**CURRICULUM VITAE FOR JUDITH BENDER** **February 1, 2018**

## 1. PERSONAL DATA

Judith Lee Bender, Professor
Brown University
Department of Molecular Biology, Cell Biology, and Biochemistry
Sidney Frank Hall Room 162 (office), Room 133 (laboratory)
185 Meeting Street G-L162
Providence, RI 02912
Telephone: (401)-863-6238 (office)
(401)-863-3075 (laboratory)
FAX: (401)-863-2421
Electronic Mail: judith_bender@brown.edu

## 2. HOME ADDRESS

18 Hanson Rd.
Barrington, RI 02806
Telephone: (401)-289-2406

## 3. EDUCATION AND TRAINING

B.S. 1982, Harvard-Radcliffe College, Biochemistry
Topic: Biochemical analysis of adenylate cyclase purified from bovine caudate nucleus
Advisor: Dr. Eva Neer (Harvard Medical School)

Ph.D.1990, Harvard University, Biochemistry and Molecular Biology
Topic: Molecular genetic analysis of transposition mechanism for bacterial transposon Tn10
Advisor: Dr. Nancy Kleckner

Post-doctoral training 1991-1995, Whitehead Institute, Molecular Biology
Topic: Gene regulation in *Arabidopsis thaliana*
Advisor: Dr. Gerald Fink

## 4. PROFESSIONAL APPOINTMENTS

| | |
|---|---|
| 1995-2002 | Assistant Professor, Department of Biochemistry and Molecular Biology, Johns Hopkins University, Bloomberg School of Public Health |
| 2002-2007 | Associate Professor, Department of Biochemistry and Molecular Biology, Johns Hopkins University, Bloomberg School of Public Health |
| 2007-present | Professor, Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University |

## 5. PUBLICATIONS

### a. Book Chapters

Kleckner, N., Morisato, D., Roberts, D., and Bender, J. (1984). Mechanism and Regulation of Tn10 Transposition. *Cold Spring Harbor Symp. Quant. Biol.* **49**, 235-244.

Kleckner, N., Bender, J., and Gottesman, S. (1991). Uses of Transposons with Emphasis on Tn*10*. *Methods Enz.* **204**, 139-180.

Bender, J. (2004). DNA methylation and epigenetics. *Annu. Rev. Plant Biol*. **55**, 41-68.

Bender, J. (2004). DNA methylation of the endogenous *PAI* genes in Arabidopsis. *Cold Spring Harbor Symp. Quant. Biol*. **69**, 145-153.

### b. Refereed Journal Articles

Bender, J. and Neer, E. (1983). Properties of the Adenylate Cyclase Catalytic Unit from Caudate Nucleus. *J. Biol. Chem.* **258**, 2432-2439.

Bender, J., Wolf, L., and Neer, E. (1984). Interaction of Forskolin with Resolved Adenylate Cyclase Components. *Adv. Cyc. Nuc. Protein Phos. Res.* **17**, 101-109.

Frost, J., Bender, J., Kadonaga, J., and Knowles, J. (1984). Dehydroquinate Synthase from *Escherichia coli*: Purification, Cloning, and Construction of Overproducers of the Enzyme. *Biochemistry* **23**, 4470-4475.

Bender, J. and Kleckner, N. (1986). Genetic Evidence that Tn10 Transposes by a Nonreplicative Mechanism. *Cell* **45**, 801-815.

Bender, J., Kuo, J., and Kleckner, N. (1991). Genetic Evidence Against Intramolecular Rejoining of the Donor DNA Molecule Following IS*10* Transposition. *Genetics* **128**, 687-694.

Bender, J. and Kleckner, N. (1992). IS10 transposase mutations that specifically alter target site recognition. *EMBO J.* **11**, 741-750.

Bender, J. and Kleckner, N. (1992). Tn*10* insertion specificity is strongly dependent upon sequences immediately adjacent to the target-site consensus sequence. *Proc. Natl. Acad. Sci. USA* **89**, 7996-8000.

