

CURRICULUM VITAE

BARBARA SYMONDS BELTZ

Susan M. Hallowell and Ruby Frances Howe Farwell Professor
Neuroscience Program
Wellesley College
Wellesley, MA 02481

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Education:

1974 B.A. Mount Holyoke College (Biology and English)
1976 M.A. Princeton University (Biology)
1979 Ph.D. Princeton University (Biology: Focus in Neurobiology and Development)

Postdoctoral Training:

1979-1980 Fellowship, National Science Foundation, Harvard Medical School, Boston, MA
1980-1983 Fellowship, National Institutes of Health, Harvard Medical School, Boston, MA

Academic Appointments:

1976-1978 Teaching Assistant, Anatomy & Neurophysiology, Princeton University, Princeton, NJ
1979-1983 Research Fellow, Department of Neurobiology, Harvard Medical School, Boston, MA
1983-1985 Instructor, Department of Neurobiology, Harvard Medical School
1983-1988 Co-Director, Marine Biology Lab Short Course "*Basic Immunocytochemical Techniques in Tissue Sections and Whole Mounts*"
1985-1987 Lecturer, Department of Neurobiology, Harvard Medical School
1987-1993 Assistant Professor, Department of Biological Sciences, Wellesley College
1987-1997 Visiting Assistant Professor, Department of Neurobiology, Harvard Medical School
1993 Visiting Fellow, School of Biological Sciences, University of New South Wales, Sydney, Australia
1993-1999 Associate Professor, Department of Biological Sciences, Wellesley College
1997-1998 Visiting Faculty, Volen Center, Brandeis University, Waltham, MA
1999-2007 Professor, Department of Biological Sciences, Wellesley College
1999-2004 Director, Neuroscience Program, Wellesley College
2001-2004 Chair, Department of Biological Sciences, Wellesley College
2006- Director, Neuroscience Program, Wellesley College
2007- Professor of Neuroscience, Wellesley College

Honors and Awards:

1974 Magna cum laude graduate, Mount Holyoke College
1977, 1978 Presidential Scholar, Electron Microscopy Society of America
1989 Mary Lyon Alumnae Achievement Award, Mount Holyoke College
1989-1995 NSF Presidential Young Investigator Award
1993 Fogarty Senior International Fellow, University of New South Wales, Australia
2002-2004 Allene Lummis Russell Chair in Neuroscience, Wellesley College
2004- Susan M. Hallowell and Ruby Frances Howe Farwell Chair, Wellesley College
2004-2006 Maren Fellow, Mt. Desert Island Biological Laboratory

Intramural Professional Activities, Wellesley College:

1987-	Academic Council
1993-2007	Reappointments and Promotions Committee, Biological Sciences
1993-1996	Committee on Curriculum and Instruction
1994-1995	Co-chair, Pedagogy Task Force
1998-2001	Admissions Committee
1998-1999	Brachman Hoffman Fellowship Committee
1998-2004	Director, Neuroscience Program
2001-2004	Chair, Department of Biological Sciences
2003-2005	Committee on Curriculum and Instruction
2005-2006	2015 Wellesley Commission
2006-	Director, Neuroscience Program
2007-	Reappointments and Promotions Committee, Neuroscience Program

Extramural Professional Activities:

