prunet (2010-present).

Undergraduate (50 total)
Becky Davis ‘94 (1994)
Siobhan Gorman ‘97 (WISP [Women In Science Program] 1994)
Paige Wickner (Yale College ‘98, 1995)
Jennifer Trusty ‘96 (1995)
Mi Ryung An ‘96 (1995)
Amy Ulfers ‘98 (WISP 1995)
Alyson Santoro ‘99 (WISP 1996)
Benjamin Herman ‘96 (Honors Student, Hughes Summer 1995 Intern [$3,500], Richter Fellowship [$1,000], Waterhouse Fellowships [$1,000])
Sara Clark ‘97 (1996)
Kendra Buzzell ‘97 (Honors Student, WISP 1994, Presidential Scholar 1995, Hughes Spring 1996 Intern [$3,500], Richter Fellowship [$1,000], Class of 1939 Fellowship [$250])
Elizabeth Heilig (Haverford College ‘98, Hughes Summer 1997 Intern [$3,500])
Adam Weinstein ‘98 (Honors Student, Presidential Scholar 1996, Hughes Summer 1997 Intern [$3,500], Richter Fellowship [$1,000])
Penney Gilbert (Haverford College ‘99, Hughes Summer 1998 Intern [$3,500])
David W. Allen ‘97 (Honors Student, NSF REU 1996 and 1997)
Allison Robbins ‘01 (WISP 1998)
Donald Conrad ‘99 (1996-1999)
Julie Baker ‘99 (Hughes Summer 1998 Intern [$3,500], Presidential Scholar 1998)
Erica Mintzer ’02 (WISP 1999)
Nam Kim ’02 (1998-1999)
Paul Wang ’03 (1999-2000)
Jennifer Chi Hwang Kwak ‘00 (Honors Student)
Laura Fanning ‘01 (Honors Student, WISP 1998, Presidential Scholar 1999, Waterhouse Fellowship [$1500], Richter Fellowship [$1500])
Robert Valet ’01 (Honors Student, Cargill Fellowship [$2000], Richter Fellowship [$1500])
Kari Hacker ’02 (Honors Student, Cargill Fellowship [$2100])
Susan Oliveira ‘01 (2000-2001)
Stanley Kim ’03 (2000)
Emily R. Miller ’04 (WISP 2001)
Gavin Pierce ‘03 (2001)
Lara Niell ‘02 (2001)
Katherine Flynn-Meketon ‘05 (2001)
Lindsay Clark ‘04 (Honors Student, Presidential Scholar 2002, Beckman Fellowship [$9000]) (2002-2004)
Miya Dunits ‘05 (2003-2005)
Gabreille Geise (Bennington College ‘05) (2003)
Ako Takakura ’04 (2002-2004)
Brea Prindaville ’05 (Presidential Scholar 2003)
Debra Liu ’07 (WISP 2004, Presidential Scholar 2005) (2004-2006)
Jerome Liu ’06 (Honors student) (2004-2006)
Richard Liu ’08 (2005)
Lucinda Liu ’09, WISP 2006, Presidential Scholar 2007 (2005-2009)
Jennifer Luong ’10, WISP 2007 (2007)
Victoria Boggiano ’10 (2007)
Melissa Ristoff ’10 (2007-2008)
Valerie Sadhoum ’10 (2007-2008)
John Gerstenberger ‘11 (HHMI Fellowship) (2007-2009)
Kunal Patel ’11 (HHMI Fellowship, Presidential Scholar, Honors Student) (2007-present)
Stephanie Wolf ‘12 (WISP) (2008)
Ryan Collins ’13 (2009)
Meeta Prakesh ’13 (HHMI Fellowship) (2010-2011)
Lipsa Panda ’14 (2011-2012), DOF off-term funding, Summer 2011
Wendy Xiao ’14 (2011)

Steven Munzen ’14 (2011)
Serena Liu ’14, (DOF off-term funding, Spring 2012, Presidential Scholar) (2012-present)
Kerry Anne Conlin ’16 (WISP) (2013-present)

Graduate Rotation (17 total)
Tom McCormick (1994), Marc Menighini (1994), Meiling Lu (1994), Phoebe Tzou (1994), Eric Manning (1995), Rachel Biron (1995), Scott Gridley (1995), Fang Liu (1996), Natasha Grotz (1997), Mei Hsu (2000), Aaron Atkinson (2001), Nan Xin (2004), Joe Morissey (2004), Yi-Hsuan Chiang (2006), Emily Hood (2007), Adrienne Perkins (2011), Jennifer Conrad (2011).

