

CURRICULUM VITAE

ROBERT LINDER MORRIS

Professor of Biology Department of Biology, Wheaton College, Norton, Massachusetts 02766
email: rmorris@wheatonma.edu, web: <http://acunix.wheatonma.edu/rmorris/>
Tel (508) 286-3953, Fax (508) 285-8278

EDUCATION

- 1988-95 **Ph.D. Harvard University** Cambridge, Massachusetts
Program on Cell and Developmental Biology - Harvard Medical School
Thesis Advisor: Peter J. Hollenbeck, Associate Professor of Neurobiology
Thesis Title: *Axonal Transport of Mitochondria*, March 1995
Qualifying Exam: Functional Redundancy of Actin Binding Proteins in Amoeboid Movement
- 1991 Physiology: Cell and Molecular Biology summer course
Marine Biological Laboratory, Woods Hole, Massachusetts
- 1987 Biochemistry course, Thomas Jefferson University, Philadelphia, Pennsylvania
- 1982-86 **A.B. Lafayette College** Easton, Pennsylvania
Major: Biology, Minor: Computer Science
Senior research topic (non-thesis): Acid rain effects on oak tree root ectomycorrhizae
- 1985 Invertebrate Zoology, and Marine Mammals and Seabirds summer courses
Oregon Institute of Marine Biology, University of Oregon, Coos Bay, Oregon

PROFESSIONAL/TEACHING POSITIONS

- 2011-
present **Professor. Department of Biology. Wheaton College**, Norton, MA.
 - *Teaching 200-level Developmental Biology and Cell Biology (lecture and lab), 300-level Neurobio (lecture and lab), 100-level Cell and Molecular Bio (lecture), and 400- & 500-level Indep Research.*
 - *Researching cilia in regeneration and embryogenesis by cell biological, biochemical, and genomics approaches. Head of a research laboratory driven by undergraduate researchers.*
 - *Directing the Imaging Center for Undergraduate Collaboration – the college’s digital imaging lab*
- 2014-
present **Director, Visiting Scientist Program, MDI Biological Laboratory**, Salisbury Cove, Maine
(Acting Director 2014-2015) • *First contact for all visiting faculty, liaison between Visiting Scientists and lab staff & administration, organizer of speaker series, organizer and host of public outreach programs*
- 2010-
present Visiting Scientist, Mount Desert Island Biological Laboratory, Salisbury Cove, Maine
 - *Researching ciliary differentiation during development and regeneration; mentoring students*
- 2008-
2011 **Chair. Department of Biology. Wheaton College**, Norton, MA.
 - *Responsible for guiding 11 person department through building redesign, self-study and external review, retirement replacements, Psychobiology major phase-out, Neuroscience major phase-in, course scheduling, economic downturn-driven adjunct layoffs and recovery-driven hiring.*
- 2005-
2011 **Associate Professor. Department of Biology. Wheaton College**, Norton, MA.
 - *Teaching 200-level courses in Developmental Biology and Cell Biology (lectures and labs), 300-level Neurobio (lec and lab), 100-level Cell & Molecular Bio (lec), 400- & 500-level Indep Research.*
 - *Researching motor proteins in ciliogenesis and early development by cell biological, biochemical, and genomics approaches. Head of a research laboratory driven by undergraduate researchers.*
 - *Directing the Imaging Center for Undergraduate Collaboration - a digital imaging lab for teaching and research established through a 2002 grant from the National Science Foundation to Wheaton College.*

- 2007 Visiting Senior Fellow, University of Wollongong, New South Wales, Australia
- *Invited for six month research project to study mechanisms of animal development by cell biological and genomics approaches and to study preparations for potential H5N1 avian flu pandemic.*
- 2006 Visiting Scholar, Biology Department, Boston College, Chestnut Hill, MA
- *Invited to spend Fall semester sabbatical in the lab of Dr David Burgess studying cytoskeletal and motor proteins in sea urchin embryos by whole mount in situ hybridization.*
- 1998-2005 **Assistant Professor. Department of Biology. Wheaton College, Norton, MA.**
- *Teaching 200-level courses in Developmental Biology and Cell Biology (lectures and labs), 300-level Neurobiology and Advanced Marine Biology (lecture and lab), 100-level Cell & Molecular Biology (lec), First-Year Seminar, and 400- & 500-level Indep Research.*
 - *Researching motor proteins in ciliogenesis and early development by cell biological, biochemical, and genomics approaches. Head of a research laboratory driven by undergraduate researchers.*
 - *Directing the Imaging Center for Undergraduate Collaboration - a digital imaging lab for teaching and research established through a 2002 grant from the National Science Foundation to Wheaton College.*
- 1995-98 Applications Scientist, Edge Scientific Instrument Corp., Santa Monica, California
- *Consultant to 3D direct-view microscope manufacturer on applications of 3D microscopy in green fluorescent protein research and in research using micromanipulation.*
- 1995-98 **Postdoctoral Research Fellow.** Laboratory of Dr. Jonathan M. Scholey.
Section of Molecular and Cellular Biology, University of California, Davis, California
- *Studied motor proteins in mitosis, ciliogenesis, and early development in echinoderms by cell biological, biochemical approaches. Lab personnel supervision and financial management.*
- 1991-94 Head Instructor: Scanning Laser Confocal Microscope Facility
Departments of Anatomy and Neurobiology, Harvard Medical School, Boston, MA
- *Developed curriculum & course materials, instructed & certified >150 users individually.*
- 1992 Teaching Assistant: Invertebrate Physiology Course and Laboratory (premier year)
Organismic and Evolutionary Biology Department, Harvard University, Cambridge, MA
- *Assisted in design and implementation of new labs and performed guest lecturing.*
- 1987-88 Research Associate: Thomas Jefferson University, Philadelphia, PA
- *Reprogrammed and ran digital-imaging light microscope for cell biology research.*
- 1986-87 Computer Systems Analyst: MetroTemps Agency, Wayne, PA
- 1985 Teaching Assistant: Developmental Biology lab, Lafayette College, Easton, PA
- 1986 Teaching Assistant: Biology of Vascular Plants lab, Lafayette College, Easton, PA
- 1985-86 Research Assistant: Biology Department. Lafayette College, Easton, PA
- *Analyzed effects of acid rain in the Pocono Mountains and Lehigh River Valley of Pennsylvania.*
- 1984-86 PC Computer Analyst: National Liberty Corporation. Frazier, PA