Bender, J. and Fink, G. R. (1994). AFC1, a LAMMER kinase from *Arabidopsis thaliana*, activates STE12-dependent processes in yeast. *Proc. Natl. Acad. Sci. USA* **91**, 12105-12109.

Bender, J. and Fink, G. R. (1995). Epigenetic control of an endogenous gene family is revealed by a new blue fluorescent mutant of Arabidopsis. *Cell* **83**, 725-734.

Bender, J. and Fink, G. R. (1998). A Myb homologue, ATR1, activates tryptophan gene expression in *Arabidopsis*. *Proc. Natl. Acad. Sci. USA* **95**, 5655-5660.

Jeddeloh, J.A., Bender, J., and Richards, E.J. (1998). The DNA methylation locus *DDM1* is required for maintenance of gene silencing in *Arabidopsis*. *Genes Dev*. **12**, 1714-1725.

Luff, B., Pawlowski, L., and Bender, J. (1999). An inverted repeat triggers *de novo* methylation

of identical sequences in *Arabidopsis*. *Mol. Cell* **3**, 505-511.

Melquist, S., Luff, B., and Bender, J. (1999). Arabidopsis *PAI* gene arrangements, cytosine methylation, and expression. *Genetics* **153**, 401-413.

Bartee, L. and Bender, J. (2001). Two *Arabidopsis* methylation-deficiency mutations confer only partial effects on a methylated endogenous gene family. *Nucleic Acids Res*. **29**, 2127-2134.

Bartee, L., Malagnac, F., and Bender, J. (2001). *Arabidopsis cmt3* chromomethylase mutations block non-CG methylation and silencing of an endogenous gene. *Genes Dev.* **15**, 1753-1758.

Smolen, G. and Bender, J. (2002). Arabidopsis cytochrome P450 *cyp83B1* mutations activate the tryptophan biosynthetic pathway. *Genetics* **160**, 323-332.

Smolen, G. A., Pawlowski, L., Wilensky, S. E., and Bender, J. (2002). Dominant alleles of the basic helix-loop-helix transcription factor ATR2 activate stress-responsive genes in Arabidopsis. *Genetics* **161**, 1235-1246.

Pandey, R., Müller, A., Napoli, C. A., Selinger, D. A., Pikaard, C. S., Richards, E. J., Bender, J., Mount, D. W., and Jorgensen, R. A. (2002). Analysis of histone acetyltransferase and histone deacetylase families of *Arabidopsis thaliana* suggests functional diversification of chromatin modification among multicellular eukaryotes. *Nucleic Acids Res*. **30**, 5036-5055.

Malagnac, F., Bartee, L., and Bender, J. (2002). An Arabidopsis SET domain protein required from maintenance but not establishment of DNA methylation. *EMBO J*. **21**, 6842-6852.

Quiel, J. A. and Bender, J. (2003). Glucose conjugation of anthranilate by the *Arabidopsis* UGT74F2 glucosyltransferase is required for tryptophan mutant blue fluorescence. *J. Biol. Chem*. **278**, 6275-6281.

Kato, M., Miura, A., Bender, J., Jacobsen, S. E., and Kakutani, T. (2003). Role of CG and non-CG methylation in immobilization of transposons in *Arabidopsis*. *Current Biol*. **13**, 421-426.

Melquist, S. and Bender, J. (2003). Transcription from an upstream promoter controls methylation signaling from an inverted repeat of endogenous genes in *Arabidopsis*. *Genes Dev*. **17**, 2036-2047.

Melquist, S. and Bender, J. (2004). An internal rearrangement in an Arabidopsis inverted repeat locus impairs DNA methylation triggered by the locus. *Genetics* **166**, 437-448.

Hoecker, U., Toledo-Ortiz, G., Bender, J., and Quail, P. H. (2004). The photomorphogenesis-related mutant *red1* is defective in *CYP83B1*, a red light-induced gene encoding a cytochrome P450 required for normal auxin homeostasis. *Planta* **219**, 195-200.