1969	National Science Foundation Scholar, Foundation for Research on the Nervous System, Boston, MA
1972	Undergraduate Research Appointee, National Science Foundation, Clark University, Worcester, MA
1990	NSF Discussion Panel <i>U.S. Engineering, Mathematics, and Science Education for the Year 2010 and Beyond</i>
1992	Chairperson, NSF Workshop <i>Role of Faculty from Science Disciplines in the Undergraduate Education of Science and Mathematics Teachers</i>
1994	NSF Presidential Young Investigator Steering Committee, <i>The Status of Undergraduate Science Education in the U.S.</i>
1995	NSF Review Panel, Division of Undergraduate Education: <i>Mathematical Sciences and their Applications Throughout the Undergraduate Curriculum</i> Visiting Committee, Biology Program, Bryn Mawr College Invited participant, National Research Council Convocation <i>Undergraduate Education in Science, Mathematics, Engineering, and Technology</i> Invited participant, NSF Conference <i>Women in Science: Celebrating Achievements, Charting Challenges</i>
1995-2000	Co-chair, East Coast Nerve Net Organizing Committee
1995-1998	Committee on Neuroscience Literacy, Society for Neuroscience 1996-98 Co-Chair, Short Course for High School Students 1997 <i>Teaching Neuroscience</i> , Presentation for High School Teachers
1996-2004	Graduate Record Examinations Board, Educational Testing Service, Committee of Examiners (GRE Biology) 2002-2004, Chair
1996, 1998	Science Careers Forum, Panelist, Harvard Medical School
1999-	Section Editor, <i>Arthropod Structure and Development</i>
2000-2001	Advisory Panel for the Major Research Instrumentation Program, National Science Foundation
2000	NIH Review Panel: Summer Research Experiences for Undergraduates
2002	Organizer for the conference <i>Post-genomic neuroscience: from molecules to behavior</i> , Marine Biological Laboratory, Woods Hole, MA
2001-2004	NSF Developmental Neuroscience Review Panel
2003-2006	Committee on the Development of Women's Careers in Neuroscience, Society for Neuroscience
2003	External evaluator for tenure and promotion, Bryn Mawr College, PA 2004 External evaluator for tenure and promotion, Chapman College, CA NSF Review Panel, Director's Award for Distinguished Teaching Scholars Program

Extramural Professional Activities (continued):

2004-2007	INBRE External Advisory Committee, State of Arkansas and University of Arkansas for Medical Sciences
	RIMI External Advisory Committee, Meharry Medical College and Tennessee State University, Nashville, Tennessee
2004-	INBRE External Advisory Committee, State of Maine and Mt. Desert Island Biological Laboratory
	Committee Chair 2005-
	Woods Hole Oceanographic Institution, Member of the Corporation; Education Committee
2004-2007	Chair, Program Committee, International Congress of Neuroethology, Vancouver Congress (held in July, 2007)
2005	Trustee member, External Review, Biology Department, WHOI
	External evaluator for promotion, Gustavus Adolphus College, MN
	External review, Neuroscience Program, Trinity College, Hartford, CT
2006	External review, Neuroscience Program, Bowdoin College
2006-	Consultant, Sherman Fairchild Foundation
2008	External evaluator for tenure and promotion, Wesleyan University
2008-	Scientific Advisory Board, Institute of Neurobiology, University of Puerto Rico

Reviewer for the following journals and agencies:

Arthropod Structure and Development	Journal of Crustacean Biology
Biological Bulletin	Journal of Experimental Biology
Brain Research	Journal of Experimental Zoology
Canadian Journal of Zoology	Journal of Neurobiology
Cell and Tissue Research	Journal of Neuroscience
Human Frontiers in Science Program	Journal of Neuroscience Methods
Invertebrate Reproduction	National Institutes of Health
Journal of Comparative Neurology	National Science Foundation

Membership in Professional Societies:

1974-	Sigma Xi
1976-	Society for Neuroscience
	1995-1998 Member, Committee on Neuroscience Literacy
	1997, 1998 Co-Chair, Short Course for High School Students
	2003-2006 Committee on the Development of Women's Careers in Neuroscience
1976-	East Coast Nerve Net
	1995-2000 Co-chair, organizing committee
1978-	American Association for the Advancement of Science
	1999-2001 Elected member, Nominating Committee
1994-	International Congress of Neuroethology
	2003-2004 Organizing Committee for 2004 congress, Denmark
	2004-2007 Chair, International Congress 2007, Canada
1998-2003	N.E.U.R.O.N (North east under/graduate research organization for neuroscience), Founding member
	1999-2002 Chair, Organizing Committee

