

XCurriculum Vitae
Ann C. Zumwalt, Ph.D.
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Boston University School of Medicine
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Academic Training

5/2005 Ph.D. Johns Hopkins University School of Medicine, Baltimore, MD
Functional Anatomy & Evolution
5/1998 B.A. Rice University, Houston, TX

Additional Training

2012 Faculty, Harvard Macy Program for Educators in Health Professions,
Cambridge, MA
2011 Scholar, Harvard Macy Program for Educators in Health Professions,
Cambridge, MA
2010 Scholar, Early Career Women Faculty Professional Development Seminar,
American Association Medical Colleges
2004-2007 Postdoctoral researcher in Biological Anthropology and Anatomy / Gross
Anatomy & Anatomical Gifts, Duke University Medical Center, Durham, NC

Academic Appointments

8/2007-12/2014 Assistant Professor of Anatomy & Neurobiology
Boston University School of Medicine
12/2014-present Associate Professor of Anatomy & Neurobiology
Boston University School of Medicine

Honors

5/2018 **Stanley L. Robbins Educator of the Year**, Boston University School of
Medicine
5/2010 **Educator of the Year** (Preclinical), Boston University School of Medicine

Departmental and University Committees and Service

Boston University

2008-2015, 2016-18 Boston University Faculty Council, *Elected member*
2010-2015 Faculty Advisory Committee
2014-present Perkins Award Selection Committee

Boston University School of Medicine / Medical Campus

2016-present **Chairman**, Pre-clerkship Curriculum Subcommittee
2016-present Solicited Member, BUMC Women's Advisory Board
2016-present Solicited Member, BUMC Diversity Advisory Group
2014-present **Associate course director**, Principles Integrating Science and Medicine
2014-2016 **Co-chairman**, Integrating Foundational and Clinical Sciences subcommittee of
Preclinical Curriculum Committee
2011-2015 Medical Education Committee, Member At-large; *Elected member*
2011-present Faculty advisor, BUMC Pride

2010-present	Preclinical Curriculum Committee member
2010-2015	Adviser, Academy of Advisers
2010-present	Committee on Faculty Affairs
2010-2015	Latin Honors committee
2010-present	McNary Award committee
2008-2018	John McCahan Medical Education Day committee (Chairman 2009-2014)
2009-2011	Curriculum Management and Oversight subcommittee of LCME Education Committee
2009-2010	Faculty Mentoring Task Force

Department of Anatomy & Neurobiology

2018-present	Anatomy & Neurobiology Graduate Program Director
2018-present	President <i>ad interim</i> , Pine Hill Cemetery
2013-present	Anatomy & Neurobiology Vesalius (Master's) Program Director
2013-present	Graduate Education Committee
2017, 2009-2012	Appointments and Promotions Committee

Teaching Experience and Responsibilities

Boston University School of Medicine

2010-present	Course Director , Body Structures / Medical Gross Anatomy
2009-present	Course Director , Teaching in the Biomedical Sciences
2009-present	Course Director , Teaching in the Anatomy (4 th year elective)
2009-present	Co-developer and Instructor, Radiologic Anatomy (Session within Radiology clerkship)
2008-2011	Co-developer and Instructor, Anatomy of Obstetrics & Gynecology (Session within Obstetrics & Gynecology clerkship)
2007-present	Instructor and Section Leader, Medical Gross Anatomy
2007-present	Instructor, Advanced Clinical Anatomy

Duke University School of Medicine

2005	Course director, Human Body (Undergraduate Gross Anatomy)
2005-2007	Course director, Oncoanatomy (Elective: Anatomy of Radiation Oncology)
2005-2007	Developer and Instructor, Female Pelvic Anatomy
2004-2007	Instructor, The Normal Body (Medical Gross Anatomy)

Other Universities

2014-present	Guest lecturer, Human Sexuality, University of Massachusetts, Boston, MA
2009-2012	Guest lecturer, Human Sexuality, Suffolk University, Boston, MA
2004	Guest lecturer, Human Osteology, University of Maryland, College Park, MD
2001, 2002	Guest lecturer, Introduction to Biology, Essex Community College, Essex, MD

