

Kimberly D. Tremblay, Ph.D.

Associate Professor of Veterinary and Animal Sciences
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RESEARCH INTERESTS

Mammalian endoderm formation, differentiation and organogenesis, including the early stages of liver and pancreas formation using the mouse as a model organism.

EDUCATION

Ph.D. Cell and Molecular Biology, May 1998

Advisor: Marisa Bartolomei

University of Pennsylvania, Philadelphia, PA

Dissertation Title: Identification of a Developmentally Stable Domain of Paternal-Specific Methylation Upstream of the Imprinted Murine H19 Gene.

A.B. *Cum Laude* with High Honors in Biology, May 1992

Advisor: Jeanne Powell

Smith College, Northampton, MA

Honors Thesis Title: The Use of Myogenic Heterokaryons to Study Protein Synthesis and Nuclear Domains.

PROFESSIONAL EXPERIENCE

2019-present Faculty Member, Biotechnology Training Program, UMass, Amherst.
Faculty Member, IALS CrEATE subgroup.

2013-present Associate Professor, Department of Veterinary and Animal Sciences

2006-2013 Assistant Professor, Department of Veterinary and Animal Sciences
University of Massachusetts, Amherst

2007-present Faculty Member, Molecular and Cellular Biology Graduate Group
Faculty Member, Institute for Cellular Engineering
University of Massachusetts, Amherst
Primary Member, Diabetes and Endocrinology Research Core (DERC)
University of Massachusetts, Worcester

2004-2006 NIH (K01) Mentored Research Fellow
University of Pennsylvania, Philadelphia, PA.

2001-2004 Postdoctoral and K01 Mentored Research Fellow *Advisor:* Ken Zaret
Fox Chase Cancer Center, Philadelphia, PA.

1998-2001 NIH (NRSA) Postdoctoral Fellow *Advisor:* Liz Roberston
Harvard University, Cambridge, MA.

HONORS AND DISTINCTIONS

Co-Organizer for the 54th Annual Northeast Regional Society of Developmental Biologists Meeting, Woods Hole, MA: April 19-21, 2013
 NIH/NIDDK K01 Mentored Research Fellow Award: 2003-2006
 NIH/NICHD Individual NRSA Postdoctoral Fellow Award: 1998-2001
 NIH/T32 University of Pennsylvania Institutional Pre-doctoral Recipient: 1995-1997
 HHMI Summer Undergraduate Research Fellowship Award: 1991, 1992

CURRENT FUNDING

<i>Description</i>	<i>Role</i>	<i>Dates</i>	<i>Direct Amount</i>	<i>Indirect Amount</i>
NIH R56DK123363 <i>Title: Resolving heterogeneity in liver development.</i> K. Tremblay, PI	PI	9/20/19- 9/19/20	\$210,000	\$124,950
NIH R01HD096073 <i>Title: Phenotyping novel organogenesis lethal KOMP alleles.</i> K. Tremblay, PI	PI	9/10/19- 9/09/24	\$1,452,054	\$734,707
NIH R01HD092773 <i>Title: Long noncoding RNAs regulating endoderm differentiation.</i> A. Mullen, PI	sub	8/25/17- 4/30/22	\$956,250 (\$76,500 Tremblay portion)	\$669,375 (\$45,518 Tremblay portion)
NIH R01HD083311 <i>Title: Streamline assessment of early lethal phenotypes in the mouse.</i> J. Mager, PI	co-PI	8/01/15- 7/30/20	\$2,250,000 (\$125,000 Tremblay portion)	\$1,327,500

PENDING FUNDING

<i>Description</i>	<i>Role</i>	<i>Dates</i>	<i>Direct Amount</i>	<i>Indirect Amount</i>
NSF 1950522 <i>Title: REU Site: Science Impact Program in Cellular and Molecular Biology</i> T. Gibson, PI	co-PI	6/01/20- 5/31/23	\$380,575	\$23,227
NIH R01HD08331 <i>Title: Streamline assessment of early lethal phenotypes in the mouse.</i> J. Mager, PI	co-PI	8/01/20- 7/30/25	\$2,250,000	\$1,327,500
NIH R01DK123363 <i>Title: Resolving heterogeneity in liver development.</i> K. Tremblay, PI	PI	9/19/20- 9/19/23	\$630,000	\$374,850