RESEARCH ACTIVITIES**Invited Lectures (2000-)**

- 2000 Georgia State University, Department of Biology
Beckman Foundation, Beckman Scholars Symposium
Arizona Research Labs, Division of Neurobiology, University of Arizona, Tucson
- 2001 University of Connecticut at Storrs, Department of Physiology and Neurobiology
Worcester Polytechnic Institute, Biology Department, Worcester, MA
New England Society for Microscopy
University of Virginia, Biology Department
- 2002 Colby College, Parents' Weekend speaker
Wellesley College, The Wellesley Campaign: New England Celebration
Conference: *Post-Genomic Neuroscience: From Molecules to Behavior*, Marine
Biology Laboratories, Woods Hole, MA
- 2003 Wellesley College, Alumnae Convocation
Helen F. Cserr Memorial Lecture, Mount Desert Island Biological Laboratory
International Stem Cell Symposium, Mount Desert Island Biological Laboratory
- 2004 Staley Symposium, Wellesley College
Frenchman's Bay Crustacean Society
Universität Ulm, Neurobiologie, Ulm, Germany
- 2005 Wellesley College Reunion Convocation
Mt. Desert Island Biological Laboratory, NIEHS Center for Membrane Toxicity
Studies
Hopedale, MA Library, Public Lecture
Institute of Marine Research, Austevoll, Norway
- 2006 Institute of Biomedical Sciences, Universidade Federal do Rio de Janeiro, Brazil
Plenary speaker, SBBC/SIMEC Conference (combined meetings of: XIII Brazilian
Congress of the Brazilian Society of Cell Biology; IX Brazilian Symposium
on Extracellular matrix; IV International Symposium on Extracellular
Matrix) Buzios, Brazil
International Stem Cell Symposium, Mount Desert Island Biological Laboratory
Wellesley Alumnae Club of Boston, MA
Columbia University, Judith P. Sulzberger MD Genome Center
- 2007 Wellesley Alumnae Club of Santa Barbara, CA
Brachman Hoffman Symposium, Wellesley College
Distinguished Faculty Lecture, Wellesley College
- 2008 Max Planck Institute for Chemical Ecology, Jena, Germany
Humboldt University, Institute for Biology, Berlin, Germany
Mount Desert Island Biological Lab, Maine
- 2009 The Whitney Lab, University of Florida

Publications (*indicates undergraduate student author)**Books**

Beltz BS, Burd GD (1989) *Immunocytochemical Techniques: Principles and Practice*, Blackwell Scientific Publications, Cambridge, MA. 182 pp.

Paul CA, Beltz BS, Berger-Sweeney J, editors (1997) *Discovering Neurons: The Experimental Basis of Neuroscience*, Cold Spring Harbor Press, NY. 420 pp.

Reviews

Beltz BS, Kravitz EA (1986) Aminergic and peptidergic neuromodulation in Crustacea. *Journal of Experimental Biology* 124:115-141.

Beltz BS (1988) Crustacean Neurohormones. In: *Invertebrate Endocrinology*, vol 2, Laufer H and Downer R, ed., Alan R. Liss, Inc. NY pp. 235-258.

Beltz BS (1990) New Dimensions in Neuroanatomy: Visualizing the Morphology, Physiology and Chemistry of Neurons, *American Zoologist* (SAAWOK Symposium) 30:353-370.

Beltz BS and Helluy S (1992) "Larval" life in the egg: an embryonic molt cycle in the American Lobster, *Lobster Newsletter* 5(1):1-7.

Beltz BS (1995) Neurobiology and Neuroendocrinology. Chapter 11 in: *Biology of the Lobster, Homarus americanus*, Factor JR, ed., Academic Press.

Beltz BS (1999) The Distribution and Functional Anatomy of Amine Neurons in Lobsters, *Microscopy Research and Technique* 44:105-120.

Beltz BS, Kravitz EA (2002) Serotonin in Crustacean Systems: More than a Half Century of Fundamental Discoveries. In *The Crustacean Nervous System*, volume II, Springer Verlag, Berlin, pp 141-163.

Beltz BS, Sandeman DC (2003) Regulation of life-long neurogenesis in the decapod crustacean brain. *Arthropod Structure and Development* 32:39-60.

Original Reports (peer reviewed)

Beltz BS, Gelperin A (1979) An ultrastructural analysis of the salivary system of the terrestrial mollusc *Limax maximus*. *Tissue and Cell* 11:31-50.