COURSES AND LABORATORIES TAUGHT

- 1998-2015 *Developmental Biology* with laboratory, 200 level - Wheaton College, Norton, MA.
• Offered alternate years. Averaging 16 students per year, 43 lecture hours, 11 labs, open-ended research project on fetal alcohol syndrome and immunofluorescence.
- 1999-2015 *Independent Research* for Senior Thesis, 400- and 500 level - Wheaton College, Norton, MA.
• 20 students, 11 with >320 lab hours/summer and all with 150 lab hours/year of guided research.,
• weekly lab meetings and journal club for seniors and other lab members
• student attendance at international conferences for presentation and publication of results.
- 2000-14 *Neurobiology* with laboratory, 300 level - Wheaton College, Norton, MA.
• Offered yearly. Averaging 14 students, 39 lecture hours, 13 labs, open-ended research project on intracellular transport culminating in public poster presentation at regional science meeting or in-house peer-reviewed paper.
- 2014 *Applied Health Science*, MGMT 298, 200 level (co-instructor) - Wheaton College, Norton MA
• Course in Business & Management major, co-taught with Biz faculty member David Huizenga PhD, JD, Based on book "From Good to Greed: the Tension in Life Science Commercialization" we coauthored.
- 2014 *Senior Seminar*, 400 level: "Life 2.0: blurring lines between our tech and ourselves. Wheaton.
• Capstone for 22 Biology majors covering primary literature reading and writing, public speaking, peer review, and publication. For students' interests from molecules to organisms to ecosystems .
- 2002-14 *Cells and Genes*, introductory cell and molecular biology, 100 level - Wheaton College
• One of two introductory biology courses for majors. Offered every spring. Averaging 60 students. 39 lecture hours plus discussion meetings. Project converting lecture hall into living white blood cell.
- 2003-12 *Cell Biology* with laboratory, 200 level - Wheaton College, Norton, MA.
• Offered alternate falls beginning with fall 2003 debut. 37 lecture hours and 14 labs in first yr. Open-ended projects on quantitative light microscopy of cell behaviors published on course website.
- 1999-2015 *Independent Research* projects - Wheaton College, Norton, MA.
• mandatory one-hour Morris Lab meetings weekly during the academic year for student lab members to exchange data, trouble-shoot problems, and coordinate projects.
• 11 students in 9 summers, 320 lab/field trip hrs per student. Projects on ciliogenesis & motor proteins.
• 1 student for 1 sem, 30 lecture/lab/field trip hours. Project on comparative embryology.
• Averaging 6 students/sem doing projects in laboratory on voluntary basis as prelude to thesis work.
- 1999-2005 *Advanced Marine Biology* with laboratory, 300 level - Wheaton College, Norton, MA.
• Offered alternate springs. 10 students avg, 37 lecture hours, 10 labs, & 4 field trips per yr; personally authored course's web-based text. 32 different collaborative student research projects.
- 1999 *First Year Seminar*, 100 level - Wheaton College, Norton, MA.
• 17 students / advisees, 36 lecture hours, topic: Human cloning and the future of biomedicine
- 1999, 2000 *Introductory Biology* laboratory - Wheaton College, Norton, MA.
• 9 to 24 students, 13 labs per semester
- 1992 *Invertebrate Physiology* laboratory - Harvard University, Cambridge, Massachusetts.
- 1986 *Biology of Vascular Plants* laboratory - Lafayette College, Easton, Pennsylvania.
- 1985 *Developmental Biology* laboratory - Lafayette College, Easton, Pennsylvania.