COMPLETED FUNDING

<i>Description</i>	<i>Role</i>	<i>Dates</i>	<i>Direct Amount</i>	<i>Indirect Amount</i>
NIH R21HD082547 <i>Title: Use of the yolk sac to decipher the molecular requirements of liver bud development.</i> K. Tremblay, PI	PI	9/1/15- 8/31/17	\$300,000	\$177,000
NIH R01DK087753 <i>Title: Understanding liver bud emergence, formation and potential.</i> K. Tremblay, PI	PI	7/1/10- 6/31/15	\$925,000	\$550,278
American Diabetes Association, 1-10-BS-178 <i>Title: An investigation of the molecular requirements of pancreas progenitor formation.</i> K. Tremblay, PI	PI	01/01/10- 12/31/12	\$296,146	\$44,422
Center of Excellence in Apoptosis Research <i>Title: Building an Apoptosis Reporter Mouse.</i> J. Hardy and K. Tremblay, PIs	co-PI	10/1/09- 9/30/11	\$120,000	\$10,000
State Science and Technology Initiative <i>Title: Funding for Animal Stem Cell Initiative</i> S. Black, PI, J. Telfer, J. Mager, K. Tremblay, R. Fissore, co-PI	co-PI	01/01/07- 12/31/09	\$270,000	
STEM Family Travel Grant Two small grants used to care for children, facilitating the PI's attendance at a National and Regional meeting. K. Tremblay, PI	PI	4/12 & 8/12	\$800	
SDB Meeting Grant Society Grant to support the NE Regional Developmental Biology Meeting K. Tremblay and A. Jenny, Co-PIs	Co-I	1/28/13- 5/07/13	\$11,430	
NIH K01DK064063 <i>Title: Fate Mapping and Analysis of the Definitive Endoderm.</i> K. Tremblay, PI	PI	04/01/03- 08/31/06	\$268,863	\$21,509
NIH F32 HD08419 <i>Title: Role of Smad1 and Smad2 in Mouse Development</i> K. Tremblay, PI	PI	01/01/98- 12/31/01	\$99,000	

PROFESSIONAL DEVELOPMENT COURSES

Jackson Laboratory Course on Mammalian Genetics	July 14-August 2,	1993
NIDDK New Investigators Workshop (K awardees)	September 27-28,	2004
NIDDK New Investigators Workshop (R01 awardees)	December 2-4,	2012

PUBLICATIONS- K. D. Tremblay as corresponding author is underlined. Undergraduate authors*

From work at the University of Massachusetts, Amherst

- Cheong, A., Archambault, D., Denagi, R., Iverson, E., Tremblay, K.D. and Mager, J. (2020) Nuclear encoded mitochondrial ribosome proteins are required to initiate gastrulation. **Development**. *Provisionally accepted*.
- Chaturantabut, S., Shwartz, A., Garnass, M.K., LaBella, K., Li, C.C. Carroll, K.J., Cutting, C. C., Budrow, N., Palaria, A., Gorelick, D.A., Tremblay, K.D., North, T.E. and Goessling, W. (2020) Estrogen acts via estrogen receptor 2b to regulate hepatobiliary fate during vertebrate development. **Hepatology**. Epub ahead of print.
- Cui, W., Cheong, A., Wang, Y., Tsuchida, Y., Liu, Y., Tremblay, K.D. and Mager, J. (2020) MCRS1 is essential for epiblast development during early mouse embryogenesis. **Reproduction**. 159 (1): 1-13.
- Tellier, AP, Archambault, D., Tremblay, K.D. and Mager, J. (2019) The elongation factor Elof1 is required for mammalian gastrulation. **PLoS One**. 14 (7): e0219410.
- Cheong, A., Degani, R., Tremblay, K. D. and Mager, J. (2019) A null allele of Dnaaf2 displays embryonic lethality and mimics human ciliary dyskinesia. **Human Molecular Genetics**. 28: 2775-2784.
- Cui, W., Marcho, C., Wang, Y., Degani, R., Golan, M.*, Rivera-Perez, J. A., Tremblay, K. D. and Mager, J. (2019) MED20 is essential for early embryogenesis and correct Nanog expression in mouse blastocysts. **Reproduction**. 157(3): 215-222.
- El Sebae, G., Malatos, J.*, Cone, M.E.*, Rhee, S., Angelo, J.R., Mager, J. and Tremblay, K.D. (2018) Assessing the potential of single hepatoblasts using retrospective lineage tracing. **Development**. 145 (19).
- Angelo, J.R. and Tremblay, K.D. (2018) Identification and fate mapping of the pancreatic mesenchyme. **Developmental Biology**. 435; 15-25.
- Palaria, A., Angelo, J.R., Guertin, T.*, Mager, J. and Tremblay, K.D. (2018) Patterning of the hepato-pancreatobiliary boundary by BMP reveals heterogeneity within the murine liver bud. **Hepatology**. 68: 274-288.