Beltz BS, Gelperin A (1980) Mechanosensory input modulates the activity of an autoactive, bursting neuron in *Limax maximus*. *Journal of Neurophysiology* 44:665-674.

Beltz BS, Gelperin A (1980) Mechanisms of peripheral modulation of salivary burster in *Limax maximus*: a presumptive sensorimotor neuron. *Journal of Neurophysiology* 44:675-686.

Beltz BS, Kravitz EA (1983) Mapping of serotonin-like immunoreactivity in the lobster nervous system. *Journal of Neuroscience* 3:585-602.

Kravitz EA, Beltz BS, Glusman S, Goy M, Harris-Warrick RM, Johnston MF, Livingstone MS, Schwarz TL, Siwicki KK (1983) Neurohormones and Lobsters: Biochemistry to behavior. *Trends in Neuroscience* 6(8):346-349.

Beltz B, Eisen JS, Flamm R, Harris-Warrick RM, Hooper SL, Marder E (1984) Serotonergic innervation and modulation of the stomatogastric ganglion of three decapod crustaceans. *Journal of Experimental Biology* 109:35-54.

Kravitz EA, Beltz BS, Glusman S, Goy MF, Harris-Warrick RM, Johnston MF, Livingstone MS, Schwarz TL (1984) The well-modulated lobster: The roles of serotonin, octopamine, and proctolin in the lobster nervous system. *Pesticide Biochemistry and Physiology* 22:133-147.

- Kravitz EA, Beltz BS, Glusman S, Goy M, Harris-Warrick R, Johnston M, Livingstone M, Schwarz T, Siwicki KK (1985) The well-modulated lobster: The roles of serotonin, octopamine, and proctolin in the lobster nervous system. In: *Model Neural Networks and Behavior*, Selverston A, ed., Plenum Press.
- Siwicki KK, Beltz BS, Schwarz TL, Kravitz EA (1985) Proctolin in the lobster nervous system. *Peptides* 6:393-402.
- Siwicki KK, Beltz BS, Kravitz EA (1987) Proctolin in serotonergic, dopaminergic, and cholinergic neurons in the lobster, *Homarus americanus*. *Journal of Neuroscience* 7:522-532.
- Beltz BS, Kravitz EA (1987) Physiological identification, morphological analysis and development of identified serotonin-proctolin containing neurons in the lobster ventral nerve cord. *Journal of Neuroscience* 7:533-546.
- Kobierski L, Beltz BS, Trimmer BA, Kravitz EA (1987) The FMRFamide-like peptides of *Homarus americanus*: Distribution, immunocytochemical mapping, and ultrastructural localization in terminal varicosities. *Journal of Comparative Neurology* 266:1-15.
- Helluy SM, Beltz BS (1990) Stages in the embryonic development of the American lobster with an emphasis on the nervous system. In *Frontiers in Crustacean Neurobiology*, Birkhauser, pp 530-536.
- Beltz BS, Pontes M, Helluy SM, Kravitz EA (1990) Patterns of appearance of serotonin and proctolin immunoreactivities in the developing nervous system of the American lobster. *Journal of Neurobiology* 21:521-542.
- *Arbiser ZK, Beltz BS (1991) SCP_B- and FMRFamide-like immunoreactivities in the lobster: Colocalization of two peptides or colabeling of the same peptide(s)? *Journal of Comparative Neurology* 306:417-424.
- Helluy SM, Beltz BS (1991) Embryonic development of the American lobster (*Homarus americanus*): Quantitative staging and characterization of an embryonic molt cycle. *Biological Bulletin* 180:355-371.
- Beltz BS, Helluy SM, Ruchhoeft ML,*Gammill LS (1992) Aspects of the embryology and neural development of the American lobster. *Journal of Experimental Zoology* 261:288-297.
- Ma PM, Beltz BS, Kravitz EA (1992) Serotonin-containing neurons in lobsters: I. Their role as "gain-setters" in postural control mechanisms. *Journal of Neurophysiology* 65:36-54.
- Helluy SM, Sandeman RE, Beltz BS, Sandeman DC (1993) Comparative brain ontogeny of the crayfish and clawed lobster: Implications of direct and larval development. *Journal of Comparative Neurology* 335:343-354.
- Cournil I, Helluy SM, Beltz BS (1994) Dopamine in the lobster *Homarus gammarus*: I. Comparative analysis of dopamine and tyrosine hydroxylase immuno-reactivities in the nervous system of the juvenile. *Journal of Comparative Neurology* 344:455-469.
- Sandeman D, Beltz B, Sandeman R (1995) Crayfish brain interneurons that converge with serotonin giant cells in accessory lobe glomeruli. *Journal of Comparative Neurology* 352:263-279.
- Helluy S, Ruchhoeft M, Beltz B (1995) Development of the olfactory and accessory lobes in the American lobster: An allometric analysis and its implications for the deutocerebral structure of decapods. *Journal of Comparative Neurology* 358:1-13.
- Cournil I, Casanovas B, Helluy S, Beltz B (1995) Dopamine in the lobster *Homarus americanus*. II. Dopamine immunoreactive neurons and development of the nervous system. *Journal of Comparative Neurology* 362:1-16.
- Helluy S, Benton J, Ruchhoeft M, *Langworthy K, Beltz B (1996). Glomerular formation in the developing olfactory and accessory lobes of the American lobster: Stabilization of numbers and increase in size after metamorphosis. *Journal of Neurobiology* 29:459-472.
- Schneider H, Budhiraja P, Walter I, Beltz B, *Peckol E, Kravitz E (1996). Developmental expression of the octopamine phenotype in lobsters *Journal of Comparative Neurology* 371:3-14.