Celenza, J. L., Quiel, J. A., Smolen, G. A., Merrikh, H., Silvestro, A. R., Normanly, J., and Bender, J. (2005). The Arabidopsis ATR1 Myb transcription factor controls indolic glucosinolate homeostasis. *Plant Physiol*. **137**, 253-262.

Ebbs, M. L., Bartee, L., and Bender, J. (2005). H3 lysine 9 methylation is maintained on a transcribed inverted repeat by combined action of SUVH6 and SUVH4

methyltransferases. *Mol. Cell. Biol*. **25**, 10507-10515.

Ebbs, M. L. and Bender, J. (2006). Locus-specific control of DNA methylation by the *Arabidopsis* SUVH5 histone methyltransferase. *Plant Cell* **18**, 1166-1176.

Mull, L., Ebbs, M. L., and Bender, J. (2006). A histone methylation-dependent DNA methylation pathway is uniquely impaired by deficiency in S-adenosylhomocysteine hydrolase. *Genetics* **147**, 1161-1171.

Enke, R.A., Dong, Z., and Bender, J. (2011). Small RNAs prevent transcription-coupled loss of histone H3 lysine 9 methylation in *Arabidopsis thaliana*. *PLoS Genetics* e1002350.

**c. Invited Reviews/Perspectives**

Bender, J. (1998). Cytosine methylation of repeated sequences in eukaryotes: the role of DNA pairing. *Trends Biochem. Sci*. **23**, 252-256.

Symer, D.E. and Bender, J. (2001). Hip-hopping out of control. *Nature* **411**, 146-148.

Bender, J. (2001). A vicious cycle: RNA silencing and DNA methylation in plants. *Cell* **106**, 129-132.

Bender, J. (2002). Plant Epigenetics. *Current Biol*. **12**, R412-R414.

Bender, J. (2004). Chromatin-based silencing mechanisms. *Current Op. Plant Biology* **7**, 521-526.

Mathieu, O. and Bender, J. (2004). RNA-directed DNA methylation. *J. Cell Science* **117**, 4881-4888.

Bender, J. and Celenza, J.L. (2009). Indolic glucosinolates at the crossroads of tryptophan metabolism. *Pytochem. Rev*. 8, 25-37.

Johnson, M.A. and Bender, J. (2009). Reprogramming the epigenome during germline and seed development. *Genome Biol.* 10:232 epub.

Bender, J. (2012). RNA-directed DNA methylation: getting a grip on mechanism. *Current Biol.* 22:R400-R401.

**d. Invited Lectures**

Department of Molecular Biology and Genetics, Johns Hopkins School of Medicine
Host: Dr. Nancy Craig
November, 1995

Department of Biology, Johns Hopkins University
Host: Dr. Kyle Cunningham
February, 1996

Section of Genetics, Cornell University
Host: Dr. Robert Last
May, 1996

Department of Biology, Yale University

Host: Dr. Xing Wang Deng
September, 1996

DEKALB Genetics Corporation
Host: Dr. David McElroy
September, 1996

Department of Physiology, Johns Hopkins University
Host: Dr. Susan Craig
October, 1996

Carnegie Institute, Stanford University
Host: Dr. Neil Hoffman
December, 1996

Department of Biology, University of Maryland, Baltimore County
Host: Graduate Students in Department (student-run seminar)
March, 1997

Department of Molecular Genetics and Cell Biology, University of Chicago
Host: Dr. Daphne Preuss
April, 1997

Carnegie Institute, Johns Hopkins University
Host: Dr. Andrew Fire
September, 1997

Institute for Molecular Biology, University of Oregon
Host: Dr. Eric Selker
October, 1997

Department of Agronomy and Crop Science, University of Illinois
Host: Dr. Lila Vodkin
February, 1998

Department of Plant Sciences, University of Arizona
Host: Dr. Elizabeth Vierling
March, 1998