HONORS AND AWARDS

- 2015-present William & Elsie Prentice Chair for teaching excellence. Wheaton College, Norton MA.
• *Endowed Chair to support teaching innovations developed over 18 years. 5 year term.*
- 2013-2015 Summer Research Fellow - Center for Regenerative Biology and Medicine at MDIBL. Mount Desert Island Biological Lab, Salisbury Cove, ME. (USAMRMC grant W81XWH-11-1- 0425)
• *Awards to support summer research studying ciliary differentiation in growth & regeneration.*
- 2009-2013 Academic Research Enhancement Award (R15 AREA grant), Eunice Kennedy Shriver National Institute for Child Health & Human Development, National Institutes of Health, Wash. DC.
• *\$150,000 Award (Grant # 1R15HD060015-01) to support three years of research studying "Roles of Cilia and Mechanisms of Ciliogenesis in Animal Development" using genomic and cell biological techniques. Funded with help of the American Recovery and Reinvestment Act of 2009.*
- 2013 MDIBL Sabbatical Fellow - Mount Desert Island Biological Lab, Salisbury Cove, ME.
• *Award to support continuing research collaboration and outreach in support of lab scientific mission.*
- 2011-2013 Visiting Scientist and outreach program host, Mount Desert Island Biological Lab, Maine
• *Invited to be first host of novel outreach program called "Behind the Lab Bench." Developed and executed first offerings of the program. Continued research program on ciliary differentiation.*
- 2012 Chair for "Membranes, Cytoskeleton, and Polarity" Session at Developmental Biology of the Sea Urchin meeting, Woods Hole, MA. 27 October 2012.
- 2010 Summer Mentor of the Year, Mount Desert Island Biological Lab, Salisbury Cove, Maine
• *Voted by the lab's undergraduate research students as "the overwhelming choice" for this award.*
- 2010 Forster Summer Research Fellow, Mount Desert Island Biological Lab, Salisbury Cove, Maine
• *\$2000 award to support summer-in-residence at the MDIBL studying ciliary differentiation using microinjection and confocal microscopy.*
- 2010 Honors Convocation Guest Speaker. Lafayette College, Easton Pennsylvania.
• *Invited as distinguished alumnus to address recipients of college awards, their families, faculty, & admin.*
- 2008 Evelyn and Melvin Spiegel Research Fellow, Marine Biological Laboratory, Woods Hole, MA
• *Award to support summer-in-residence at the MBL studying "Coordination of ciliogenic and mitotic cycles during embryogenesis" using microinjection and confocal microscopy.*
- 2008 Undergraduate Imaging Center Consultant's Award, Saint Vincent College, Latrobe, PA
• *awarded funds to visit Saint Vincent College and advise them on implementation of their new digital imaging lab modeled on Wheaton's Imaging Center for Undergraduate Collaboration.*
- 2008 Asscn of American Colleges & Universities Course Transformation Award, Wheaton College
• *awarded funds to revise Bio 112 (Cells and Genes) to infuse global content throughout the course.*
- 2005 Evelyn and Melvin Spiegel and Laura and Arthur Colwin Summer Research Fellow, Marine Biological Laboratory, Woods Hole, MA
• *Award to support summer-in-residence at the MBL studying "Coordination of ciliogenic and mitotic cycles during embryogenesis" using microinjection and confocal microscopy.*
- 2002-2004 National Science Foundation Grant for Course, Curriculum, and Laboratory Improvement to establish a digital imaging facility at Wheaton College, Norton, MA.
• *\$144,677 awarded for proposal entitled "Digital Imaging: Infusing Active Learning Throughout a Science Curriculum" co-authored with Asst. Prof. Geoff Collins of the Physics & Astronomy Dept to equip and operate an interdisciplinary digital imaging lab for undergraduate teaching and research.*
- 2004 Hewlett Pluralism and Unity Course Transformation Award, Wheaton College, Norton, MA

