CURRICULUM VITAE – JOHN L. CELENZA

Personal Data

Address Home: 49 Sweetwater Ave.
Bedford, MA 01720
781 271-1278

Work: Dept. of Biology
Boston University
5 Cummington St.
Boston, MA 02215
617 353-2445
celenza@bu.edu

Birthdate and place: July 6, 1959 Rockville Centre, NY
Citizenship: USA

Education

Adelphi University (1977-81) B. S. Biology
Columbia University (1981-88) M. A., Ph.D. Genetics and Development (Advisor: M. B. Carlson)

Professional Experience

Undergraduate research, Department of Biology, Adelphi University 1980-81
advisor: Dr. Herbert Jervis
Laboratory rotation, Department of Genetics and Development, Columbia University 1981-82
advisor: Dr. Debra Wolgemuth
Predoctoral research, Department of Genetics and Development, Columbia University 1982-88 advisor: Dr. Marian Carlson
Postdoctoral research, Department of Genetics and Development, Columbia University 1988-89
advisor: Dr. Marian Carlson
Postdoctoral research, Whitehead Institute for Biomedical Research 1989-94
advisor: Dr. Gerald R. Fink
Assistant Professor, Department of Biology, Boston University 1995-2004
Associate Professor, Department of Biology, Boston University 2004-present
Director, Program in Biochemistry and Molecular Biology, Boston University 2004-present
Director, Undergraduate Research Opportunities Program, Boston University 2017-present

Academic and Professional Awards

Magna cum laude, Department of Biology, Adelphi University 1981
NIH Predoctoral Training Grant in human genetics and development, Columbia University 1981-83
NSF Postdoctoral Fellowship in Plant Biology, Whitehead Institute for Biomedical Research 1989-9

Publications

1. Wolgemuth, D. J., **J. Celenza**, D. S. Bundman, and B. S. Dunbar (1984). Formation of the rabbit zona pellucida and its relationship to ovarian follicular development. Dev. Biol. *106*: 1-14.
2. **Celenza, J. L.** and M. Carlson (1984). Cloning and genetic mapping of *SNF1*, a gene required for expression of glucose-repressible genes in *Saccharomyces cerevisiae*. Mol. Cell. Biol. *4*: 49-53.
3. **Celenza, J. L.** and M. Carlson (1984). Structure and expression of the *SNF1* gene of *Saccharomyces cerevisiae*. Mol. Cell. Biol. *4*: 54-60.
4. **Celenza, J. L.** and M. Carlson (1985). Rearrangement of the genetic map of chromosome VII of *Saccharomyces cerevisiae*. Genetics *109*: 661-664.
5. Carlson, M., **J. L. Celenza,** and F. J. Eng (1985). Evolution of the dispersed *SUC* gene family of *Saccharomyces* by rearrangements of chromosome telomeres. Mol. Cell. Biol. *5*: 2894-2902.
6. **Celenza, J. L.** and M. Carlson (1986). A yeast gene that is essential for release from glucose repression encodes a protein kinase. Science *233*: 1175-1180.
7. Neigeborn, L., **J. L. Celenza** and M. Carlson (1987). *SSN20* is an essential gene with mutant alleles that suppress defects in *SUC2* transcription in *Saccharomyces cerevisiae*. Mol. Cell. Biol. *7*: 672-678.
8. **Celenza, J. L.** and M. Carlson (1987). Regulation of *SUC2* gene expression by glucose repression. *In* Proceedings of the ALKO symposium on industrial yeast genetics, (eds. M. Korhala, E. Pohjonen). Helsinki, Finland: Foundation for Biotechnical and Industrial Fermentation Research.
9. **Celenza, J. L.**, L. Marshall-Carlson and M. Carlson (1988). The yeast *SNF3* gene encodes a glucose transport protein. Proc. Natl. Acad. Sci. USA *85*: 2130-2134.
10. **Celenza, J. L.** and M. Carlson (1989). Mutational analysis of the *Saccharomyces cerevisiae* SNF1 protein kinase and evidence for functional interaction with the SNF4 protein. Mol. Cell. Biol. *9*: 5034-5044.
11. **Celenza, J. L.**, F. J. Eng, and M. Carlson (1989). Molecular Analysis of the *SNF4* Gene of *Saccharomyces cerevisiae*: evidence for physical association of the SNF4 protein with the SNF1 protein kinase. Mol. Cell. Biol. *9*: 5045-5054.
12. Marshall-Carlson, L., **J. L. Celenza,** B. Laurent, and M. Carlson (1990). Mutational analysis of the *SNF3* glucose transporter of *Saccharomyces cerevisiae*. Mol. Cell. Biol. *10*: 1105-1115.
13. **Celenza, J. L.** and M. Carlson (1991). Renaturation of protein kinase activity on protein blots. Methods Enzymol. *200*: 423-430.
14. **Celenza, J. L.**, P. Grisafi and G. R. Fink (1995). A pathway for lateral root formation in *Arabidopsis thaliana*. Genes Devel. *9*: 2131-2142.
15. de Almeida Engler, J., V. De Vleesschauwer, S. Burssens, **J. Celenza**, D. Inzé, M. Van Montagu, G. Engler and G. Gheysen (1999). The use of molecular markers and cell cycle inhibitors to analyse cell cycle progression in nematode induced galls and syncytia. Plant Cell *11*: 793-807.
16. Hull, A. K, R. Vij and **J. L. Celenza** (2000). Arabidopsis cytochrome P450s that catalyze the first step of tryptophan-dependent indole-3-acetic acid biosynthesis. Proc. Natl. Acad. Sci. USA *97*: 2379-2384.
17. Hull, A. K. and **J. L. Celenza** (2000). Bacterial expression and purification of the Arabidopsis NADPH-cytochrome P450 reductase ATR2. Protein Expr. Purif. *18*: 310-315.
18. Celenza, J. L. (2001). Natural products derived from the *N*-hydroxylation of tyrosine and tryptophan. Curr. Opin. Plant Biol. 4: 234-240.
19. Ljung K, A. K. Hull, M. Kowalczyk, A. Marchant, **J. Celenza**, J.D. Cohen and G. Sandberg (2002). Biosynthesis, conjugation, catabolism and homeostasis of indole-3-acetic acid in *Arabidopsis thaliana* Plant Mol. Biol. 49: 249-272.
20. Zhao, Y., A. K. Hull, N. R. Gupta, K. Goss, J. Normanly, J. Chory and **J.L. Celenza** (2002). Trp-dependent auxin biosynthesis in *Arabidopsis*: involvement of cytochrome P450s CYP79B2 and CYP79B3. Genes Dev. 16: 3100-3112.
21. Waxman, D. J. and **J. L. Celenza** (2003). Sexual dimorphism of hepatic gene expression: Novel biological role of KRAB zinc finger repressors revealed. Genes Dev. 17:2607-2613.