Department of Plant Sciences, Rutgers University
Host: Dr. Nilgun Tumer
October, 1998

Plant Gene Expression Center, University of California, Berkeley
Host: Dr. Athanosios Theologis
November, 1999

Department of Biology, University of Massachusetts, Amherst
Host: Dr. Elsbeth Walker
February, 2000

Department of Biology, Emory University
Host: Dr. William Kelly
November, 2000

Department of Biology, Catholic University of America
Host: Dr. Ann Conti
November, 2000

Department of Biology, Brown University
Host: Dr. Alison Delong
December, 2001

Genetics Program, Texas A&M University
Host: Graduate students in program (student-run seminar)
March, 2002

Grand Rounds, Johns Hopkins University Bloomberg School of Public Health
Host: Dr. Alfred Sommer, Dean
December, 2002

Department of Plant Biology, Ohio State University
Host: Dr. Erich Grotewold
March, 2003

Interdisciplinary Plant Group, University of Missouri, Columbia
Host: Graduate students in program (student-run seminar)
May, 2003

Department of Plant Sciences, University of Arizona
Host: Dr. Richard Jorgensen
October, 2003

Genetics Program, Purdue University
Host: Dr. Clifford Weil
October, 2003

National Institutes of Health
Host: Dr. Orna Cohen-Fix
October, 2004

Department of Plant and Microbiol Biology, University of California, Berkeley
Host: Dr. Krishna Niyogi
October, 2004

Department of Biochemistry, Cellular and Molecular Biology, University of Tennessee, Knoxville
Host: Dr. Mariano Labrador
April, 2005

Department of Microbiology and Immunology, Thomas Jefferson University
Host: Dr. Alex Karasev
January, 2006

Dow AgroSciences, Indianapolis, Indiana
Host: Dr. Mary Welter
March, 2006

National Institutes of Health

Host: Dr. Elissa Lei
December, 2006

Department of Plant Biology, Cornell University
Host: Dr. Jian Hua
May, 2007

Department of Cell and Molecular Biology, University of Texas, Austin
Host: Dr. Z. Jeffrey Chen
April, 2008

Department of Genetics, Development, and Cell Biology, Iowa State University
Host: Dr. Yanhai Yin
October, 2008

Department of Cell and Developmental Biology, Vanderbilt University Medical Center
Host: Dr. Guoqiang Gu
April, 2009

Department of Molecular, Cellular, and Developmental Biology, Yale University
Host: Dr. Vivian Irish
April, 2010

Department of Medicine, Brigham and Women's Hospital
Host: Dr. Jing Zhou
May, 2010

North Carolina Plant Molecular Biology Consortium
Host: Dr. Anna Stepanova
April, 2015

**e. Papers Read (Invited Presentations at Meetings)**

"Epigenetic control of endogenous genes in Arabidopsis"
Mid-Atlantic Plant Molecular Biology Society Meeting, July, 1996

"Regulation of tryptophan genes in Arabidopsis"
Plant Molecular Biology Gordon Research Conference, July, 1996

"Epigenetic control of the Arabidopsis *PAI* genes"
American Society for Cell Biology Meeting, December, 1996

"DNA Methylation and Gene Silencing of an endogenous gene family in Arabidopsis"
8th Annual Symposium on Molecular Technology for Plant Improvement, May, 1997

"DNA Methylation of endogenous genes in Arabidopsis"
8$^{th}$ International Conference on Arabidopsis Research, June, 1997

"DNA Methylation and Gene Silencing in Arabidopsis"
Epigenetics Gordon Research Conference, August, 1997

"Tryptophan gene regulation in Arabidopsis"
Plant Molecular Biology Gordon Research Conference, July, 1998

"Methylation and gene silencing in Arabidopsis"
FASEB "Biological Methylation" Conference, July, 1999

"Methylation and silencing of the *PAI* genes in Arabidopsis"
Epigenetics Gordon Research Conference, August, 1999

"Methylation and gene silencing of an endogenous gene family in Arabidopsis"
Maryland Area Arabidopsis Mini-Symposium, February, 2000