- *awarded funds to revise Bio 254 (Developmental Biology) to address the biological basis for gender.*
- 2003 Chair for "Cytoskeleton and Motor Protein" Session at Developmental Biology of the Sea Urchin meeting, Woods Hole, MA. September 26, 2003.
- *recruited three speakers, organized session, led and spoke at session of DBSU meeting.*
- 1998-2014 Wheaton Foundation Awards for student research, Wheaton College, Norton, MA.
- *"Analysis of Gamma Tubulin in the Cell Lifecycle" with D Erkoboni '04 and C MacDonald '05. 11/04.*
 - *"Investigations of the Motor Protein Kinesin-II in Mitosis" with Christopher English '03, 11/6/02.*
 - *"Analysis of Kinesin-II in the Cell Lifecycle by Immunofluorescence" Danielle Erkoboni '05, 11/6/02.*
 - *"Presentation of Kinetics of Ciliary Growth on Sea Urchin Embryos" with Amy Manning '01, 11/15/00.*
 - *"Functions of the motor protein Kinesin-II in Sea Urchin Development" with Julia Lou, '01, 11/15/00.*
 - *"Kinetics of Ciliary Growth on Sea Urchin Embryos" with Amy Manning '01, 3/16/00.*
 - *"Biochemical investigation of Kinesin-II in Ciliogenesis in S.U. Embryos" with Julia Lou, '01, 3/16/00.*
 - *"Mechanisms of Cilia Growth on Sea Urchin Embryos" with Joshua Nordberg, '00, 3/16/00.*
 - *"Comparative Embryology of Spring-Spawning Marine Invertebrates" with Liisa Viitanen '99, 3/5/99.*
 - *"Long-Term Storage of Gametes for Developmental Biol. Research" with Melissa Milton '99, 3/5/99.*
 - *"Mechanisms of Cilia Growth in Sea Urchin Embryos" with Joshua Nordberg '00, 3/5/99.*
 - *"Investigating Roles of Kinesin-II in Ciliogenesis in Sea Urchin Embryos" with Fay Dufort '00, 3/5/99.*
- 2003 Became member of Project Kaleidoscope's Faculty for the 21st Century Network
- *National organization for faculty leaders in Science, Math, Engineering, and Technology. Nominated by Wheaton College Administration.*
- 1999-2004 Technology Course Enrichment Stipends, Wheaton College, Norton, MA.
- *Promoting Use of Digital Imaging Throughout the Curriculum," from Davis Education Foundation for developing pedagogical materials for use in Wheaton's digital imaging lab, Summer 2004.*
 - *"Living Architecture: Connecting Science with Art through Digital Imaging," for Connecting Bio219 - Cell Biology with Evie Lane's ARTH253 - Castles, Cathedrals, and Monasteries, Summer 2003.*
 - *"Transforming Students into Lifelong Learners through Web-Based Scientific Research," for Bio254 - Developmental Biology, Spring 1999.*
 - *"Multi-level course website for Advanced Marine Biology" for Bio398-Adv. Marine Bio. Spring 1999.*
- 1999-2002 Mars and Gebbe Faculty/Student Research Fellowships, Wheaton College, Norton, MA.
- *"Structural Analysis of the Kinesin-II Motor Protein" with Chris English '03, 11/26/01, for Jan 2002.*
 - *"Microscopic Analysis of Cytoskeletal Dynamics in Developing Sea Urchin Embryos" with Chris English '03, 3/30/01, for work over summer 2001.*
 - *"Comparative Ciliogenesis in Sea Urchin Embryos" with Amy Manning '01, 3/31/00, for summer 2000.*
 - *"Functions of the motor protein Kinesin-II in Sea Urchin Development" with Julia Lou '01, 3/31/00, for work over summer 2000.*
 - *"Investigating the Role of Kinesin-II in Ciliogenesis in Sea Urchin Embryos" with Fay Dufort, '00, 4/2/99 for work over summer of 1999.*
 - *"Mechanisms of Cilia Growth in Sea Urchin Embryos" with Joshua Nordberg, '00, 4/2/99 for work over summer of 1999.*
- 2000 Faculty Research Award, Wheaton College, Norton, MA.
- *Received one \$2500 award for collaborative research on mechanisms of animal development.*
- 1995-98 National Research Service Award for Postdoctoral Research Fellowship, National Institutes of General Medical Sciences, Bethesda, Maryland
- 1997 Designation of Morris and Hollenbeck's 1995 Journal of Cell Biology paper as "Of Outstanding Interest" by Current Opinion in Cell Biology (highest level distinction) in review of research on "Motors and membrane traffic." (Goodson et al., 9:18-28, 1997)
- 1996 Invited Attendee to Gordon Research Conference on "Contractile and Motile Systems," NH
- 1995 Designation of Morris and Hollenbeck's 1993 Journal of Cell Science paper as "Of Special Interest" by Current Opinion in Neurobiology (second highest level distinction) in review on "The sensory-motor role of growth cone filopodia" (Kater & Rehder, 5:68-74, 1995)

- 1993-94 Harvard Mohoney Neuroscience Institute Fellow, Dept of Neurobiology, Harvard Medical Schl.
- 1993 American Society for Cell Biology Predoctoral Travel Award for attendance at American Society for Cell Biology 33rd Annual Meeting, New Orleans, LA
- 1992 Cell and Developmental Biology Program - Harvard Medical School Annual Award for Exceptional Contribution to the Program
· *One of only two students ever conferred this award, previously presented only to faculty.*
- 1992 American Society for Cell Biology Predoctoral Travel Award for attendance at American Society for Cell Biology 32nd Annual Meeting, Denver, CO.
- 1991 Herbert W. Rand Scholarship for attendance at Physiology: Cell & Molecular Biology course Marine Biological Laboratory, Woods Hole, MA.
- 1985 Oregon Institute of Marine Biology Continued Study Scholarship
· *Awarded annually by vote of faculty to four of the summer's 65 students.*
- 1982 Pennsylvania Science Council Talent-Search Award, National Honor Society, National Merit Commended Scholar.