Major Mentoring Activities

2016 Facilitator, Mentoring the Mentor Program, Clinical & Translational Science Institute, Boston University

Research Mentoring

<i>Name</i>	<i>Year</i>	<i>Current Degree</i>	<i>Current position</i>
Anita Pai	2007	B.A., Biological Anthropology and Anatomy, Duke University	M.D., Resident in Pediatrics Children's Hospital of Los Angeles
Mitchell Wice	2010	M.A., Graduate Medical Sciences, Boston University Medical Center	Medical student Boston University School of Medicine
Rebecca Lufler	2010	Ph.D., Anatomy & Neurobiology, Boston University Medical Center	Assistant Professor Department of Anatomy and Cellular Biology, Tufts University School of Medicine
Joshua Stefanik	2010	Ph.D., Anatomy & Neurobiology, Boston University Medical Center	Postdoctoral researcher Clinical Epidemiology Research & Training Unit, Boston University Medical Center
William Pearson, Jr.	2012	Ph.D., Anatomy & Neurobiology, Boston University Medical Center	Assistant Professor Department of Cellular Biology and Anatomy, Georgia Health Sciences University
Kitzia Colliard	2013	M.A., Anatomy & Neurobiology Boston University Medical Center	M.A. Student Columbia University
Lee Pfaff	2013	M.A., Anatomy & Neurobiology Boston University Medical Center	Medical student University of Albany School of Medicine
Arjun Iyer	2014	M.S., Anatomy & Neurobiology Boston University Medical Center	Graduate, Department of Anatomy & Neurobiology
Abenet Ghebremichael	2014	M.S., Anatomy & Neurobiology Boston University Medical Center	Graduate, Department of Anatomy & Neurobiology
Ala'a El-Shaar	2014	B.S., Bridgewater State University	Graduate, Anatomy & Neurobiology Boston University Medical Center

Teaching Mentoring

Intensive oversight of the development and production of teaching projects by graduate students in the Vesalius Program (<http://www.bu.edu/vesalius/>)

<i>Name</i>	<i>Year</i>	<i>Project</i>	<i>Current position</i>
Johanna Crimins	2009	Cross-sectional anatomy of the pelvis	Post-doctoral Research Fellow, Mt. Sinai School of Medicine
Kathy Kopeikina	2009	Cross-sectional anatomy of the pelvis	Post-doctoral Research Fellow, Northwestern University
O'Hara Halley	2011	Interactive cranial nerve review	Hospital Admissions Coordinator, PinnacleHealth Cardiovascular Institute
Snehal Dhake	2011	Cranial nerve review game	
John Bladon	2012	Anatomy dissection tools and techniques	Ph.D. Candidate, Boston University Program in Neuroscience
Kitzia Colliard	2012	Cranial nerve review game	M.A. Student Columbia University
Tami Delorenzo	2012	Heart tube folding interactive exercise and video	