Graduate Ph.D. Thesis Committee (22 total)
MCB Graduate Students Yuanmin Sun (1994-1997), Yang Hong (1994-1999), Martha Franz (1994-2000), Paul Alloway (1994-2000), Natasha Grotz (1998-2004), Todd Michael (1998-2002), Brenda Parson Hall (1998-2005), Nick Orem (1998-2004), Patrice Salome (1999-2004), Radhika Ketani (1999-2006), Aaron Atkinson (2001-2006), Liz Colangelo (2001-2006), Zhiyong Gao (2003-2006), Jeeyon Jeong (2003-2008), Joohyun Lee (2004-2008), Yash Chinchore (2005-2010), Joe Morissey (2006-2010), Christine Palmer (2007-2011), Yi-Hsuan Chiang (2007-2011), Maria Hindt (2011-present), Jessica Weng (2011-2013), Amanda Socha (2012-present).

Graduate Ph.D. Qualifying Examination Committee (47 total)
MCB Graduate Students Haihong Zhong (1994), Yuanmin Sun (1995), Yang Hong (1995), Martha Franz (1996), Paul Alloway (1996), Yen-Yee Tang (1997), Jacqueline Powers (1997), Victoria Mountain (1997), Allan Froehlich (1998), Fang Liu (1998), Natasha Grotz (1998), Eric Balicky (1999), Todd Michael (1999), Nick Orem (1999), Lawrence Madden (1999), Erin Dymeck (2000), Eric Balicky (2000), Patrice Salome (2000), Brenda Parson (2000), Lina Zhang (2000), Lorenzo Sempere (2001), Aaron Atkinson (2002), Liz Colangelo (2002), Koren Nishina (2002), Matthew Wargo (2002), Madushini Dharmasena (2003), Michael Chen (2003), Torrey Gallagher (2003), Dan Hopkins (2003), Jeeyon Jeong (2004), Tamara Zaytouni (2004), Zhiyong Gao (2005), Ralda Nehme (2005), Joohyun Lee (2005), Pete Newell (2006), Joe Morissey (2006), Christine Palmer (2007), Adel Malek (2007), Kyle Cady (2008), Maria Hindt (2011), Jessica Weng (2011), Adrienne Perkins (2012), David Tobin (2012), Amanda Socha (2012), Jennifer Conrad (2013), Suzana Car (2013), and Garo Akmakjian (2013).

Undergraduate Honors Theses Supervised (11 total)
Benjamin Herman ‘96, “Using a GUS/Kan enhancer trap system to identify novel genes involved in floral development of *Arabidopsis thaliana*”
Kendra Buzzell ‘97, “Demonstrating that the Arabidopsis proteins APETALA3 and PISTILLATA form a heterodimer *in vivo*”
David W. Allen ‘97, “Characterization of an enhancer trap line expressed during early stages of Arabidopsis flower development”
Adam Weinstein ‘98, “Investigating the dimerization domains of the Arabidopsis proteins APETALA3 and PISTILLATA”
Jennifer Kwak ’00, “Suppression of the *terminal flower 1* phenotype by late flowering genes in Arabidopsis”
Robert Valet ’01. “Characterization of T-DNA mutagenized suppressors of *terminal flower 1* in Arabidopsis”
Laura Fanning ’01. “Characterization of *pistallata* mutants that are capable of homodimerization”
Kari Hacker, ‘02. “Creation of a deletion in the chromosome 4 REM gene cluster in *Arabidopsis thaliana*”
Lindsay Clark ’04. “Genetic analysis of the REM genes in the chromosome 4 cluster in *Arabidopsis thaliana*”
Jerome Liu ’06. “*bcm4*, an enhancer of an unusual B-class mutant *pi-5*”
Kunal Patel ’11. “Characterization of TCP4-interacting proteins”