10. Cui, W., Dai, X., Marcho, C., Han, Z., Zhang, K., Tremblay, K.D. and Mager, J. (2016) Towards functional annotation of the preimplantation transcriptome: An RNA-i screen in mammalian embryos. **Scientific Reports**. 6:37396.
11. Daneshvar, K., Pondick, J.V., Kim, B.M., Zhou, C., York, S.R., Macklin, J.A., Abualteen, A., Tan, B., Sigova, A.A., Marcho, C., Tremblay, K.D., Mager, J., Choi, M.I. and Mullen, A. (2016) DIGIT is a conserved long noncoding RNA that regulates GSC expression to control definitive endoderm differentiation of embryonic stem cells. **Cell Reports**. 17:353-365.
12. Marcho, C., Bevilacqua, A.*, Tremblay, K.D and Mager, J. (2015) Tissue specific regulation of *Igf2r*/*Airn* imprinting during gastrulation. **Epigenetics and Chromatin**. 8:10.
13. Wang, J., Rhee, S. Palaria, A. and Tremblay, K.D. (2015) FGF signaling is required for anterior but not posterior specification of the murine liver bud. **Developmental Dynamics**. 244, 431-443.
14. Follit, J.A., San Agustin, J. T., Jonassen, J.A., Huang, T., Rivera, J.A., Tremblay, K.D. and Pazour, G. J. (2014) *Arf4* Is Required for Mammalian Development but Dispensable for Ciliary Assembly. **PLoS Genetics**.10: e1004170.
15. Angelo, J.R. and Tremblay, K.D. (2013) Laser mediated cell ablation during post-implantation mouse development. **Developmental Dynamics**. 242:1202-1209.
16. Rhee, S., Gerrero-Zayas, M.-I., Wallingford, M.C., Ortiz-Pineda, P., Mager, J. and Tremblay, K.D. (2013) Visceral endoderm expression of Yin Yang-1 (YY1) is required for maintenance of VEGF during yolk sac development. **PLoSOne**. 8: e58828.
17. Angelo, J.R., Guerrero, M.-I. and Tremblay, K.D. (2012) A fate map of the murine pancreas buds reveals a multipotent ventral foregut organ progenitor. **PloSOne**. 7:e407407.
18. Trask, M., Tremblay, K.D. and Mager J. (2012) Yin-Yang1 is required for epithelial-to-mesenchymal transition and regulation of Nodal signaling during mammalian gastrulation. **Developmental Biology**. 368:273-282.
19. Tremblay, K.D. (2011) Inducing the liver: understanding the signals that promote murine liver budding. **Journal of Cellular Physiology**. 226:1727-1731.
20. Griffith, G.*, Trask, M. C., Hiller, J.*, Pawlak, J. B., Tremblay, K. D. and Mager, J. (2011) Yin-yang 1 is required in the mammalian oocyte for follicle expansion. **Biology of Reproduction**, 84:654-663.
21. Nicholls, S.B., Chu, J., Abbruzzese, G., Tremblay, K.D. and Hardy, J. A. (2011) Mechanism of a genetically encoded dark-to-bright reporter for caspase activity. **Journal of Biological Chemistry**, 286:24977-24986.

22. Tremblay, K. D. (2010) "Forming the Murine Endoderm: Lessons from Frog, Fish and Chick." In **Progress in Molecular Biology and Translational Sciences**, Kaestner, K.H. ed. Vol 96, Academic Press; Burlington, pp., 1-34.
23. Malcuit, C., Trask, M. C., Santiago, L., Beaudoin, E. *, Tremblay, K.D. and Mager, J. (2009). Identification of novel oocyte and granulosa cell markers. **Gene Expression Patterns**, 9:404-410.

Publications prior to University of Massachusetts

24. Calmont, A., Wandzioch, E., Tremblay, K. D. Minowada, G., Martin, G. R. and Zaret, K. (2006). An FGF-response pathway that mediates hepatic gene induction of embryonic endoderm cells. **Developmental Cell**, 11:1-10.
25. Bort, R, Signore, M., Tremblay, K. D., Martinez Barbera, J.-P. and Zaret, K. (2006). Hex homeobox gene controls the transition of the endoderm to a pseudostratified, cell emergent epithelium for liver bud development. **Developmental Biology**, 290:44-56.
26. Tremblay, K. D. and Zaret, K. (2005). Distinct populations of endoderm cells converge to generate the embryonic liver bud and ventral foregut tissues. **Developmental Biology**, 280:87-99.
27. Tremblay, K.D., Dunn, N. R. and Robertson, E. J. (2001). Mouse embryos lacking Smad1 signals display defects in extra-embryonic tissues and germ cell formation. **Development**, 128:3609-3621.
28. Tremblay, K.D., Hoodless, P.A., Bikoff, E, and Robertson, E.J. (2000). Formation of the definitive endoderm is a Smad2-dependent process. **Development**, 127:3079-3090.
29. Doherty, A. S., Mann, M. R. W., Tremblay, K. D., Bartolomei, M. S., Schultz, R. M. (2000). Differential effects of culture on imprinted *H19* expression in the preimplantation mouse embryo. **Biology of Reproduction**, 62:1526-1535.
30. Schultz, R.M., Tremblay, K.D., Doherty, A.S. and Bartolomei, M.S. (2000). Effect of embryo culture on imprinted gene expression in the preimplantation mouse embryo. In "The Testis: From Stem Cell to Sperm Function". Goldberg, E., ed., Springer-Verlag, New York.
31. Davis, T. L.*, Tremblay, K.D.* and Bartolomei, M.S. (1998). Imprinted expression and paternal methylation of the mouse *H19* gene are conserved in extraembryonic lineages. **Developmental Genetics**, 23:111-118. *denotes equal contribution
32. Tremblay, K. D. (1998). Bisulfite methylation analysis of single DNA strands. **Trends in Genetics, Technical Tips Online**. 01242

33. Tremblay, K.D., Duran, K.L. and Bartolomei, M.S. (1997). A 5' 2 kilobase-pair region of the imprinted mouse *H19* gene exhibits exclusive paternal methylation throughout development. **Molecular and Cellular Biology**, 17: 4322-4329.
34. Tremblay, K.D., Saam, J.R., Ingram, R.S., Tilghman, S.M. and Bartolomei, M.S. (1995). A paternal-specific methylation imprint marks the alleles of the mouse *H19* gene. **Nature Genetics**, 9: 407-413.