INVITED TALKS

- 2015 "Social Media in Teaching and Research: a Primer to a Powerful Double-Edged Sword." 23rd Dev. Bio. of the Sea Urchin conference (Education session). Woods Hole, MA. 9 Oct 2015.
- 2015 "A Taste for Science: the Evolution and Genetics of Taste and Smell" Mount Desert Island Biological Laboratory. Co-presented with Chef Michael Anderson. July 24, 2015.
- 2015 "Future Life: The Merger of People, Planet, and Technology" (six lectures) Norton Institute for Continuing Education, Norton MA. 9 March - 13 April 2015.
- 2015 "Escape from Dinkelbuhl" Wheaton Story Slam, 3 April 2015.
- 2015 "Future Humans: How Our Technology Becomes Us" Wheaton Wheataks, 30 March 2015.
· *Selected among all faculty to deliver this annual talk. Met with a standing ovation.*
- 2014 "More than Motility: Cilia as Sensors in Development and Disease" Mount Desert Island Biological Laboratory, Monday Morning Seminar series. 21 July 2014.
- 2013 "The Business of Science: How Ideas Move from a Scientist's Bench to a Consumer's Product" co-presented with Dr. David Huizenga, PhD, JD, MDI Biological Lab Science Café. Asticou Inn, Northeast Harbor Maine. 15 July 2013.
- 2013 x2 "Growing versatility: Mechanisms of cilia differentiation in echinoid embryos," Research talk. Boston University Department of Biology, 11 February 2013. *and* Joint lab meeting Pazour, Witman, Khanna, and Doxsey Labs, UMass Medical School, Worcester MA, 15 May 2013.
- 2013 "Inevitable Immortality: how medicine and technology will keep us forever young." Greater Boston Wheaton Club alumni meeting at Tennis & Racquet Club, Boston. 29 April 2013.
- 2012 "Mechanisms of ciliary growth and differentiation," Developmental Biology of the Sea Urchin meeting. Marine Biological Laboratory, Woods Hole, MA. 27 October 2012.
- 2012 "Genomics for undergrads: achieving simple goals with complex tools " Developmental Biology of the Sea Urchin meeting. MBL. Woods Hole, MA. 27 October 2012.
- 2012 x2 "Medical Mysteries Solved by the Sea," Norton Institute for Continuing Education, Norton MA. 6 June 2012. *and at* MDI Bio Lab Science Café, Northeast Harbor Maine 16 July 2012.

- 2012 "Marine models in medicine: How the sea helps solve medical mysteries" Viking Yacht Wheaton Alumni Event, Riviera Beach FL. 5 Feb 2012. • *Invited by College Advancemnt.*
- 2012 "Immortality: How we will (eventually) live forever " Wheaton College Flash Seminars, Norton MA. 2 Feb 2012. • *Invited by students to speak in new 'flash-mob' lecture series.*
- 2012 "Hogwarts Biology: Things muggles might know better than magicians." Qualters Middle School, Mansfield MA. January 18, 2012. • *Invited to address three 8th grade Biology classes on the universality of science and applications of biological techniques.*
- 2011 "Life lessons and research questions: The lasting positive impact of Dr. Chuck Holliday on one grateful student" Lafayette College Biology Dept., Easton PA. 26 Sept 2011. • *Invited to give inaugural address in lecture series paying tribute to retiring senior dept member.*
- 2011 "Regulation of Ciliary Differentiation During Echinoid Development " Developmental Bio of the Sea Urchin Mtg, Marine Biological Laboratory, Woods Hole, MA. 30 Apr 2011.
- 2011 "The Comparative Toxicogenomics Database (CTD): finding chemicals and diseases related to your genes " Developmental Biology of the Sea Urchin Meeting, Marine Biological Laboratory, Woods Hole, MA. 30 Apr 2011.
- 2010 "So I'm a Biologist, NOW what? ... or, what can happen when you follow your mentor's advice." Mount Desert Island Biological Lab, Salisbury Cove, Maine. July 27, 2010. • *Selected from among all the lab's Principal Investigators, according to student leaders, as "the overwhelming choice of the student body" to be keynote speaker at students' annual awards dinner.*
- 2010 "Living Architecture." Trustees Meeting, and President's Commissioners Meeting, Wheaton College. 28 Feb 2010, and 30 April 2010. • *Co-presented with colleague Evelyn Staudinger on similarities between human-built and nature-built architecture. Invited by College Advancement to address campus leaders.*
- 2010 "How to land a dream job in any discipline." Lafayette College Honors Convocation, Easton PA. February 1, 2010. • *Invited as distinguished alumnus to address the 110 student recipients of college honors and awards, their families, faculty and administrators.*
- 2010 "So I'm a Biologist, NOW what? ... or, what can happen when you follow your Professors' advice." Lafayette College Biology Dept., Easton PA. February 1, 2010.
- 2009 "Publishing without Perishing: strategies for successful peer-reviewed publication at primarily undergraduate institutions" Developmental Biology of the Sea Urchin meeting, Marine Biological Laboratory, Woods Hole, MA. October 3, 2009.
- 2008 "Cilia formation on early embryos: clues about development from genomics and cell biology" Invited guest lecturer. Bio Dept, Dickinson Col., Carlisle PA, Nov 14, 2008.
- 2007 "Cytoskeletal and Motor Proteins in the Sea Urchin Genome: How many motors does one urchin need?" Guest lecture. Department of Biology, University of Wollongong, Wollongong, New South Wales, Australia, May 4, 2007.
- 2006 "Kinesins in sea urchin development: a motor for every occassion?" Sabbatical research talk. Department of Biology, Boston College, Chestnut Hill, MA. October 24, 2006.
- 2005 "Doing double duty? Kinesin-II subunits in cilia and nuclei." Summer Fellows Research Symposium. Marine Biological Laboratory. Woods Hole, MA. July 24, 2005.
- 2004 "Life After College: Graduate School and Careers in Neuroscience." Northeastern Undergraduate Research Organization for Neuroscience meeting. Wheaton College, Norton MA. May 2, 2004.
- 2003 "Kinesin-II redistribution from cilia to nuclei during the mitotic and ciliogenic cycles in sea urchin embryos." Developmental Biology of the Sea Urchin mtg. Sept 26, 2003.
- 2003 "Kinesin-II roles in the mitotic and ciliogenic cycles in sea urchin embryos." Laboratory meeting. Gary Wessel Laboratory, Biology Dept, Brown University. Oct 17, 2003.