Teaching Mentoring, continued

Kara Kleber	2012	Anatomy of Aging CME-eligible Grand Rounds presentation to Section of Geriatrics, BMC.	Medical student Boston University School of Medicine
Allison Tomson	2012	Yoga Anatomy: Interactive review of the back and lower extremity muscles	Graduate, Boston University Anatomy & Neurobiology
Kevin Arndt	2013	Anatomy of the Autonomic Nervous System	Medical student Boston University School of Medicine
Jingyi Wang	2013	Functional Anatomy of the Larynx	Ph.D. candidate, Boston University
Julie Stamm	2013	Anatomy of the Knee Musculoskeletal Exam CME-eligible Grand Rounds presentation to Student Health Clinical Faculty	Associate lecturer, University of Wisconsin-Madison
Bruno Frustace	2014	Guiding a Student Toward Improved Performance: Best practices in learning techniques	Graduate, Boston University Anatomy & Neurobiology
Corinne Nagle	2015	Evidence-based Teaching Techniques to Maximize Student Learning	Graduate, Boston University Anatomy & Neurobiology
Alexander Hsu	2015	Heart Tube Folding Interactive Workshop	Graduate, Boston University Anatomy & Neurobiology
Jessica Hill	2016	Interactive lecture: Evidence-based learning techniques	Graduate, Boston University Anatomy & Neurobiology
Julia Lai	2016	Reproductive Anatomy & Embryology review	Graduate, Boston University Anatomy & Neurobiology
Frances Zamora	2017	Anatomy of the Visual System, Demonstration at Boston Museum of Science	Graduate, Boston University Anatomy & Neurobiology
Sam Shah	2017	Interactive lecture: Neurobiology of Emotions and Learning, Teaching in the Biomedical Sciences	Graduate, Boston University Anatomy & Neurobiology
Mary Orczykowski	2017	Workshop: 3D Printed Models to Visualize Fascial Layers	Assistant Professor, University of Michigan Medical School
Alexandra Wink	2017	Journal Club: Anatomy Research Methods, Dept. of Anatomy & Neurobiology	Assistant professor, University of Massachusetts Medical School
Katie Babcock	2017	Brain anatomy demonstrations, Boston Museum of Science	Ph.D. Candidate, Boston University Anatomy & Neurobiology
Sophie Kontur	2018	Skull & cranial nerve anatomy videos	Graduate, Boston University Anatomy & Neurobiology

Other Professional Activities

Professional Societies: Memberships, Offices, and Committee Assignments

International

2012 – present International Association of Medical Science Educators

National

2013-present **BUSM Representative, Council of Faculty and Academic Societies**

American Association of Medical Colleges

2005-present American Association of Anatomists

2018-2021 **Board of Directors**

2009-12, 2014-17 Professional Development Committee

2010-2012 125th Anniversary Task Force

2008-2010 Nominating Committee

2007-2008 **Board of Directors, Student-Postdoc Representative**

2005-2008 Advisory Committee for Young Anatomists

2005-present American Association of Clinical Anatomists

Other Support

Current:

2017 Education Outreach Grant, American Association of Anatomists
 “Anatomy Education at Boston Museum of Science” Role: Principle Investigator

2016-2017 Department of Medicine Education Pilot Grant PI: Isabel Dominguez,
 “Reinforcing Basic Sciences in the Clinical Setting”
 Role: Co-Investigator

Past:

1997 Howard Hughes Fellowship, Case Western Reserve University

2002 National Science Foundation Dissertation Improvement Grant

2003 Journal of Experimental Biology Traveling Fellowship

2003, 2002 Sigma Xi Grants-in-Aid of Research

2008 Lippincott Williams Wilkins/AAA Education Research Scholarship, American Association of Anatomists

Invited Lectures and Conference Presentations

Platform presentations – International

2014 *Invited speaker* **Zumwalt AC**, “The use of gaze tracking to document learning”
 Department of Cell Biology and Anatomy, University of Western Ontario,
 Ontario, Canada

Platform presentations – National

2017 *Invited speaker and mentor* **Zumwalt AC** “Mentoring Graduate Students in Teaching Practica”
 Anatomy Educational Research Institute, Indiana University School of
 Medicine, Bloomington, IN

2016 *Invited speaker* **Zumwalt AC** “In pursuit of an objective assessment of learning”
 Human Anatomy and Physiology Society annual meeting, Atlanta GA

2011 *Invited speaker* **Zumwalt AC** “Spiraling Integration: Teaching Anatomy during the
 Clinical Clerkships”
 Department of Genetics, Cell Biology and Anatomy, University of
 Nebraska Medical Center; Omaha, NE

2005 *Invited speaker* **Zumwalt AC** “Development of a new clinical anatomy course: Issues,
 inspirations and ideas.”
 American Association of Clinical Anatomists annual meeting; NY, NY