- *Langworthy K, Helluy S, Benton J, Beltz B (1997) Amines and peptides in the brain of *Homarus americanus*: Immunocytochemical localization patterns and implications for brain function. *Cell and Tissue Research* 288:191-206.
- Benton J, Helluy S, Huber R, Beltz B (1997) Serotonin depletion by 5,7-dihydroxytryptamine alters deutocerebral development in the lobster. *Journal of Neurobiology* 33:357-373.
- Harzsch S, *Miller J, Benton J, Dawirs RR, Beltz B (1998) Neurogenesis in the thoracic neuromeres of two crustaceans with different styles of metamorphic development. *Journal of Experimental Biology* 201:2465-2479.
- Harzsch S, Benton, J, Dawirs, RR, Beltz, B (1999) A new look at embryonic development of the visual system in decapod crustaceans: neuropil formation, neurogenesis and apoptotic cell death. *Journal of Neurobiology* 39:294-306.
- Harzsch S, *Miller J, Benton J, Beltz B (1999) From embryo to adult: Persistent neurogenesis and apoptotic cell death shape the crustacean deutocerebrum. *Journal of Neuroscience* 19:3472-3485.
- Chang ES, Chang SA, Beltz BS, Kravitz EA (1999) Crustacean hyperglycemic hormone in the lobster nervous system: Localization and release from cells in the subesophageal ganglion and thoracic second roots. *Journal of Comparative Neurology* 414:50-56.
- Harzsch S, Benton J, Beltz BS (2000) An unusual case of a mutant lobster embryo with double brain and double ventral nerve cord. *Arthropod Structure and Development* 29:95-99.
- Sullivan JM, Benton JL, Beltz BS (2000) Serotonin depletion *in vivo* inhibits the branching of olfactory projection neurons in the lobster deutocerebrum. *Journal of Neuroscience* 20:7716-7721.
- Benton J, Beltz BS (2001) Effects of embryonic serotonin depletion on olfactory interneurons in lobsters. *Journal of Neurobiology* 46: 193-205.
- *Doernberg S, Cromarty SI, Beltz BS, Kravitz EA (2001) Agonistic behavior in naïve juvenile lobsters depleted of serotonin by 5,7-dihydroxytryptamine. *Journal of Comparative Physiology A* 187(2): 91-103.
- Beltz BS, Benton JL, Sullivan JM (2001) Transient uptake of serotonin by newborn olfactory projection neurons may mediate their survival. *Proceedings of the National Academy of Science* 98:12730-12735.
- Sullivan JM, Beltz BS (2001) Neural pathways connecting the deutocerebrum and lateral protocerebrum in the brains of decapod crustaceans. *Journal of Comparative Neurology* 441:9-22.
- Sullivan JM, Beltz BS (2001) Development and connectivity of olfactory pathways in the brain of the lobster *Homarus americanus*. *Journal of Comparative Neurology* 441:23-43.
- Benton JL, Beltz BS (2002) Patterns of neurogenesis in the midbrain of embryonic lobsters are different from proliferation in the insect and crustacean ventral nerve cord. *Journal of Neurobiology* 53: 57-67.
- Goergen, E, *Bagay LA, Rehm K, Benton JL, Beltz BS (2002) Circadian control of neurogenesis. *Journal of Neurobiology* 53: 90-95.
- Paul CA, Goergen EM, Beltz BS (2002) Exploring neurogenesis in crustaceans. *Journal of Undergraduate Neuroscience Education* 1:A18-A22.
- Richards KS, Simon DJ, Pulver SR, Beltz BS, Marder E (2003) Serotonin in the developing stomatogastric system of the lobster, *Homarus americanus*. *Journal of Neurobiology* 54:380-92.
- Beltz BS, *Kordas K, *Lee MM, *Long JB, Benton JL, Sandeman DC (2003) Ecological, evolutionary and functional correlates of sensilla number and glomerular density in the olfactory system of decapod crustaceans. *Journal of Comparative Neurology* 455: 260-269.
- *McKinzie ME, Benton JL, Beltz BS, Mellon DF (2003) Parasol cells of the hemiellipsoid body in the crayfish *Procambarus clarkii*: dendritic branching patterns and functional implications. *Journal of Comparative Neurology* 462:168-179.