"Functional genomics of chromatin"
11th International Conference on Arabidopsis Research, June, 2000

"Genetic approaches to gene silencing"
Plant Molecular Biology Gordon Research Conference, July, 2000

"Mutations that alter methylation and silencing of an endogenous gene in Arabidopsis"
FASEB "Biological Methylation" Conference, July, 2001

"Mutations that alter methylation and silencing of an endogenous gene in Arabidopsis"
Epigenetics Gordon Research Conference, August, 2001

"Transcription from an upstream promoter controls methylation signaling from an inverted repeat of endogenous genes in Arabidopsis"
Plant Molecular Biology Gordon Research Conference, July, 2002

"DNA methylation and gene silencing in Arabidopsis"
Epigenetics Gordon Research Conference, August, 2003

"RNA signals for DNA methylation of endogenous genes in Arabidopsis"
Emerging mechanisms of Epigenetic Regulation Keystone Conference, January, 2004

"DNA methylation of the endogenous *PAI* genes in Arabidopsis"
Epigenetics Cold Spring Harbor 69th Symposium of Quantitative Biology, June, 2004

"RNA-directed DNA methylation of the endogenous *PAI* genes in Arabidopsis"
Banbury Conference on RNAi-related processes in plants: chromatin, development and defense, August, 2004

Elected co-organizer of 2005 Epigenetics Gordon Research Conference

"Myb transcription factors that control indolic glucosinolate homeostasis in Arabidopsis"
7th Annual ATRIUM (*Arabidopsis thaliana* Research Initiative at University of Maryland) Symposium, April, 2006

"Histone methylation that guides DNA methylation"
Also served as Chair of "Genetic and Epigenetic Mechanisms" Session
17th International Conference on Arabidopsis Research, June, 2006

"Histone methylation that guides DNA methylation"
International Society for Plant Molecular Biology, August, 2006

"DNA methylation and gene silencing in Arabidopsis"
The 24th UC-Riverside Symposium in Plant Biology, January, 2007

"Histone methylation that guides DNA methylation"
Epigenetics Gordon Research Conference, August, 2007

"Histone methyltransferases that control DNA methylation"
New England Arabidopsis Meeting, October, 2007

"Locus-specific control of DNA methylation by the SUVH5 and SUVH6 histone methyltransferases"
Also served as Chair of "Genetic and Epigenetic Mechanisms" Session
19th International Conference on Arabidopsis Research, July, 2008

"The role of small RNAs in maintaining DNA methylation on duplicated sequences"
Epigenetics Gordon Research Conference, August, 2009

"Histone methylation that controls DNA methylation"
9th International Plant Molecular Biology Congress, October, 2009

Discussion Leader for "Epigenetics and the genome" session
Epigenetics Gordon Research Conference, August 2011

**f. Manuscripts in preparation**

Celenza, J. L., Hogan, B., Mottarella, S., Constantino, A.*, Crisp, C.*, Wan, A., and Bender, J. Functional diversification of transcription factors that regulate tryptophan secondary metabolism.
*Brown undergraduate author

## 6. RESEARCH GRANTS

### a. Current Grants

None

### b. Completed Grants

National Institutes of Health GM61148
"DNA methylation and gene silencing in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 09/01/05-08/31/10
Total Award Amount: $1,190,000

American Cancer Society Institutional Research Grant
"Characterization of the Myb Homologue ATR1"
Principal Investigator: J. Bender
Period of Support: 01/01/97-12/31/97

March of Dimes Basil O'Connor Starter Scholar Award FY98-0535
"Epigenetic control in *Arabidopsis thaliana*"
Principal Investigator: J. Bender
Period of Support: 02/01/97-01/31/99

Searle Scholars Award 97-E-103
"Molecular analysis of DNA methylation and gene silencing in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 07/01/97-6/30/00

National Science Foundation IBN-9723172
"Regulation of tryptophan genes in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 01/01/98-12/31/02