Platform presentations – Institutional

- 2018 *Invited speaker* **Zumwalt AC** and Dominguez MI “Fostering future medical educators” 8th Annual Education Innovation Conference, Boston University
- 2010 *Invited speaker* **Zumwalt AC** “The Anatomy of Cancer” Integrated Cancer Imaging and Therapy Workshop, Student Oncology Society, Boston University School of Medicine.
- 2010 *Invited speaker* **Zumwalt AC** “Educational Scholarship” Preclinical Curriculum Subcommittee, Boston University School of Medicine.
- 2008 *Invited speaker* Hoagland TM and **Zumwalt AC** “Effective Pedagogy” Grand Rounds, Obstetrics & Gynecology. Boston Medical Center.

Bibliography

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Original, Peer Reviewed Articles:

Underlined first author’s name indicates a Ph.D. graduate who trained under Dr. Zumwalt.

1. 2001 Richstmeier JT, **Zumwalt AC**, Carlson, EJ Epstein CJ, and Reeves, RH “Craniofacial phenotypes in segmentally trisomic mouse models for Down syndrome” *American Journal of Medical Genetics* 107(4): 317-324.
2. 2005 **Zumwalt AC** “A new method for quantifying the complexity of muscle attachment sites” *The Anatomical Record, Part B: The New Anatomist* 286B: 21-28.
3. 2006 **Zumwalt AC** “The effect of endurance exercise on the morphology of muscle attachment sites” *Journal of Experimental Biology* 209: 444-454.
4. 2006 **Zumwalt AC**, Hamrick MW, Schmitt D “A force platform for measuring the ground reaction forces in small animal locomotion” *Journal of Biomechanics* 39(15): 2877-2881.
5. 2007 **Zumwalt AC**, Marks, L, Halperin EC “Integration of gross anatomy into a clinical oncology curriculum” *Academic Medicine* 85(5): 469-474.
6. 2007 Hutchison D, Ho V, Dodd M, Dawson H, **Zumwalt AC**, Schmitt D, Colton CA “Quantitative measurement of postural sway in mouse models of human neurodegenerative disease” *Neuroscience* 148(4): 825-32.
7. 2010 Lufler R, **Zumwalt AC**, Romney C, Hoagland T “Incorporating radiology into medical Gross Anatomy: Does the use of cadaver CT scans improve students’ academic performance in anatomy?” *Anatomical Sciences Education* 3(2): 56-63.
8. 2010 **Zumwalt AC**, Lufler RS, Monteiro J, Shaffer K “Building the body: Active learning laboratories that emphasize practical aspects of anatomy and integration with radiology” *Anatomical Sciences Education* 3(3): 134-40.
9. 2010 Schmitt, D, **Zumwalt, AC**, Hamrick, MH, “The relationship between bone mechanical properties and ground reaction forces in normal and hypermuscular mice” *Journal of Experimental Zoology A Ecology Genetics and Physiology* 313(6): 339-51.
10. 2010 Stefanik, JJ; Zhu, Y; **Zumwalt, AC**; Gross, DK; Clancy, M; Lynch, J; Frey-Law, L; Lewis, C; Roemer, F; Powers, CM; Guerhazi, A; Felson, D “The association between patella alta and the prevalence and worsening of structural features of patellofemoral joint osteoarthritis” *Arthritis Care & Research* 62(9): 1258-65.
11. 2011 Pearson WG Jr, Langmore SE, **Zumwalt AC**. “Evaluating the structural properties of suprahyoid muscles and their potential for moving the hyoid.” *Dysphagia*. (4): 345-51.