22. DiDonato, R. J., E. Arbuckle, S. Buker, J. Sheets, J. Tobar, R. Totong, P. Grisafi, G. R. Fink and **J. L. Celenza** (2004). *Arabidopsis ALF4* encodes a nuclear-localized protein required for lateral root formation. Plant J. 37: 340-353.
23. **Celenza, J. L.**, J. A. Quiel, G. A. Smolen, H. Merrikh, A. Silvestro, J. Normanly, and J. Bender (2005). The Arabidopsis ATR1 Myb transcription factor controls indolic glucosinolate homeostasis. Plant Physiol. 137:253-262.
24. Ljung, K., A. K. Hull, **J. Celenza**, M. Yamada, M. Estelle, J. Normanly, and G. Sandberg (2005). Sites and regulation of auxin biosynthesis in Arabidopsis roots. Plant Cell 17:1090-1104.
25. Dubrovsky, J. G., M. Sauer, S. Napsucialy-Mendivil, M. G. Ivanchenko, J. Friml, S. Shishkova, **J. Celenza**, and E. Benkova (2008). Auxin acts as a local morphogenetic trigger to specify lateral root founder cells. Proc. Natl. Acad. Sci. USA *105*: 8790-8794.
26. Bender, J. and **J. L. Celenza** (2009). Indolic glucosinolates at the crossroads of tryptophan metabolism. Phytochemistry Reviews 8:25-37.
27. Nonhebel, H. M., H. Al-Amier, M. Pieck, E. Akor, A. Ahamed, J. D. Cohen, **J. L. Celenza** and J. Normanly (2011). Redirection of Trp metabolism in tobacco by ectopic expression of an Arabidopsis indolic glucosinolate biosynthetic gene. Phytochemistry. 72:37-48.
28. Pieck, M., Y. Yuan, J. Godfrey, C. Fisher, S. Zolj, D. Vaughan, N. Thomas, C. Wu, J. Ramos, N. Lee, J. Normanly and **J. L. Celenza** (2015). Auxin and tryptophan homeostasis are facilitated by the ISS1/VAS1 aromatic aminotransferase in Arabidopsis. Genetics 201:185-199.
29. Hogan, B. J., A. Wan, N. Yong, L. Francis, S. Mottarella, C. Crisp, **J.L. Celenza** and J. Bender. Functional diversification of Arabidopsis MYB transcription factors that regulate tryptophan-derived defense compound synthesis. *In preparation.*
30. Hogan, B. J., S. Patell, C. Langlois, D. Turner, A. Buurma, J. Bender and **J. L. Celenza**. Indolic glucosinolate and camalexin production in Arabidopsis tryptophan auxotrophs mutants. *In preparation*.
31. Zolj, S., N. Rodriguez-Sastre, L. Ocampo, D. Berman, L. Stefanini, P. Darrow, E. Hobson, M. Pieck and **J. L. Celenza**. The Arabidopsis *alf3-1* mutation causes autoimmunity in the root and identifies a TIR domain protein. *In preparation.*
32. Rengarajan, S., M. Babaei Amameh, A. Diallo, and **J. L. Celenza**. Production of indolic glucosinolates in *Camelina sativa* by introduction of the *Arabidopsis thaliana MYB34* transcription factor. *In preparation.*