March of Dimes FY99-288
"Establishment of DNA methylation in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 06/01/99-05/31/03

National Science Foundation IBN-9975930
"Functional Genomics of Chromatin: Global Control of Plant Gene Expression"
Principal Investigator: Dr. Richard Jorgensen, University of Arizona
Role on Project: co-PI
Period of Support: 09/01/99-08/31/05

National Institutes of Health GM61148
"DNA methylation and gene silencing in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 07/01/00-06/30/05

National Science Foundation MCB-0517358 (Johns Hopkins U.), MCB0750278 (Brown U.)
"Regulation of tryptophan metabolism in Arabidopsis"
Principal Investigator: J. Bender
Period of Support: 09/01/05-08/31/09

Total Award Amount: $450,000

**7. SERVICE**

**a. University Service**

**At Brown University (2007-present):**

MCB Department Executive Committee Member 2007-2008

Salomon Award Selection Committee Member, 2007 and 2013

Symposium on Tetrapyrroles Committee Chair, 2008-2009

Graduate Admissions Committee Member, 2008-2009

Committee on Medical Faculty Appointments Member, 2008-2011

Graduate Admissions Committee Chair, 2009-present

MCB Graduate Training Program co-Director, 2009-present

EPSCoR Graduate Fellowship Selection Committee Member, 2011, 2012, 2013

Research Advisory Board Member 2011-2013

Building for Environmental Research and Teaching Principals Committee, 2012-2013

Sidney Frank Fellowship Selection Committee, 2010-2017

Junior Faculty Mentoring: Dr. Erica Larschan (MCB) 2010-present, Dr. Sohini Ramachandran (EEB) 2011-2012, Dr. James Kellner (EEB) 2013-2014

Tenure, Promotions, and Appointments Committee Member, Fall 2014-present (Chair Fall 2016-Spring 2017)

Promotion with Tenure Committee for Dr. Erica Larschan (MCB), Chair Spring 2017-Spring 2018

Nominations Committee Member, Fall 2017-present

**b. Professional Service**

Genetics Society of America Member, 1996-present

American Society of Plant Biologists Member, 1996-present

Grant Review Panel Member “Plant Genetic Mechanisms” for United States Department of Agriculture, 1998-2001

Grant Review Panel Member “Biology-1” Post-doctoral Fellowships for National Institutes of Health, 1999

Grant Review Panel Member “Eukaryotic Genetics” for National Science Foundation, 1999-2004

Elected Member, North American Arabidopsis Steering Committee, 2004-2008

Genetics Society of American Nominating Committee Member, 2005

Scientific Advisory Panel Member "Maize Chromatin Project" (NSF-funded plant genome initiative) 2005-2009

Scientific Advisory Panel Member "Plant-Incorporated Protectants based on Virus Coat Protein Genes" for Environmental Protection Agency, 2005

Grant Review Panel Member "Development-1" for National Institutes of Health, 2005

"Epigenetics" Gordon Research Conference co-Chair, 2005

"17th International Conference on Arabidopsis Research" co-Organizer, 2006

Grant Review Panel Member "ZRG1 F08-A Genes, Genetics, and Genetics" Post-doctoral Fellowships for National Institutes of Health, 2006

Scientific Advisory Panel Member "Arabidopsis Biological Resource Center," 2007-2010

Grant Review Panel Member "Arabidopsis 2010" for National Science Foundation, 2006-2007

Grant Review Panel Member "Molecular Genetics B" for National Institutes of Health, 2006-2011 (ad hoc member beginning October 2006; regular member beginning October 2007)

"Grand Challenges in Plant Biology" Workshop Participant, sponsored by National Science Foundation, January 2008

Site Visit Team Member "Functional Genomics of Plant Polyploids" for National Science Foundation, November 2008

Grant Review Panel Member for National Science Foundation Molecular and Cellular Biosciences Division, April 2009

Grant Review Panel Member "Plant Genome Research" for National Science Foundation, May 2012