12. 2011 Stefanik JJ*, Guermazi A, Zhu Y, **Zumwalt AC**, Gross KD, Clancy M, Lynch JA, Segal NA, Lewis CE, Roemer FW, Powers CM, Felson DT. "Quadriceps weakness, patella alta, and structural features of patellofemoral osteoarthritis." *Arthritis Care and Research*. 63(10): 1391-7.
13. 2012 Lufler RS, **Zumwalt AC**, Romney CA, Hoagland TM "Effect of visual-spatial ability on medical students' performance in a gross anatomy course." *Anatomical Sciences Education*. 5(1): 3-9.
14. 2012 Stefanik JJ, Roemer FW, **Zumwalt AC**, Zhu Y, Gross KD, Lynch JA, Frey-Law LA, Lewis CE, Guermazi A, Powers CM, Felson DT. "Association between measures of trochlear morphology and structural features of patellofemoral joint osteoarthritis on MRI: The MOST study." *Journal of Orthopedic Research*. 30(1): 1-8.
15. 2012 Pearson WG Jr, Langmore SE, Yu LB, **Zumwalt AC**. "Structural analysis of muscles elevating the hyolaryngeal complex." *Dysphagia*; 27(4): 445-51.
16. 2013 Stefanik JJ, **Zumwalt AC**, Segal NA, Lynch JA, Powers, CM "Association Between Measures of Patella Height, Morphologic Features of the Trochlea, and Patellofemoral Joint Alignment: The MOST Study" *Clinical Orthopedics and Related Research*. 471(8): 2641–2648.
17. 2013 Morrison T, Arya R, **Zumwalt AC**, Shaffer K. "Inexpensive models for teaching imaging anatomy: Coronary anatomy lab." *MedEdPORTAL*; 2013. Available from www.mededportal.org/publication/9414
18. 2013 Pearson WG Jr, Hinson D, **Zumwalt AC**, Langmore SE "Evaluating swallowing muscles essential to hyolaryngeal elevation with mfMRI" *International Journal of Radiation Oncology, Biology, Physics*. 85(3):735-40.
19. 2013 Arya R, Morrison T, **Zumwalt AC**, Shaffer K. "Making education effective and fun: Stations based approach to teaching Radiology and Anatomy to third year medical students." *Academic Radiology* 20(10):1311-8.
20. 2013 Kleber KT, Young ME, **Zumwalt AC** "Anatomy in aging: A model for vertically integrating basic science content into clinical teaching" *Medical Science Educator* 23(3S) 426-429.
21. 2013 Pearson WG Jr, **Zumwalt AC** "Visualizing Hyolaryngeal Mechanics in Swallowing Using Dynamic MRI" *Computer Methods in Biomechanics and Biomedical Engineering. Imaging and Visualization*. Published online: doi: 10.1080/21681163.2013.846231.
22. 2014 Lufler RS, **Zumwalt AC** "Imaging the cadavers being dissected does not appear to improve the gross anatomy dissection experience" *Anatomical Sciences Education* 7(1) 78-79.
23. 2015 **Zumwalt AC**, Iyer A, Ghebremichael A, Frustace B, Flannery S "Gaze patterns of Gross Anatomy students change with classroom learning" *Anatomical Sciences Education*. 8(3):230-41
24. 2018 Turk KW, Elshaar AA, Deason RG, Heyworth NC, Nagle C, Frustace B, Flannery S, **Zumwalt AC** and Budson AE "Late positive component event-related potential amplitude predicts long-term classroom-based learning" *Journal of Cognitive Neuroscience*. May 23; 1-7. PMID: 29791297
25. Submitted Yang, CY.; **Zumwalt, AC**; Larson, AR "Dermatology and Anatomy Laboratory: Comparing Three Formats of Integration" Medical Teacher

26. Submitted Dominguez MI and Zumwalt AC "Priming basic scientists to teach in integrated curricula" Medical Education

Case Reports, Reviews, Chapters, and Editorials

Textbook Chapters:

Anatomy author on AnatomyONE (www.anatomyone.com), a comprehensive digital resource for anatomy students that was released in 2012. In those two years more than 50 medical and other health professional schools in the United States and the Caribbean have adopted it as a primary anatomy textbook. Note that 2014 numbers are still pending. Information on individual hits is not available from the publisher. Elsevier acquired AnatomyOne in the summer of 2014, so adoption numbers are likely to continue to increase.