Invited Seminars

Rhode Island College. Genetic approaches to studying root development in *Arabidopsis thaliana.* Providence, RI (4/15/98).

Boston College. Root system development in *Arabidopsis thaliana.* Boston, MA (1/25/00).

Boston University. Root system development in *Arabidopsis thaliana.* Boston, MA (4/28/00).

New England Biolabs. The role of auxin in Arabidopsis root system development. Beverly, MA (8/24/00).

University of Massachusetts/Boston. Understanding the role of auxin in Arabidopsis root system development. Boston, MA (3/16/01).

University of New Hampshire. Rooting around for the role of auxin in Arabidopsis development. Derry, NH (12/3/01).

New England Arabidopsis Meeting. Digging up functions for genes required for root system development. Cambridge, MA (10/2/02).

The Swedish University of Agricultural Sciences. Root development and auxin biosynthesis in Arabidopsis. Umeå, Sweden (12/5/02).

Boston University, Goldman School of Dental Medicine. Department of Molecular and Cell Biology, Root branching and auxin homeostasis: Why weeds are hard to pull up. Boston, MA (9/23/04).

University of Massachusetts Amherst, Plant Biology. Digging up functions for genes required for root system development. Amherst, MA (4/29/04).

New England Arabidopsis Meeting, Tryptophan secondary metabolism: striking a balance between growth and defense. Cambridge, MA (10/5/05).

Worcester Polytechnic Institute. The role of CYP79B2 and CYP79B3 in IAA biosynthesis and tryptophan metabolism in Arabidopsis. Worcester, MA (12/13/05).

Cold Spring Harbor Laboratories. Genetics of secondary metabolism. Cold Spring Harbor, NY (7/18/06).

Cold Spring Harbor Laboratories. Genetic approaches to understanding plant secondary metabolism. Cold Spring Harbor, NY (7/10/07).

Cold Spring Harbor Laboratories. Genetic approaches to understanding plant secondary metabolism. Cold Spring Harbor, NY (7/2/08).

Cold Spring Harbor Laboratories. Genetics of secondary metabolism. Cold Spring Harbor, NY (7/7/09).

Invited Talks at Meetings

Arc et Senans Workshop on Roots. Genetic identification of steps in lateral root formation. Arc et Senans, France (5/28/96 – 6/1/96).

Auxin 2000. Understanding the role of auxin in lateral root formation. Corsica, France (5/13/00 –5/18/00).

11th International Conference on Arabidopsis Research. Characterization of two cytochrome P450s involved tryptophan secondary metabolism. Madison, WI (6/24/00 –6/28/00).

Plant Molecular Biology Gordon Conference. The role of the cytochrome P450s, CYP79B2 and CYP79B3, in tryptophan metabolism in Arabidopsis. Holderness, NH (7/16/00 – 7/21/00).

Auxin 2004. The role of CYP79B2 and CYP79B3 in IAA biosynthesis and tryptophan metabolism. Kolympari, Greece (5/22/04 –5/17/04).