- 2003 Technology Workshop presentation on "Interdisciplinary Digital Imaging in the Imaging Center for Undergraduate Collaboration," May 23. Wheaton College, Norton, MA.
- 2001 "Doing double duty? Kinesin-II redistribution between cilia and nuclei with each cell cycle in sea urchin embryos." May 18, Depart of Biology, U.Mass. - Boston.
- 2000 Technology Workshop on judging quality of websites, Wheaton College, Norton, MA.
- 1999 Technology Workshop talk on Course Webpage Creation, Wheaton College, Norton, MA.
- 1999 Careers Forum for Biomedical Sciences, Harvard Medical School, Boston, MA.
- 1997 Developmental Biology of the Sea Urchin Meeting XI, Woods Hole, MA.
- 1993 Boston Area Graduate Student Symposium, Harvard Medical School, Boston, MA.
- 1993 Neurobiology Department Seminar, Harvard Medical School, Boston, MA.
- 1993 Cell and Developmental Biology Program Seminar, Harvard Medical Schl, Boston, MA.
- 1992 Molecular Biology Department Seminar, Massachusetts General Hospital, Boston, MA.
- 1987 Pathology Department Seminar, Thomas Jefferson University, Philadelphia, PA.
- 1987 "Why Do Science?," 8th grade Introductory Physical Science, Key School, Annapolis MD.

ADDITIONAL TEACHING EXPERIENCE

- 2010-15 Mount Desert Island Biological Lab Summer Research Mentor - MDIBL, Salsbury Cove, ME
- *Mentored 2-3 undergrad and/or high school students per summer in independent research projects.*
- 2009-10 Mansfield High School Seniors Mentoring program - Wheaton College, Norton, MA.
- *Created specialty course in Neuroscience with bi-weekly readings and labs for one MHS senior.*
- 2002-present Director & head instructor, Imaging Center for Undergraduate Collaboration. Wheaton College.
- *Instructed faculty and student on use of computers, microscopes, cameras, and other equipment in one-on-one, small group, and large group workshop settings.*
- 2000-2004 Wheaton Research Partnership Faculty Mentor. Wheaton College, Norton, MA.
- *Instructed research students one-on-one by actively engaging them as collaborators in research.*
- 1999-2002 Sunday School Teacher to preschl-1st Graders, Trinitarian Congregational Church, Norton, MA.
- 1998,99 Guest Lecturer for Introductory Biology course. Wheaton College, Norton, MA.
- *Presented well-received lectures on DNA and RNA function to 100 undergraduate students/lecture.*
- 1995-98 Tutor and Mentor to Undergraduate Researcher-turned-Postgraduate Technician. U.C. Davis.
- *Instructed undergraduate on sea urchin collection and care, microscopy, and microinjection.*
- 1996-97 Volunteer Guest Lecturer for Introductory Cell Biology course. University of California, Davis.
- *Presented well-received lecture on cytoskeleton for 200 undergraduate students.*
- 1997 Volunteer Field Guide for Invertebrate Zoology course. University of California, Davis.
- *Assisted with field instruction of undergraduates in intertidal zone at Monterey Bay.*
- 1996 Invited Demonstrator, Pioneer Elementary School Science & Technology Day, Davis, CA
- *Illustrated principles of physics as "YoYo Man" to 3rd-6th graders using yoyo tricks.*

PROFESSIONAL ACTIVITIES

Professional Society Memberships

- 1989-present American Society for Cell Biology, all but three years
- 2002-present Project Kaleidoscope Faculty for the 21st Century
- 1998-present Council on Undergraduate Research
- '89, 2008-11 American Association for the Advancement of Science

Committee Appointments

- 2012-2015 Provost's Advisory Committee, Wheaton College, Norton MA (elected. 3 yrs. 1 as Chair.)