MANUSCRIPTS IN PREPARATION

35. Archembault, D., Cheong, A., Iverson, E., Tremblay, K.D. and Mager, J. Protein phosphatase 1 regulatory subunit 35 is necessary for development and is required for notochord morphogenesis and ciliogenesis. *Manuscript in preparation.*
36. Guertin, T.*, Garcia, I.*, Palaria, A., Mager, J., Trainer, P. and Tremblay, K.D. Retinoic Acid gradients are required for appropriate dorsal/ventral patterning of the mammalian liver bud. *Manuscript in preparation.*

INVITED SEMINARS

2019

The Genomics Revolution: Changing Our Approach to Diagnostics, Management and Research in Adult and Pediatric Liver Disease. Sponsored by the American Association for the Study of Liver Diseases (AASLD). September 20-21. Arlington, VA.

"Epigenetic and Disease Phenotypes"

2017

27th Irwin Arias Symposium, Broad Institute, Cambridge, MA: November 30th. Sponsored by the American Liver Foundation.

"Inducing the liver: all hepatoblasts are not created equally."

Harvard Digestive Diseases Center, 2017 Annual Spring Symposium. Boston Children's Hospital, Boston MA: April 4.

"Inducing the liver: all hepatoblasts are not created equally."

2015

Keystone Endoderm Meeting, Keystone, CO: February 8-13.

"The anterior and posterior liver bud contribute to unique lobes."

Northeast Regional Society of Developmental Biology, Woods Hole, MA, April 19-21

"Identification of two hepatoblast populations in the murine liver bud"

2014

Department of Molecular and Developmental Biology, Albert Einstein School of Medicine, Bronx, NY: February 11.

“Understanding liver development: Embryonic origins and bud formation.”

2013

Activated Egg Symposium, Bedford Research Foundation, Bedford, MA: November 8.

“Understanding liver and pancreas formation: embryonic origins and bud formation.”

5th Annual Northeast Regional Mammalian Meeting, Boston, MA: August 31.

“Identification and assessment of tissues involved in dorsal pancreas bud induction in the mouse.”

Pancreatic Diseases, Gordon Research Conference, Hadley, MA: July 14-18.

“Identification and assessment of tissues involved in dorsal pancreas bud induction in the mouse.”

SUNY, New Paltz. Biology Department Seminar, March 21, 2013.

“Got guts? Understanding mammalian endoderm organogenesis.”

2012

The 72nd Annual Scientific Sessions of the American Diabetes Association, Philadelphia, PA: June 8-12.

“A fate map of the murine pancreas buds reveals a multipotent foregut progenitor.”

University of Connecticut, Storrs. Molecular and Cellular Biology Department: February 21.

“Endoderm organogenesis: A budding question.”

University of Massachusetts Medical School-Department of Medicine, Division of Diabetes and Endocrinology Grand Rounds: February 14.

“Endoderm organogenesis: A budding question.”

2011

52rd Annual Northeast Regional Society of Developmental Biologists Meeting, Woods Hole. MA: April 18.

“Single-cell recombination in embryonic tissue mediated by the dose sensitivity of a tamoxifen-inducible Cre line.”

Satellite Symposium of the 70th Annual Meeting of the Society of Developmental Biologists, Chicago, IL: July 21.

“Uncovering the endodermal origins of the murine pancreas buds.”

2010

Amherst College, Howard Hughes Sponsored Summer Teachers' Workshop in Biology: July 16.

“Got Guts? Forming endodermal organs during murine development.”

2009

2nd Annual Regional Mouse Users Meeting. University of Massachusetts, Amherst: January 24.

“Searching for the pancreas progenitors: lost and found.”

Molecular and Cellular Biology Retreat, University of Massachusetts, Amherst: March 7.
 “*Endoderm development: How do you make a liver (and pancreas)?*”

2008

Pioneer Valley Life Science Institute, Springfield, MA: May 12.
 “*Identification and manipulation of the liver precursors.*”

2007

Boston University Medical Center, Pulmonary Division, Boston, MA: May.
 “*Identification and manipulation of the liver precursors.*”

Molecular and Cellular Biology Colloquium. University of Massachusetts, MA: November.
 “*Identification and manipulation of the liver precursors.*”

SELECTED POSTER PRESENTATIONS

150+ Local, Regional and International Poster Presentations: Scientific Sessions of the American Diabetes Association, FASEB Liver Development, Gordon Research Conference on Pancreatic Diseases, International Society of Developmental Biologists, Society of Developmental Biologists, Northeast Regional Society of Developmental Biologists, Regional Mouse Users Meeting, MA Undergraduate Research Conference etc.

Graduate student poster presenter underlined. Undergraduate presenter*.

Guerrero, M.-I.[^] and Tremblay, K. D. “*Using whole embryo culture to understand the role of TGF β signaling on endoderm organogenesis.*” Northeast Regional Society of Developmental Biology, Woods Hole, MA and VASCI retreat, Hadley, MA: March and May 2010. [^] **Best Poster Award** at the VASCI retreat.

Rhee, S.[^], Malatos, J. and Tremblay, K.D. “*The function of YY1 on endoderm organogenesis.*” Northeast Regional Society of Developmental Biology, Woods Hole MA: March 25-27, 2010. [^] **Best Poster Competition Winner**.