1. **Zumwalt AC.** "Arteries: Thoracic Wall and Viscera." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
2. **Zumwalt AC.** "Accessory Glands of Digestion." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
3. **Zumwalt AC.** "Digestive System." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
4. **Zumwalt AC.** "Genital System - Male." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
5. **Zumwalt AC.** "Genital System - Female." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
6. **Zumwalt AC.** "GI Tract." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
7. **Zumwalt AC.** "Infratemporal Fossa." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
8. **Zumwalt AC.** "Nasal Cavity and Paranasal Sinuses." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
9. **Zumwalt AC.** "Oral Cavity." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
10. **Zumwalt AC.** "Peritoneum of the GI Tract." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
11. **Zumwalt AC.** "Pharynx." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
12. **Zumwalt AC.** "Pterygopalatine Fossa." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
13. **Zumwalt AC.** "Teeth and Gingivae." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
14. **Zumwalt AC.** "Thoracic Wall." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
15. **Zumwalt AC.** "Veins: Back and Spinal Cord." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
16. **Zumwalt AC.** "Veins: Jugulars." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.
17. **Zumwalt AC.** "Veins: Thoracic Wall and Viscera." In: Morton D (Ed.), AnatomyONE. Amirsys: Salt Lake City, UT.

Oral Abstracts

National

2015

Zumwalt AC, El-Shaar A, Nagle C, Iyer A, Gherbmichael A, Frustace B, Wang E, Flannery S, Tat M, Budson A "In Pursuit of an Objective Assessment of Learning

- 2012 Using Gaze Tracking and EEG” American Association of Anatomists annual meeting, Boston, MA
Zumwalt AC, Wice MB, Bergethon, PR “The use of gaze tracking to quantify learning” American Association of Anatomists annual meeting, San Diego, CA
- 2010 **Zumwalt AC** “Alternative Careers for Ph.D.s” Symposium chairman, American Association of Anatomists
- 2005 **Zumwalt AC** “The Impact of Anatomy Education beyond the First Year” Symposium chairman, American Association of Anatomists
- 2004 **Zumwalt AC** “A new method to quantify the 3D morphology of bone surfaces, with application to muscle enthesis rugosity.” Society for Integrative and Comparative Biology Annual Meeting. New Orleans, LA
- 2004 **Zumwalt AC** “The effect of exercise on muscle enthesis morphology” American Association of Anatomists annual meeting, Tampa, FL
- 2003 **Zumwalt AC**, Lieberman DE and Ruff CB. “Too good to be true? Testing the relationship between muscle function and attachment site morphology.” Society for Integrative and Comparative Biology Annual Meeting. Toronto, Canada

Institutional

- 2013 Shaffer K, Arya R, Morrison T, **Zumwalt AC** “Flipping the Classroom in Anatomy” John McCahan Medical Campus Education Day Workshop, Boston University Medical Campus
- 2012 **Zumwalt AC**, Arya R, Morrison T and Shaffer K “Inexpensive Models for Teaching Imaging Anatomy” 4th Annual Center for Excellence and Innovation in Teaching Instructional Innovation Conference, Boston University
- 2010 **Zumwalt AC**, Lufler RS, Shaffer K “Active Learning Exercises in the Anatomy Lab to Review Radiologic Anatomy” 2nd Annual Center for Excellence and Innovation in Teaching Instructional Innovation Conference, Boston University
- 2007 Hoagland TM and **Zumwalt AC** “Effective Pedagogy: Simple Ways to Improve Your Teaching” John McCahan Medical Campus Education Day Workshop, Boston University Medical Campus

Curricular Innovation and Leadership

Date	Zumwalt Role	Name	Description	Participants
<i>Boston University School of Medicine</i>				
2014-present	Associate Director	Principles Integrating Science and Medicine	First year medical curriculum	185 students per year
Fall 2013	Co-Developer (with Julie Stamm, Ph.D. candidate)	Anatomy of the Knee Musculo-skeletal exam	Grand Rounds session for Student Health clinical faculty; Eligible for CME credit.	20 clinical practitioners in Student Health (physicians, nurse practitioners, nurses)
<i>Impact: Wholly novel interdisciplinary approach to continuing education of Student Health faculty</i>				
Fall 2012	Co-Developer (with Megan Young, MD, Department of Medicine)	Anatomy of Aging	Grand Rounds session for Section of Geriatrics; Eligible for CME credit.	25 Members from the Division of Geriatrics (physicians, residents, nurses, nurse practitioners, medical students)