CURRICULUM VITAE - ROBERT L. MORRIS

- 2014-present American Association of Univ. Profs., Wheaton Chapter Exec. Comm., Member-at-Large.
- 2013 Chair, Advisory Committee to the Director 2, MDI Bio Lab, Salisbury Cove ME. (selected)
• *Invited by Lab Director to Chair a committee of visiting faculty to review Visiting Scientist Program.*
- 2012-13 Advisory Committee to the Director 1, MDI Biological Lab, Salisbury Cove ME. (selected)
• *Invited by Lab Director to help represent visiting faculty in review of Visiting Scientist Program.*
- 2011-12 Director's Advisory Committee, Mount Desert Island Biological Laboratory. (selected)
• *Invited by Lab Director to help represent visiting faculty on issues affecting the lab community.*
- 2012-present Health Professions Advisory Committee, Wheaton College, Norton, MA (volunteered)
- 2000-2011 Co-advisor to Psychobiology program, Wheaton College, Norton, MA (elected)
- 2007-10 Advisory Committee, Wheaton College, Norton, MA (elected, served 3 years with 1 as Chair)
• *Served during search for new provost, including twice-weekly meetings to write prospectus for the search and to advise President on transition. Served during time of exceptional budgetary constraint necessitating creation of budgetary "Task Forces" and standing "Priorities and Planning Committee".*
- 2004-2010 Pre-Health Advisory Committee, Wheaton College, Norton, MA (volunteered)
- 2003-2010 Science Center Building Committee, Wheaton College, Norton, MA (selected)
- 2004-2006 President's Coordinating Committee, Wheaton College, Norton, MA (selected)
- 2000-2003 Education Policy Committee, Wheaton College, Norton, MA (elected)
• *Served during three years of comprehensive College curriculum review. Weekly meetings to guide review, revision, passage, and implementation of new curriculum in addition to regular EPC business.*
- 2001 Convener & lead editor for Wheaton Science Center Mission Statement committee (selected)
- 1999-2001 General Ed requirements Study Group, Wheaton College, Norton, MA (appointed)
- 2001 "Wild West" Visiting Team member, Wheaton Coll. Norton, MA (volunteered)
• *Natural Science representative on team sent to visit Colorado College and Grinnell College to gather ideas for curriculum review. Co-composer/co-performer of "Hymn to Curriculum."*
- 2000 General Ed requirements Study Group Co-Convener, Wheaton Coll., Norton, MA (elected)
• *Co-convened General Ed. Study Group of faculty for Monthly meetings to plan new curriculum requirements. Co-authored report that became a guiding document in the curriculum review.*
- 2000-01 EPC Subcommittee on Out of Classroom Learning Wheaton Coll., Norton, MA (appointed)
- 1996-97 Mitosis/Meiosis Joint Lab Meeting Organizing Committee, U.C. Davis (volunteered)
- 1993, 94 Boston Area Graduate Student Symposium Organizing Committee (volunteered)
- 1990-95 Student Affairs Committee member, Program on Cell & Developmental Biology - Harvard Medical School (CDB-HMS) (volunteered)
- 1990 Founder and first Chair - Student Affairs Committee, CDB-HMS (elected)
- 1990 Student Representative on Bunn Commission (elected) - faculty panel established to review organization of CDB-HMS and make recommendations on its restructuring.
- 1989 Harvard Med Schl. Grad Student Rep. to Harvard Univ Grad Student Council (volunteered)
- 1989-95 Division of Medical Sciences Student Organization member (volunteered)

Major Workshops attended

- 2012 "How to get started on a new grant" workshop with mock study section. 17-18 July 2012. Mount Desert Island Biological Laboratory, Salisbury Cove, Maine.
- 2012 Council on Undergraduate Research "Dialogues" workshop on Grant Writing and Granting Agencies Feb 23-26. Washington DC. • *Sponsored self and two colleagues to attend.*
- 2009 American Association of Colleges and Universities "Engaging Departments Institute." July 13-17. Philadelphia PA. • *Represented department in workshop on learning goals.*
- 2003 Project Kaleidoscope Workshop on "Planning Facilities for Science" April 10-2, Drury University, Springfield, Missouri.
- 2002 Project Kaleidoscope's Faculty for the 21st Century Nat'l Mtg, Oct 11-13, Washington, DC.
- 2001 Project Kaleidoscope Workshop on "Undergraduate Neuroscience Education: from the Enchanted Loom to the World Wide Web," June 22-24, Trinity College, Hartford CT.
- 2000 "Problem-Based Learning: Integrating active learning with online resources," June 12-16, Institute for Transforming Undergraduate Education, University of Delaware.
- 2000 Science Center Workshop on Non-Majors Pedagogy, 3 days, Wheaton Coll., Norton, MA.
- 1999 Project Kaleidoscope Workshop on Science and Math Pedagogy, 3 days, Bethesda, MD.
- 1996 "Lab Leadership and Conflict Management" workshop, American Society for Cell Biology Annual Meeting, San Francisco, California.
- 1989-1995 Annual Teaching Workshops, Derek Bok Center for Teaching and Learning, Harvard University, Cambridge, MA.
- 1994 "Presenting Data and Information" workshop by Edward Tufte of Yale Univ, Boston, MA
- 1992 "Interactive Teaching Methods for Graduate Students," Div. of Medical Sciences, Harvard Medical School, Boston, MA.
- 1991 "Getting to Yes" workshop on negotiation techniques hosted by Roger Fisher - Harvard Negotiation Project, Harvard Law School, Cambridge, MA.
- 1989 "Crossing the Barrier of Resolution" workshop on advances in light microscopy, Harvard Medical School, Boston MA.