Undergraduate Honors Thesis Committee (57 total)

Krista Ingram ‘94, Ellen Friday ‘94, Brooke Parry ‘95, Mehreen Hai ‘95, Sharon Karlsberg ‘96, Sarasa Kimata ‘96, Daphne Monie ‘96, Daniel Liu ‘96, Gholson Lyon ‘96, Naiomi Wernick ‘97, Howard Scott Silverman ‘97, Elizabeth Lipson ‘97, Jun Shen ’98, Kristen Stephens ’98, Erica McAuliffe ‘98, Tara Bennett ‘98, Diane Gilbert ‘98, Laura Gougas ‘98, Bradley Molyneaux ’98, Jennifer Gagne ’99, Anthony Accurso ’99, Amanda Borges ’99, Zachary Smith ’99, Ron Kim ’00, Dana Nuetze ’00, Andrew Garrison ’00, Mary Mulcahey ’00, Nancy Ann Oberheim ’01, Gabriel Brooks, ‘02, Laura Rogers, ‘02, Christine Lennon, ‘02, Lynn Rudner, ‘02, Matthew Cheney, ‘02, Hannah Yu, ‘02, Ramona Hoh ’02, Jonathan Budzik ’03, Jonathan Carlson ’03, Taylor Spencer ’03, William Kwan ’03, Katey Krizen ’04, Carl DeSelm ’04, Lacey Benson ’04, Swathi Gopalkrishnan ’04, Peter Colabuono ’04, Laura Yasaitis ’05, Jeanne Franzone ’05, Jeff Wei ’05, Emma Lubin ’06, Sara Thiebaud ’06, Earl Thompson ’06, Rachel Ruiz ’07, Katherine Hacker ’07, Laura Myers ’08, Joshua Cornman-Homonoff ’08, Nicholas Wier ’09, Carla Williams, ’09, Ilda Bajraktari ’11, Sonia Yuen ’11, Anais Carniciu ’11, Linda Li ’11, Jessica Dong ‘12.

Committees

College

Radiation Safety Committee, 1995-2002
Electron Microscope Advisory Committee, 1995-1999
Class of 1939 Scholars Committee, 1997-1998
Committee on Admission and Financial Aid, 2000-2001
Committee on Standards, Fall 2004, Spring 2005, Summer 2005, Fall 2005
Committee of Chairs, 2006-2012
Science Division Council, 2006-2012
Committee on Organization and Policy, 2010-2013
Steering Committee of the General Faculty, 2010-2011
Biological Safety, 1998–2004, 2012-2013

Departmental

Biochemist Faculty Search Committee, 1994
Greenhouse Committee, 1994-present, chair 1994-2005
Space Committee, 1994-present
Undergraduate Committee, Genetics Advisor, 1995-1997
Cell Biologist Faculty Search Committee, 1996
Molecular and Cellular Biology(MCB) Graduate Program – Organized recruiting weekends for prospective graduate students 1999 and 2000
Search Committee (chair), Special Teaching Instructor, Biology Department, 2001
Cell and Developmental Biology Faculty Search Committees, 2001-2002
MCB Graduate Committee, 2001-2007. Chair 2004-2006
Undergraduate Committee, Biochemistry Advisor, 2001-2004
Cell Biology and Plant Biology Faculty Search Committees, 2002-2003
Chair, 2006-2012
Class of 1978 Life Sciences Center Building Committee - 2006-2011
Search Committee Chair, Developmental Biology Faculty Search, 2011-2012
Biology 11 Task Force (chair), 2012-2013
Chair Advisory Committee, 2012-2013