Steering Committee Member, Epigenomics of Plants International Consortium, 2010-2013

Grant Review Panel Member (ad hoc) "ZRG1 F08-A Genes, Genomes, and Genetics" (Postdoctoral and Graduate Student Fellowships) for National Institutes of Health, February 2013

Grant Review Panel Member for National Science Foundation Molecular and Cellular Biosciences Division, May 2013

Grant Review Panel Member for National Science Foundation Molecular and Cellular Biosciences Division, March 2014

Grant Review Panel Member (ad hoc) "ZRG1 F05-R Cell Biology, Developmental Biology, and Bioengineering" (Postdoctoral and Graduate Student Fellowships) for National Institutes

of Health, July 2014

Grant Review Panel Member “Molecular Genetics B” for National Institutes of Health, February 2015

Grant Review Panel Member for National Science Foundation Molecular and Cellular Biosciences Division, February 2015

Grant Review Panel Member “ZRG1 F05-U Cell Biology, Developmental Biology, and Bioengineering” (Postdoctoral and Graduate Student Fellowships) for National Institutes of Health, July 2015

Grant Review Panel Member “ZRG1 F05-U Cell Biology, Developmental Biology, and Bioengineering” (Postdoctoral and Graduate Student Fellowships) for National Institutes of Health, October 2016

Grant Review Panel Member “ZRG1 F05-U Cell Biology, Developmental Biology, and Bioengineering” (Postdoctoral and Graduate Student Fellowships) for National Institutes of Health, October 2017

Genetics Society of America DeLill Nasser Travel Award selection committee (regular member 2016; Chair 2017-present)

**Ongoing Professional Service Activities:**

Ad hoc review of manuscripts for journals including *Science*, *Nature*, *Genes & Development*, *Proceedings of the National Academy of Science USA*, *Current Biology*, *Public Library of Online Science Genetics*, *Public Library of Online Science One, Genetics*, *Nucleic Acids Research*, *Plant Cell*, *Plant Physiology*, *Plant Journal*, *Plant Molecular Biology*

Ad hoc review of grant proposals for National Science Foundation

**8. HONORS AND AWARDS**

Phi Beta Kappa, Radcliffe Chapter, 1982

Henderson Prize for best undergraduate thesis in Biochemistry,
Harvard-Radcliffe College, 1982

National Science Foundation Graduate Fellowship, 1982-1985

Jane Coffin Childs Memorial Fund for Medical Research
Postdoctoral Fellowship, 1991-1993

March of Dimes Basil O'Connor Starter Scholar Award, 1997-1998

Searle Scholars Award, 1997-2000

Elected co-organizer of 2005 Epigenetics Gordon Conference, 2001

Elected member of North American Arabidopsis Steering Committee, 2004-2008

**9. TEACHING 2014-present**

**a. Courses**

(On sabbatical in Fall 2013 and Spring 2014)

BIOL2150 "Scientific Communication" Fall 2014 (5 graduate students), responsible for 100% of class (average course rating 1.0; average instructor rating 1.0)

BIOL2150 "Scientific Communication" Fall 2015 (9 graduate students), responsible for 66% of class (average course rating 1.5; average instructor rating 1.5)

BIOL2150 "Scientific Communication" Fall 2016 Section 1 (7 graduate students), responsible for 100% of class (average course rating 1.75; average instructor rating 1.25)

BIOL1540/2540 "Molecular Genetics" (BIOL1540 11 undergraduates, BIOL2540 4 graduate students), responsible for 50% of class (average course rating BIOL1540 2.0, BIOL2540 2.25; average instructor rating BIOL1540 1.71, BIOL2540 1.75)

BIOL2150 "Scientific Communication" Fall 2017 Section 1 (6 graduate students), responsible for 100% of class (average course rating 2.67; average instructor rating 2.33)