Malatos, J.*[^], Rhee, S. and Tremblay, K.D. “*Utilization of the Tamoxifen inducible FoxA2^{mcm} allele to generate single cell recombination in the endoderm.*” Northeast Regional Society of Developmental Biology, Woods Hole MA, March 25-27 2010, and also [^] **awarded Best Poster** at the HHMI Summer Internship poster session, UMass, Amherst: July 30, 2010.

Gifford, A.*[^], Guerrero, M., Trask, M., Mager, J. and Tremblay K.D. “*Determining the role of BMP signaling in murine endoderm organogenesis*”. MA Undergraduate Research Conference, Amherst MA: April 22, 2011.

Tremblay, K. D. “*Creation of a midgut fatemap from early somite mouse embryos.*” International Society of Developmental Biologists, Edinburgh, Scotland: September 2-5, 2009.

Angelo, J., Guerrero, M.-I. and Tremblay, K.D. “*Creation of a midgut fatemap reveals the pancreas progenitor population.*” 70th Scientific Sessions of the American Diabetes Association, Orlando, FL: June 25-29 2010.

Maserati, M. and Tremblay, K.D. “*Studying the role of Smad2 in ES cell endoderm differentiation.*” 1st Annual Regional Mouse Users Group, Worcester, MA: October 2009.

Wang, J., Guerrero, M.-I. and Tremblay, K.D. “*Inhibition of FGFR 1/2 signaling during liver bud induction reveals a differential response by the anterior and posterior liver bud.*” Northeast Regional Mammalian Development Meeting. Amherst, MA: August 29, 2012.

Rhee, S.[^], Malatos, J., Trask, M., Mager, J. and Tremblay, K. D. “*Yin yang-1 expression in the visceral endoderm plays an essential role in yolk sac angiogenesis.*” 72nd Annual Society of Developmental Biologists Meeting, Montreal, Canada: July 19-23 2012. **^ Awarded an SDB student travel award** to attend this meeting.

Angelo, J.[^], Guerrero, M.-I. and Tremblay, K.D. “*Mapping dorsal pancreas inductive tissues.*” Northeast Regional Society of Developmental Biology. Woods Hole, MA: April 19-21 2013. **^ Won the 3rd place poster prize.**

Rhee, S.[^] and Tremblay, K. D. “*Visceral endoderm expression of YY1 is required for VEGFA maintenance and yolk sac development.*” Northeast Regional Society of Developmental Biology. Woods Hole, MA: April 19-21 2013. **^ Abstract selected for a short talk.**

Angelo, J.[^], Guerrero, M.-I. and Tremblay, K.D. “*Identification of tissues involved in dorsal pancreas induction.*” 73rd Annual Society of Developmental Biologists Meeting joint International Society of Developmental Biology Meeting. Cancun, Mexico: June 20-25, 2013.

Wang, J. and Tremblay, K.D. “*Inhibition of FGFR 1/2 signaling during liver bud induction reveals a differential response by the anterior and posterior liver bud.*” Northeast Regional Society of Developmental Biology. Woods Hole, MA: April 19-21, 2013.

Ortiz-Pineda, P.[^], Ray, Abigail, Mager, J. and Tremblay K.D. “*Transcriptome analysis from single liver progenitor cells.*” The Activated Egg Symposium hosted by the Bedford Stem Cell Research Foundation. Waltham, MA November 8, 2013. **^ Won the 1st place poster prize.**

TEACHING

<i>Term</i>	<i>Course</i>	<i>Course Name</i>	<i>Credits</i>	<i>Instruction</i>
S 20	ANSCI 697J	Genes & Development	3	25%
S 20	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 20	ANSCI 497TI	IE for Honors Students	1	100%
F 19	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 19	ANSCI 311	Animal Genetics	3	50%
F 18	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 18	ANSCI 311	Animal Genetics	3	50%
S 18	ANSCI 697J	Genes & Development	3	25%

S 18	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 18	ANSCI 497TI	IE for Honors Students	1	100%
F 17	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 17	ANSCI 311	Animal Genetics	3	50%
S 17	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 17	ANSCI 497TI	IE for Honors Students	1	100%
S 16	ANSCI 697J	Genes & Development	3	25%
S 16	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 16	ANSCI 497TI	IE for Honors Students	1	100%
F 15	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 15	ANSCI 311	Animal Genetics	3	50%
S 15	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 15	ANSCI 497TI	IE for Honors Students	1	100%
F 14	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 14	ANSCI 311	Animal Genetics	3	50%
S 14	ANSCI 697J	Genes & Development	3	25%
S 14	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 14	ANSCI 497TI	IE for Honors Students	1	100%
F 13	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 13	ANSCI 311	Animal Genetics	3	50%
S 13	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 13	ANSCI 497TI	IE for Honors Students	1	100%
F 12	ANSCI 795A	J. Club in Genes Cells & Dev	1	20%
F 12	ANSCI 311	Animal Genetics	3	50%
S 12	ANSCI 697J	Genes & Development	3	25%
S 12	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
F 11	ANSCI 311	Animal Genetics	3	50%
F 11	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 11	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
F 10	ANSCI 311	Animal Genetics	3	50%
F 10	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 10	ANSCI 697J	Genes & Development	3	20%
S 10	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
F 09	ANSCI 311	Animal Genetics	3	50%
F 09	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 09	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
F 08	ANSCI 311	Animal Genetics	3	50%
F 08	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 08	ANSCI 697J	Genes & Development	3	20%
S 08	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
F 07	ANSCI 311	Animal Genetics	3	30%
F 07	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%
S 07	ANSCI 795A	J. Club in Genes Cells & Dev.	1	20%