- Sullivan JM, Beltz BS (2004) Evolutionary changes in the olfactory projection neuron pathways of eumalacostracan crustaceans. *Journal of Comparative Neurology* 470:25-38.
- Wildt M, Goergen EM, Benton JL, Sandeman DC, Beltz BS (2004) Regulation of serotonin levels by multiple light-entrainable endogenous rhythms *Journal of Experimental Biology* 207:3765-74.
- Sullivan JM, Beltz BS (2005) Integration and segregation of inputs to higher-order neuropils in the crayfish brain. *Journal of Comparative Neurology* 481:118-126.
- *Brinkley CK, Kolodny NH, Kohler SJ, Sandeman DC, Beltz BS (2005) Magnetic resonance imaging at 9.4 T as a tool for studying functional and neural anatomy in non-vertebrates. *Journal of Neuroscience Methods* 146: 124-132.
- Sullivan JM, Beltz BS (2005) Newborn cells in the adult crayfish brain differentiate into distinct neuronal types. *Journal of Neurobiology* 65: 157-170.
- Sullivan JM, Beltz BS (2005) Adult neurogenesis in the central olfactory pathway in the absence of receptor neuron turnover. *European Journal of Neuroscience* 22:2397-2402.
- Sullivan JM, Benton JL, Sandeman DC, Beltz BS (2007) Adult Neurogenesis: A Common Strategy Across Diverse Species. *Journal of Comparative Neurology* 500:574-584.
- Beltz BS, Tlusty MF, Benton JL, Sandeman DC (2007) Omega-3 fatty acids upregulate adult neurogenesis. *Neuroscience Letters* 415:154-8.
- Benton JL, Sandeman DC, Beltz BS (2007) Nitric oxide in crustacean brain: Regulation of neurogenesis and morphogenesis in the developing olfactory pathway. *Developmental Dynamics* 236:3047-3060.
- Sullivan JM, Sandeman DC, Benton JL, Beltz BS (2007) Adult neurogenesis and cell cycle regulation in the crustacean olfactory pathway: from glial precursors to differentiated neurons. *Journal of Molecular Histology* 38:527-542.
- Benton JL, Goergen EM, *Rogan SC, Beltz BS (2008) Hormonal and synaptic influences of serotonin on adult neurogenesis. *General and Comparative Endocrinology* 158:183-190.
- Harzsch S, Dircksen H, Beltz BS (2008) Development of pigment-dispersing hormone-immunoreactive neurons in the American lobsters: homology to the insect circadian pacemaker system? *Cell and Tissue Research*, in press.
- Zhang Y, Allodi S, Sandeman DC, Beltz BS (submitted) Adult neurogenesis in the crayfish brain: proliferation, migration and possible origin of precursor cells. *Developmental Neurobiology*.
- Sandeman DC, Benton JL, Beltz BS (submitted) An identified serotonergic neuron regulates neurogenesis in the crayfish brain. *Developmental Neurobiology*.
- Sandeman DC, Sullivan JM, Genco MC, Marlow ED, Beltz BS (submitted) Brain photoreceptor pathways contributing to circadian rhythmicity in crayfish. *Journal of Biological Rhythms*.