**b. Independent Studies**

BIOL1960 "Directed Research/Independent Study" Spring 2014 Jeremy Work

BIOL1950 "Directed Research/Independent Study" Fall 2014 Savannah Pallango

BIOL1950 "Directed Research/Independent Study" Fall 2014 Margaret Rowe

BIOL1950 "Directed Research/Independent Study" Fall 2014 Jeremy Work

BIOL1960 "Directed Research/Independent Study" Spring 2015 Savannah Pallango (senior thesis)

BIOL1960 "Directed Research/Independent Study" Spring 2015 Margaret Rowe

BIOL1960 "Directed Research/Independent Study" Spring 2015 Jeremy Work (senior thesis)

BIOL1950 "Directed Research/Independent Study" Fall 2016 Danielle Alvarez

BIOL1950 "Directed Research/Independent Study" Fall 2016 Margaret Rowe

BIOL1960 "Directed Research/Independent Study" Spring 2017 Shanze Tahir

BIOL1960 "Directed Research/Independent Study" Spring 2017 Margaret Rowe (senior thesis)

NIH F31 Graduate Student Fellowship preparation advising, Spring 2015-present: Emily Kaye, Stephanie Post, John Santiago (April 2015); Chapman Beekman, Kevin Murphy (August 2015), Jennifer Forcina, Stephanie Post, Robert Thorn (December 2015), Chapman Beekman (August 2016), David Garcia (December 2016), Sun Mayberry-Kim (August 2017), Diego Jaime (December 2017)

**c. Student Advising**

| | |
|---|---|
| Ph.D. Student Rotation Advisor: | Jenna Kotak Spring 2014<br>Nathaniel Ponvert Spring 2016 |
| Ph.D. Thesis Advisor: | Jenna Kotak, June 2014-present |
| Undergraduate Research Advisor: | Jeremy Work summer 2012-spring 2015<br>Savannah Palango fall 2013-spring 2015<br>Danielle Alvarez summer 2015-fall 2016<br>Shanze Tahir spring 2017<br>Agnes Cheng fall 2017<br>Margaret Rowe fall 2013-2017 |
| Advisee Awards: | Savannah Palango, Summer UTRA 2014<br>Danielle Alvarez, Summer UTRA 2015<br>Margaret Rowe, Summer UTRA 2016<br>Margaret Rowe, Clapp prize for Outstanding Undergraduate Thesis in Biochemistry 2017 |
| Ph.D. Thesis Committee Member: | Kristin Beale 2010-2014<br>Christine Langlois 2010-2015<br>Jessica Chery 2011-2014<br>Allison Porman 2011-2015<br>Alexander Leydon 2012-2015<br>Christine Scaduto 2013-2017<br>William Jordan 2015-present |
| First Year Student Advisor: | Heather Huminski, 2015<br>Grant McFadden, 2015<br>Charlotte Merzbacher, 2015<br>Colby Parsons, 2015<br>Hanna Shephard, 2015<br><br>Andrea Gilmore, 2016<br>Iman Iqbal, 2016<br>Amanda Lyons, 2016<br>John Rush, 2016<br>Ilayda Top, 2016<br>Melanie Tran, 2016<br><br>Karyna Atha, 2017<br>Fares Awa, 2017<br>Caleb Eickmann, 2017<br>Arden Orwicz, 2017<br>Subhanik Purkayastha, 2017<br>May Qi, 2017 |
| Sophomore Advisor: | Sahakait Benyasut, 2015<br>Matthew Finn, 2015<br>Alexandra Lawton, 2015<br>Kyle Lin, 2015<br>Bolong Zu, 2015<br><br>Heather Huminski, 2016 |

Grant McFadden, 2016
Charlotte Merzbacher, 2016
Colby Parsons, 2016
Hanna Shephard, 2016

Andrea Gilmore, 2017
Amanda Lyons, 2017
John Rush, 2017
Ilayda Top, 2017
Melanie Tran, 2017

Biology Concentration Advisor:

Joas Alfajardo, 2016-present
Chhabria, Karisma, 2017-present
Aisha Keown-Lang, 2016-present
Colby Parsons, 2017-present