2010-present	Course Director	Gross Anatomy / Body Structures	First year Medical Gross Anatomy course	185 students per year
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2010-present	Course Director	Medical Gross Anatomy	Teach the fundamentals of human gross anatomy and embryology through lectures and human cadaver dissection	First year medical students and graduate students (175 per year)
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Impact: Consistently one of the highest rated courses in the first-year curriculum.

Average course rating on a scale of 0-100% positive:

Zumwalt as Course Director:

2016: Body Structures 1-3: 96%

2015: Body Structures 1-3: 95%; first year of new integrated curriculum

2014: Gross Anatomy 100%

2013: Gross Anatomy 96%;

Avg 2013 non-Gross Anatomy first year course rating: 81.2%

2012*: 90%; 2011: 96%; 2010: 94% (Avg first year ratings not available for these years) *Note that the rating system changed in 2012 to a system in which it is now more difficult to achieve high ratings than it was in previous years

Previous Course Director: 2009: 98%; 2008: 94%; 2008: 91%.

Date	Zumwalt Role	Name	Description	Participants
<i>Boston University School of Medicine, continued</i>				
2010-present	Course Director	Teaching in the Biomedical Sciences	Teach students fundamental teaching skills and pedagogical theory.	Graduate students (10-12 per year)
<i>Impact:</i> Graduates of our program who wish to become educators have an approximately 90% success rate in entering teaching positions after they graduate.				
2010-present	Course Director	Teaching in Anatomy	Elective in which MS4 students return to the Gross Anatomy laboratory to review human anatomy and learn teaching skills	Fourth year medical students (35-45 per year)
2009-present	Co-Developer and Co-Director (with Kitt Shaffer, MD, Radiology)	Radiologic Anatomy	Monthly sessions within the Radiology clerkship.	Medical students in Radiology clerkship (20-25 per month)
2008-2011	Developer and Course Director	Anatomy of Obstetrics & Gynecology	Review the fundamental and clinical anatomy pertinent to Obstetrics and Gynecology	Medical students in Obstetrics and Gynecology clerkship (20-25 per month)

Duke University School of Medicine

2005-2007	Developer and Course Director	Oncoanatomy	Examined the anatomy, patterns of spread, and radiation oncology treatment rationale for a different cancer each session	Radiation Oncology residents and faculty (18-20 per month) Medical students in Radiation Oncology elective
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(2-3 per month)

Impact: Elective remains active at Duke in 2014

2005-2007	Developer and Course Director	Anatomy of Obstetrics & Gynecology	Reviewed the fundamental and clinical anatomy pertinent to Obstetrics and Gynecology	Medical students in Obstetrics and Gynecology clerkship (25 per month)
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Publicity

- 2018 “We are the Pipeline” **Zumwalt AC**. Leadership Corner feature; American Association of Anatomists newsletter. August.
- 2015 “The Resurrection Men” **BBC World Service** documentary featuring BUSM Anatomical Gifts program: <http://www.bbc.co.uk/programmes/p02sr293>
- 2015 “Faculty Profile: Ann Zumwalt PhD, Anatomist and Educator” **Boston University Medicine** (Winter) p. 14-15. <https://www.bumc.bu.edu/comm/files/2013/10/Winter-2015.pdf>
- 2014 “The Many Facets of Our Diversity: An Illustrated Overview” Office of Diversity and Multicultural Affairs, Boston University School of Medicine. <http://www.bu.edu/paprogram/files/2014/08/Diversity-at-BUMC-Interactive.pdf>
- 2013 Guest panelist, Opening night at “The Art of Anatomy” exhibit at the Boston University Art Gallery