The First International Conference on Glucosinolates. Cross-talk between biosynthetic pathways for indole glucosinolates and other Trp secondary metabolites. Jena, Germany (9/10/06-9/14/06).

Plant Biology 2013. Identification of an Arabidopsis aminotransferase involved in tryptophan metabolism and auxin homeostasis. Providence, RI (7/20/13-7/24/13).

Other Meeting Presentations (presenter listed first)

Boston Area Arabidopsis Meeting. Cell cycle regulation during lateral root development. Boston, MA (1/9/96). **Celenza, J. L.** Talk.

Plant Molecular Biology Gordon Conference. Lateral development in Arabidopsis. New Hampton, NH (7/21/96-7/26/96). **J. L. Celenza.** Poster and abstract.

8th International Conference On Arabidopsis Research. Characterization of the *alf4-1* mutant which is defective in the initiation of lateral roots. Madison, WI (6/25/97-6/29/97). DiDonato, R., T. Bonetti, A. Olsson and **J. L. Celenza.** Talk, poster and abstract.

8th International Conference On Arabidopsis Research. Identification of Arabidopsis cDNAs that affect indole metabolism. Madison, WI (6/25/97-6/29/97). Olsson, A. and **J. L. Celenza.** Poster and abstract.

Boston University Science Day. Walking to *ALF4*: a gene that is required for lateral root formation. Boston, MA (4/9/98). DiDonato, R. and **J. L. Celenza.** Poster and abstract.

Boston University Science Day. A yeast genetic approach for isolating Arabidopsis cDNAs which encode enzymes involved in indole metabolism. Boston, MA (4/9/98). Olsson, A. and **J. L. Celenza.** Poster and abstract.

9th International Conference On Arabidopsis Research. Identification of mutants that affect cell cycle regulation. Madison, WI (6/24/98-6/28/98). Cindhuchao, M., T. Bonetti and **J. L. Celenza.** Talk, poster and abstract.

9th International Conference On Arabidopsis Research. A yeast genetic approach for isolating Arabidopsis cDNAs which encode enzymes involved in indole metabolism. Madison, WI (6/24/98-6/28/98). Olsson, A. and **J. L. Celenza.** Poster and abstract.

9th International Conference On Arabidopsis Research. Walking to *ALF4*: a gene that is required for lateral root formation. Madison, WI (6/24/98-6/28/98). DiDonato, R., A. Olsson and **J. L. Celenza.** Poster and abstract.

Plant Molecular Biology Gordon Conference. A yeast screen designed to elucidate the biosynthesis of indolic secondary metabolites involved in plant development and plant pathogen response. Henniker, NH (7/19/98-7/24/98). **Celenza, J. L.** and A. Olsson**.** Talk, poster and abstract.

New England Arabidopsis Meeting. Isolation of CYP79B2 - An Arabidopsis P450 involved in indole metabolism. Boston, MA (10/7/98). Olsson, A. and **J. L. Celenza.** Talk.

New England Arabidopsis Meeting. Characterization of the *alf4-1* mutant which is defective in lateral root formation. Boston, MA (12/2/98). DiDonato, R. and **J. L. Celenza.** Talk.

Boston University Science Day. CYP79B2 encodes a cytochrome P450 involved in tryptophan metabolism. Boston, MA (3/31/99). Olsson, A. and **J. L. Celenza.** Poster and abstract. **Winner of Provost's Award**

Boston University Science Day. Cloning *ALF4*: a gene that is required for lateral root formation. Boston, MA (3/29/00). DiDonato, R. and **J. L. Celenza.** Poster and abstract. **Winner of honorary membership in Sigma Chi.**

Boston University Science Day. Two cytochrome P450s involved in tryptophan metabolism. Boston, MA (3/29/00). Olsson, A. and **J. L. Celenza.** Poster and abstract.

12th International Conference on Arabidopsis Research. Positional cloning and characterization of *ALF4*, a gene required for lateral root formation. Madison, WI (6/23/01-6/27/01). DiDonato, R. and **J. L. Celenza.** Poster and Abstract.

Plant Molecular Biology Gordon Conference. Role of cytochrome P450s 79B2 and 79B3 in indole-3-acetic acid and indole glucosinolate biosynthesis in Arabidopsis. Holderness, NH (7/7/02-7/11/02). **J. L. Celenza.** Poster presentation.