Brief Communications

- Beltz BS, Benton JL, *Genco MC, Mellon DeF, Sullivan JM, Sandeman DC (2005) Regulation of adult neurogenesis in decapod crustaceans. *Bulletin of the Mt. Desert Island Biological Laboratory* 44:74-77.
- Sandeman DC, Mellon DeF, Beltz BS (2006) Pilot studies of the neurotoxic effects of chlorpyrifos on the green crab, *Carcinus maenas*. *Bulletin of the Mt. Desert Island Biological Laboratory* 45:91-94.
- Benton JL, Beltz BS (2007) An *in vitro* approach sheds light on serotonergic influences on adult neurogenesis in *Homarus americanus*. *Bulletin of the Mt. Desert Island Biological Laboratory* 46: 129-132.
- Sandeman DC, *Genco M, Shanholtzer J, Beltz BS (2007) Adult neurogenesis in the crustacean brain: the effect of environment, locomotion and toxins on the proliferation of neurons. *Bulletin of the Mt. Desert Island Biological Laboratory* 46: 141-143.

TEACHING AND MENTORING ACTIVITIES*Courses taught, Wellesley College*

1987-2008	BISC 110: Introductory Cell Biology
1992	BISC 111: Introductory Organismal Biology
1995, 2005-2007	BISC 213: Brain and Behavior
1987-2002	BISC 216: Mechanisms of Animal Development
1991	BISC 220: Cell Physiology
1987-89	BISC 330: Neural Basis of Behavior
1990-2003, 2007	BISC 306: Principles of Neural Development
2007	NEUR100: Brain, Behavior and Cognition: An Introduction to Neuroscience

Secondary school teachers mentored in my lab:

1994-95	Margaret Schwartz, Lexington High School, Massachusetts Howard Hughes Institute Research Fellow
2000	Kris Rehm, Concord Academy, Concord, Massachusetts Howard Hughes Institute Research Fellow
2005, 2006	Jennifer Shanholtzer, Mt. Desert Island High School, Maine NSF supported, <i>Research Experiences for Teachers</i> program

Research Fellows (postdoctoral) in my laboratory group:

1988-1993	Simone Helluy
1996-1998	Steffen Harzsch
1999-2001	Jeremy Sullivan
2003-2006	Jeremy Sullivan
2008-	Yi Zhang

Visiting Scientists hosted by my laboratory:

2000	Steffen Harzsch (University of Ulm, Germany)
2000	David Sandeman (University of New South Wales, Sydney, Australia) Renate Sandeman (University of New South Wales, Sydney, Australia)
2001-2004	Miriam Wildt (graduate student, University of Ulm, Germany)
2004, 2005	DeForest Mellon (University of Virginia, Charlottesville; 1 month/yr)
2006-2007	Gro van der Meeren (Institute of Marine Research, Norway) Terje van der Meeren (Institute of Marine Research, Norway) Silvia Sintoni (graduate student, Max-Planck Institute, Jena, Germany; May-July)
2007-2008	Silvana Allodi (Federal University of Rio de Janeiro, Brazil; November)
2008-2009	Silvana Allodi (September-November)