Guest Lecturer in the following courses:

BIO 580, Developmental Biology Fall 2009-11

BBS 737, Developmental Biology-UMass Medical Graduate School, Fall 2-08,10, 12-14

ANSCI 101, Introduction to Animal Sciences, Fall 2008, 09, 11, 12

Chem-E 690F, Fundamentals of Cellular Engineering, Fall 2010-12

BIO 486H, Model Systems Spring 2018

BIO 494, Life After Biology Fall and Spring 2013-19

MCB 793C, Research Integrity Spring 2019

RESEARCH TRAINING and MENTORING**Undergraduate Students Mentored in the Laboratory** *=Honors Thesis

<i>Name</i>	<i>Program</i>	<i>Degree</i>	<i>Dates</i>	<i>Post-grad position</i>
Ashley McCann*	VAS	B.S.	Jan 2007-Jan 2008	VMD, U Nebraska
Emily Beaudoin	VAS	B.S.	Sept 2007-Feb 2009	VMD, Ross
PJ Stanley	VAS	B.S.	Jan 2008-Dec 2008	VMD, Tufts
Mara Guerrero	NEAGAP	postbac	Jan 2008-Aug 2008	M.A., UMass
Amanda Vennard	VAS	B.S.	Jan 2009-Dec 2009	
Alexis Soto	REU SPUR	-	Summer 2008	
Yash Patankar	Hampshire College	B.A.	Jan 2008-Dec 2008	PhD, Cornell
Shannon Brighenti*	VAS/ Honors	B.S.	Jan 2008-May 2009	VMD, Cornell
Joseph Malatos*	VAS/Honors	B.S.	Jan 2009-May 2011	VMD, UNC
Jesse Angelo	VAS	B.S.	Jan 2009-Aug 2010	PhD, UMass
Barbara Rymeski	BMB	B.S.	Sept 2009-Dec 2010	PhD, U Chicago
Stephanie Mullane	BMB	B.S.	Jan 2010-July 2010	
Amy Gifford*	VAS/Honors	B.S.	Jan 2010-May 2011	VMD, Cornell
Praticksha Yalakkishettar	BIO	B.S.	Sept 2010-Dec 2010	MD
Meagan-Ann Kuzewski	VAS	B.S.	Jan 2011-May 2012	
Alexander Simolaris	BIO/Honors	B.S.	Jan 2011-May 2012	
Laura Valentin	VAS	B.S.	Jan 2012-May 2014	
Mary-Kate Cone*	VAS/Honors	B.S.	Sept 2011-May 2013	VMD, Cornell
Kathryn Nutting	Public Health/Honors	B.S.	Sept 2011-Dec 2012	MD, U Chicago
Abigail Ray*	VAS/Honors	B.S.	Sept 2012-June 2016	PhD, UC Davis
Sara Kolesnikovas	VAS	B.S.	Fall 2012	
Taylor Nelson	VAS	B.S.	Feb 2012-May 2013	
Katie Wilson	VAS	B.S.	Spring 2012	VMD, Tufts
Rachel Masciari	VAS	B.S.	Feb 2012-May 2013	
Kendra Anderson	VAS	B.S.	Jan 2015-May 2017	
Emily Clark*	MHC Bio/Honors	B.A.	June 2015-May 2018	
Abby Kingston	VAS	B.S.	Jan 2016-May 2017	DVM, Tufts
Julia Goodrich	VAS	B.S.	Sept 2016-May 2017	
Taylor Guertin*	BCH/Honors/Lee-Sip	B.S.	June 2016-Aug 2019	M.S, UMass
Mostapha Massae	BIO	B.S.	June 2017-June 2018	
Kassandra Boada	BIO	B.S.	Feb 2017-Dec 2017	
Armin Palic*	MICRO/Honors	B.S.	Sep 2017- May 2019	
Catherine Urbano	VAS	B.S.	Feb 2018-May 2019	
Aurelia Reynolds	BCH	B.S.	Feb 2018-May 2019	
Steve Peguero	Lee-Sip/NEGap/VAS	B.S.	June 2018-Dec 2019	
Hannah Garth	BCH	B.S.	Jan 2019-present	
Leslie (Ianna) Garcia	Lee-SIP/VAS	B.S.	June 2019- present	
Lea Saab	BIO	B.S.	January 2020- present	

Graduate Students Mentored

<i>Name</i>	<i>Program</i>	<i>Degree</i>	<i>Dates</i>	<i>Present Position</i>
Mary Trask	Animal Biotech	Rotation	Fall 2007	Assistant Professor, Tufts Medical School