14th International Conference on Arabidopsis Research. Characterization and analysis of genes implicated in auxin-mediated development and in IAA biosynthesis. Madison, WI (6/20/03-6/24/03). **J. L. Celenza**, S. Buker, R. DiDonato, G. Grant, A. Hull, H. Merrikh, B. Tinsley, J. Tobar and R. Totong**.** Poster and Abstract.

16th International Conference on Arabidopsis Research. Regulation of indolic glucosinolate and indole-3-acetic acid homeostasis by the Arabidopsis ATR1 Myb transcription factor. Madison, WI (6/15/05-6/27/01). **J. L. Celenza**, J. A. Quiel, G. A. Smolen, H. Merrikh, A. R. Silvestro, M. Pieck, J. Normanly, and J. Bender. Poster presentation.

Plant Metabolic Engineering Gordon Conference. Regulation of indolic glucosinolate and indole-3-acetic acid homeostasis by the Arabidopsis ATR1 Myb transcription factor. Tilton, NH (7/10/05-7/15/05). **J. L. Celenza**, J. A. Quiel, G. A. Smolen, H. Merrikh, A. R. Silvestro, M. Pieck, J. Normanly, and J. Bender. Poster presentation.

17th International Conference on Arabidopsis Research. The role of tryptophan metabolism in auxin homeostasis. Madison, WI (6/28/06-7/2/06). A. K. Hull, A. Ahamed, A. Adepoju, J. Ledoux, J. Normanly, **J. L. Celenza**, M. Pieck, and J. Bender. Poster presentation.

Joint Annual Meeting of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists Société Canadienne de Physiologie Végétale. The role of tryptophan metabolism in auxin homeostasis. Boston, MA (8/5/06-8/9/06). **J. L. Celenza**, A. Ahamed, A. Adepoju, J. Ledoux, J. Normanly, M. Pieck, J. Bender and A. K. Hull. Poster presentation.

19th International Conference on Arabidopsis Research. The role of tryptophan synthesis in tryptophan secondary metabolism. Montreal, CA (7/23/08-7/27/08). B. J. Hogan, C. Langlois, S. Patell, A. Buurma, J. Bender, and **J. L. Celenza**. Poster presentation.

19th International Conference on Arabidopsis Research. Crosstalk between the biosynthetic pathways for indole glucosinolates and IAA. Montreal, CA (7/23/08-7/27/08). M. Pieck, C. Wu, J. Ramos, A. K. Hull, J. Normanly and **J. L. Celenza**. Poster presentation.

19th International Conference on Arabidopsis Research. Identification of Arabidopsis mutants that suppress the *cyp83B1* auxin overproduction phenotype. Montreal, CA (7/23/08-7/27/08). T. Henderson, S. Swinton, **J. L. Celenza**, A. K. Hull. Poster presentation.

7th Annual Symposium in Plant Biology at the University of Massachusetts Amherst. Regulated production of indolic glucosinolates using an estradiol-inducible system. Amherst, MA (10/2/09). N. Thomas, M. Pieck, T. Henderson, and **J. L. Celenza**. Poster presentation.

Plant Biology 2010. Identification of an Arabidopsis aminotransferase involved in aromatic amino acid metabolism and auxin homeostasis. Montreal, CA (7/31/10-8/4/10). M. Pieck, N. Thomas, C. Wu, J. N. Ramos, V. Hsiao, K. Holtz, J. Normanly, and **J. L. Celenza**. Poster presentation.

Plant Biology 2010. Tryptophan metabolism in *Arabidopsis*: a model for interaction between primary and secondary metabolism. Montreal, CA (7/31/10-8/4/10). B. J. Hogan, L. Francis, C. Crisp, J. Ren, J. Harding, F. Earthrowl, J. Bender and **J. L. Celenza**. Poster presentation.

8th Annual Symposium in Plant Biology at the University of Massachusetts Amherst. A family of Myb transcription factors regulates tissue-specific and methyljasmonate-induced synthesis of indolic glucosinolates Arabidopsis. Amherst, MA (10/2/10). A. Wan, B. J. Hogan, S. Mottarella, C. Crisp, J. Bender, and **J. L. Celenza**. Poster presentation.

22nd International Conference on Arabidopsis Research. Tryptophan metabolism in Arabidopsis: a model for interaction between primary and secondary metabolism. Madison, WI (6/22/11-6/25/11). B. Hogan, A. Wan, S. Mottarella, L. Francis, C. Crisp, J. Bender and **J. Celenza**. Poster presentation.

22nd International Conference on Arabidopsis Research. Characterization of an Arabidopsis aminotransferase reveals cross-talk between phenylalanine biosynthesis and auxin homeostasis. Madison, WI (6/22/11-6/25/11). M. Pieck, J. Godfrey, M, Carbery, Y. Yuan, J. Normanly and **J. Celenza**. Poster presentation.

9th Annual Symposium in Plant Biology at the University of Massachusetts Amherst. Comparison of in vivo function of the putative aromatic aminotransferase SAL1 with the characterized MEE17 and TAA1 aminotransferase proteins in *Arabidopsis thaliana.* Amherst, MA (10/8/11). J. Godfrey, C. Fisher, M. Pieck and **J. Celenza**. Poster presentation.

Plant Biology 2013. Identification of an Arabidopsis aminotransferase involved in tryptophan metabolism and auxin homeostasis. Providence, RI (7/20/13-7/24/13). **J. L. Celenza,** M. Pieck, C. Fisher, J. Godfrey, S. Zolj and J. Normanly. Poster presentation.

Plant Biology 2013. Tryptophan metabolism in *Arabidopsis*: a model for interaction between primary and secondary metabolism. Providence, RI (7/20/13-7/24/13). **J. L. Celenza**, B. J. Hogan, N. Yung, A. Wan and J. Bender. Poster presentation.

2015 Northeast Section Meeting of the American Society of Plant Biologists. Characterization of the Arabidopsis *ALF3* gene and the determination of its role at the interface of metabolism and defense. Boston, MA (4/12/15-4/13/15). S.Zolj, D. Vaughn, M. Pieck, L. Ocampo and **J.L. Celenza**.

28th International Conference on Arabidopsis Research. Defense compound production in the oilseed crop *Camelina sativa*. St. Louis, MO (6/19/17-6/23/17). A. Diallo, M. Babaei Amameh, S. Zolj, N. Rodriguez Sastre, S. Rengarajan, and **J. L. Celenza**. Poster presentation.

28th International Conference on Arabidopsis Research. The Arabidopsis *alf3-1* mutation causes autoimmunity in the root and identifies a TIR domain protein. St. Louis, MO (6/19/17-6/23/17). S. Zolj, K. Stefanini, P. Darrow, N. Rodriguez Sastre, E. Hobson and **J. L. Celenza**. Poster presentation.

Courses Taught at Boston University

BI 206/BI 216/ BI 282/METBI206 Genetics; Spring 1996-2018.
BI 513 (formerly BI 308) Genetics Laboratory; Fall 1995-2000, 2002-2017.

Graduate Students Supervised:

Raymond Didonato, PhD 2002
Anna Hull, PhD 2002
Laura Paganessi, MA 1997
May Cindhuchao, MA 1998
Jie Zhang, MA 2000
Kristin Amuzzini, MA 2002 (co-advisor)
Erica Pike, MA 2006
Sanaya Patell, MA 2007
Jay Li, MA 2009
Jason Godfrey, MA 2012
Nicholas Yung, MA 2013
Brad Hogan, PhD 2013
Michael Pieck, PhD 2013
Shruthi Rengarajan, MA 2016
Sanda Zolj, PhD beginning 2011
Richard Zhang, MA beginning 2015
Mohammad Babaei Amameh, MA beginning 2017

Qualifying and Thesis Advisory Committees

103 graduate qualifying exam and/or thesis advisory committees (since 1995)

Undergraduate Research Supervision

Research advisor for >70 undergraduates working in my lab (since 1995)
Distinction/Honors examiner for ~50 students (since 1995)

Recent and Current Service

<u>Department</u>
Director, Biochemistry and Molecular Biology Program (since Fall 2004)
Undergraduate advisor for ~ 36 BMB and Biology majors
Department Curriculum Committee (Since Fall 2010)
Department APT Committee 2016

<u>College and University</u>
MMEDIC admissions committee (since 1999)
ACCELMED admissions committee (since 1999)
Early Assurance Program Promotions committee BUSM
UROP award committee (since 2006)
UROP director (beginning in 2017)

Community

Proposal review at USDA AFRI “Plant Growth, Development, Composition and Stress Tolerance” panel 2014, 2015 and 2017

Editorial Board For "Plant Growth Regulation" (since 2004)

Executive Committee of the Northeast section of the American Society of Plant Biology

Organizer of the “Plants in New England” meetings (since 2007)

ad hoc reviewer for journals