Hakan Kuckdereli	Molecular and Cellular Biology	Rotation	Spring 2008-Fall 2009	Postdoctoral Fellow Harvard University
Mara Guerrero	Animal Biotech.	M.S.	Sept 2008-Nov 2010	Research Tech Northwestern University
James Hayes	Molecular and Cellular Biology	Rotation	Fall 2008	Scientist, PPD
Siyeon Rhee	Animal Biotech	Ph.D.	Sept 2009-Sept 2016	Postdoctoral Fellow Stanford University
Kimberly Johnson	Molecular and Cellular Biology	Rotation	Fall 2010	Scientist, Biomedical Informatics
Danielle Ryman	Molecular and Cellular Biology	Rotation	Fall 2010	Biomedical Sales
Jesse Angelo	Animal Biotech.	M.S.	Sept 2011-Aug 2013	Data Manager Center for Coastal Studies
Amrita Palaria	Molecular and Cellular Biology	Ph.D	May 2013-May 2018	Postdoctoral Fellow Stanford University
Jesse Angelo	Animal Biotech	Ph.D	Sept 2014-March 2018	Data Manager Center for Coastal Studies
Katja Wiegart	Molecular and Cellular Biology	abroad/Ph D.	Sept 2014-January 2015	PhD candidate, Germany
Gabriel El-Sebae	Animal Biotech	M.S.	Sept 2016-August 2018	Scientist, Akero Therapeutics Cambridge, MA
Ira Male	Molecular and Cellular Biology	Rotation	Spring 2015	Job Search in Process
Constance Angelou	Molecular and Cellular Biology	Rotation	Fall 2015	Graduate Student, UMass
Ana-Clara Vianna	Animal Biotech	Ph.D.	Jan 2019-Present	Graduate Student, UMass
Deeksha Monehan	Animal Biotech	Rotation	Spring 2019	Graduate Student, UMass
Taylor Guertin	Molecular and Cellular Biology	M.S.	Aug 2019-Present	Graduate Student, UMass

Postdoctoral Associates Mentored

<i>Name</i>	<i>Position</i>	<i>Dates</i>	<i>Present Position</i>
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Jun Chu	Postdoctoral Fellow (Hardy co-advisor)	Oct 2009 Aug 2010	Assistant Professor Shenzhen Institute of Advanced Technology Chinese Academy of Science
Peng Wu	Postdoctoral Fellow (Hardy co-advisor)	Aug 2010 Oct 2011	Sunnybrook Research Institute Toronto, Ontario
Pablo Ortiz-Pineda	Postdoctoral Fellow	Oct 2010- Dec 2015	Assistant Professor, University of Cauca, Columbia
Jikui Wang	Senior Research Associate	April 2011- April 2013	Professor, Hunan Key Laboratory Xinxiang Medical University

Research Technicians Mentored

<i>Name</i>	<i>Dates</i>	<i>Present Position</i>
Jieun Ban	June 2015-Aug 2016	Research Technician, Stanford University
Gabriel El-Sebae	July 2013- Aug 2016	Research Scientist, Akero Therapeutics
Elizabeth Lewis	August 2012-July 2013	PhD Candidate, UMass, Worcester
Justyne Ogdahl	April 2008-April 2009	PhD Candidate, UMass, Amherst
Marc Maserati	April 2009-Sept 2010	Managing Partner, In Vitro Brasil S. A. Sao Paola, Brasil
John Pawlak	Sept 2010-Oct 2011	PhD Candidate, UNC, Chapel Hill
Mara Guerrero	Dec 2010-Sept 2012	Research Technician, Northwestern University
Jesse Angelo	Sept 2010-Aug 2011	Data Manager, Center for Coastal Studies Provincetown, MA

Student Thesis Committees

<i>Role</i>	<i>Type</i>	<i>Name</i>	<i>Program</i>	<i>Advisor</i>
Chair	PhD.	Jesse Angelo	ABBS	K. Tremblay
Chair	Ph.D.	Amrita Palaria	MCB	K. Tremblay
Chair	Ph.D.	Siyeon Rhee	ABBS	K. Tremblay
Chair	M.S.	Gabriel El-Sebae	ABBS	K. Tremblay
Chair	M.S.	Mara Guerrero	ABBS	K. Tremblay
Chair	M.S.	Jesse Angelo	ABBS	K. Tremblay
Chair	M.S.	Taylor Guertin	MCB	K. Tremblay
Chair	B.S.	Mary-Kate Cone	VAS Honors	K. Tremblay
Chair	B.S.	Shannon Brighenti	VAS Honors	K. Tremblay
Chair	B.S.	Joeseoph Malatos	VAS Honors	K. Tremblay
Chair	B.S.	Amy Gifford	VAS Honors	K. Tremblay
Chair	B.S.	Alexander Simolaris	BIO Honors	K. Tremblay
Chair	B.S.	Abigail Ray	VAS Honors	K. Tremblay
Chair	B.S.	Emily Clark	MHC Honors	K. Tremblay
Chair	B.S.	Armin Palek	MICRO Honors	K. Tremblay
Chair	B.S.	Taylor Guertin	BMB Honors	K. Tremblay
Chair	Oral	Siddeshwari Advanis	MCB	D. Alfandari
Member	Ph.D.	Ryan Genga	MCB, UMass Med	R. Maher
Member	Ph.D.	Mary Trask	ABBS	J. Mager
Member	Ph.D.	Chelsea Marcho	MCB	J. Mager
Member	Ph.D.	Whitney Stoppel	Chem Eng.	S. Roberts
Member	Ph.D.	Giovani Tortolozzone	MCB, UMass Med	J. Rivera
Member	Ph.D.	Nicola Kearns	MCB, UMass Med	R. Maher

Member	Ph.D.	Agnes Cheong	ABBS	J. Mager
Member	Ph.D.	Eng Zi Hui Shermaine	Nanyang Tech U	N. Dunn
Member	Oral	Safia Omer	MCB	W. Lei
Member	Oral	Adaris Rodriguez-Cortes	MCB	S. Schneider
Member	Oral	Kimberly Johnson	MCB	M. Barresi
Member	Oral	Dilay Ayhan	MCB	L. Lee
Member	M.S.	Melanie Walentuk	ABBS	J. Mager
Member	M.S.	Marc Maserati	ABBS	J. Mager
Member	M.S.	Adam Tellier	ABBS	J. Mager
Member	M.S.	Danielle Archembault	ABBS	J. Mager
Member	B.S.	Gillian Griffith	VAS Honors	J. Mager
Member	B.S.	Olivia Holston	VAS Honors	J. Mager
Member	B.S.	Juliana Mills	VAS Honors	J. Mager
Member	B.S.	Rohit Pankashari	Hampshire-Div III	J. Mager
Member	B.S.	Rita Fagan	BIO Honors	R. Karlstrom
Member	B.S.	Stephanie Crowley	BMB Honors	J. Mager
Member	B.S.	Jocelyn Haversat	VAS Honors	J. Mager
Member	B.S.	Yoonjin Moon	VAS Honors	J. Mager
Member	B.S.	Dalton Hill	VAS Honors	J. Mager

SERVICE to the DEPARTMENT

Chair, ABBS Admissions Committee (2019)

Organizer, VASCI Annual Undergraduate Science Day (2012-present)

Director, VASCI Departmental Honors Program (2010-present)

Chair, Search for Business Office Financial Processor (2018)

Chair, VASCI Personnel Committee (2010)

Member, VASCI Personnel Committee (2008-2009)

SERVICE to the COLLEGE/UNIVERSITY

Member, Search Committee for CHC Dean (2019)

Member of the CNS Lee-SIP Leadership Team (2018-present)

Chair, Faculty Senate Council on the Commonwealth Honors College (2018-present)

CNS Representative to the Faculty Senate Council on CHC, 2010-present

Faculty Advisor for the Diversity and Inclusion Director of CNS (2016-present)

Member of the Commonwealth Honors College Academic Standards Sub-Committee (2011-present)

Member, Armstrong Fund for Science Reviewer (2017)

Member, IALS/CNS joint Search Committees for a Stem Cells and Animal Model of Disease senior positions (2016-17)

Member, Biology Search Committee for Quantitative Biologists (2016-2017)

Member, Grant and Fellowship Selection Committee for CHC (2012-2016)

Member, Commonwealth Honors College Procedures Subcommittee (2011-2015)

Member, Ad Hoc Commonwealth Honors College Committee to review joint CHC/Departmental Faculty Position RFP (2011, 2013)

Member, Biology Search Committee for Developmental Geneticist (2010-11)

Member, Commonwealth Honors College Curriculum Committee (2010)

Member, MCB Admissions Committee (2010-2015)

Member, MCB Recruiting Committee (2009-10)

Member, Search Committee for Junior Year Writing Instructor (2008)

Co-Director, UMass, Amherst, Animal Stem Cell Facility (2007-2015)

PROFESSIONAL SERVICE

Meeting Organization:

Co-Organizer (with Andreas Jenny, Einstein School of Medicine) of the 54nd Annual Northeast Regional Meeting of the Society of Developmental Biology, Woods Hole, MA: April 19-21, 2013.

Organizer of the 4th Annual Regional Mouse Users Group, Amherst, MA: August 28, 2012.

Grant Review:

NIH Special Emphasis Panel Telephone Reviewer (2005)

Center for Biomedical Research, Pioneer Valley Life Science Institute (2010)

ETH Zurich Research Commission (2012)

RI-INBRE Research Proposal Reviewer (2012)

MRC (Medical Research Council- UK) Peer-Reviewer, Ad Hoc (2013)

NSF Career Award, Ad Hoc Reviewer (Fall, 2016)

NIH-NIDDK C Review Subcommittee, Ad Hoc Member (March, 2012; June 2018; March 2019)

NIH-HBPP Study Section, Ad Hoc Member (March 2018; February 2020)

Ad Hoc Manuscript Reviews:

BMC Development

BMC Veterinary Research

Cells

Cell Stem Cell
Developmental Biology
Developmental Dynamics
Gene Expression Patterns
Genesis
Journal of Human Genetics
Journal of Anatomy
JOVE
Nature
Nature Structural and Molecular Biology
Pediatric Research
PLoSOne
PLoSGenetics
Stem Cell
Stem Cell Reports

Professional Society Memberships:

Society of Developmental Biology (1998-present)
American Diabetes Association (2010- present)
American Association of Liver Diseases (2019-present)

COMMUNITY SERVICE

Member of the Transportation Advisory Committee (TAC), 2016-present
Subcommittee of the Amherst Town Council

This goal of this committee is to aid the Amherst town manager and town council in identifying and prioritizing public works projects. I advocate for projects that encourage walking/biking as a citizen and also act as a liason between the town and UMass, Amherst.