Additional Activities:

- 2001-present Developmental Biology of the Sea Urchin meeting Photographer and photo distributor to community through website at <http://acunix.wheatonma.edu/rmorris/> and Facebook site for interest group "DBSU - Developmental Biology of the Sea Urchin" that I created.
- 1984-present Certified SCUBA diver. Professional Association of Diving Instructors, Allentown, PA.
- 1994-2004 Licensed Amateur Radio operator - call sign N1SNZ.
- 1995-1998 Licensed Scientific Collector of marine invertebrates - California Dept of Fish & Game.
- 1995-1998 MC, & MC Coordinator - weekly Family Night Dinners, Davis Community Church.

PUBLICATIONS

* Asterisk denotes undergraduate co-author.

Papers:

Morris, R.L., H.W. Pope*, A.N. Sholi*, L.M. Williams*, C.R. Ettinger, G.M. Beacham*, T. Shintaku*, Z.D. Abbott*, and E.M. Doherty*. (2015) Methods for imaging individual cilia in living echinoid embryos. *Methods in Cell Biology*, Volume 127, ISSN 0091-679X, <http://dx.doi.org/10.1016/bs.mcb.2014.12.004> (in press).

J.H. Henson, A.D. Gianakas*, L.H. Henson*, C.L. Lakin*, M.K. Voss*, J. Bewersdorf, R. Oldenbourg, and **R.L. Morris**. (2014) Broadening the Spectrum of Actin-Based Protrusive Activity Mediated by Arp2/3 Complex-Facilitated Polymerization: Motility of Cytoplasmic Ridges and Tubular Projections. *Cytoskeleton* 71(8):484-500. doi: 10.1002/cm.21186. Epub 2014 Aug 26.

J.F. Warner, A.M. McCarthy*, **R.L. Morris**, D.R. McClay. (2013) Hedgehog Signaling Requires Motile Cilia in the Sea Urchin. *Mol Biol Evol*. 2013 Nov 5. doi:10.1093/molbev/mst176

E.F. Dunn, V.N. Moy, L.M. Angerer, R.C. Angerer, **R.L. Morris**, and K.J. Peterson. (2007) Molecular paleoecology: Using gene regulatory analysis to address the origins of complex life cycles in the late Precambrian. *Evolution and Development* 9(1):10-24.

Sea Urchin Genome Sequencing Consortium: Sodergren E, Weinstock GM, Davidson EH, Cameron RA, Gibbs RA, Angerer RC, Angerer LM, Arnone MI, Burgess DR, Burke RD, Coffman JA, Dean M, Elphick MR, Ettensohn CA, Foltz KR, Hamdoun A, Hynes RO, Klein WH, Marzluff W, McClay DR, **Morris RL**, Mushegian A, Rast JP, Smith LC, Thorndyke MC, Vacquier VD, Wessel GM, Wray G, Zhang L, Elsik CG, Ermolaeva O, Hlavina W, Hofmann G, Kitts P, Landrum MJ, Mackey AJ, Maglott D, Panopoulou G, Poustka AJ, Pruitt K, Sapojnikov V, Song X, Souvorov A, Solovyev V, Wei Z, Whittaker CA, Worley K, Durbin KJ, Shen Y, Fedrigo O, Garfield D, Haygood R, Primus A, Satija R, Severson T, Gonzalez-Garay ML, Jackson AR, Milosavljevic A, Tong M, Killian CE, Livingston BT, Wilt FH, Adams N, Bellé R, Carbonneau S, Cheung R, Cormier P, Cosson B, Croce J, Fernandez-Guerra A, Genevière AM, Goel M, Kelkar H, Morales J, Mulner-Lorillon O, Robertson AJ, Goldstone JV, Cole B, Epel D, Gold B, Hahn ME, Howard-Ashby M, Scally M, Stegeman JJ, Allgood EL*, Cool J*, Judkins KM*, McCafferty SS, Musante AM*, Obar RA, Rawson AP*, Rossetti BJ*, Gibbons IR, Hoffman MP, Leone A, Istrail S, Materna SC, Samanta MP, Stolc V, Tongprasit W, Tu Q, Bergeron KF, Brandhorst BP, Whittle J, Berney K, Bottjer DJ, Calestani C, Peterson K, Chow E, Yuan QA, Elhaik E, Graur D, Reese JT, Bosdet I, Heesun S, Marra MA, Schein J, Anderson MK, Brockton V, Buckley KM, Cohen AH, Fugmann SD, Hibino T, Loza-Coll M, Majeske AJ, Messier C, Nair SV, Pancer Z, Terwilliger DP, Agca C, Arboleda E, Chen N, Churcher AM, Hallböök F, Humphrey GW, Idris MM, Kiyama T, Liang S, Mellott D, Mu X, Murray G, Olinski RP, Raible F, Rowe M, Taylor JS, Tessmar-Raible K, Wang D, Wilson KH, Yaguchi S, Gaasterland T, Galindo BE, Gunaratne HJ, Juliano C, Kinukawa M, Moy GW, Neill AT, Nomura M, Raisch M, Reade A, Roux MM, Song JL, Su YH, Townley IK, Voronina E, Wong JL, Amore G, Branno M, Brown ER, Cavalieri V, Duboc V, Duloquin L, Flytzanis C, Gache C, Lapraz F, Lepage T, Locascio A, Martinez P, Matassi G, Matranga V, Range R, Rizzo F, Röttinger E, Beane W, Bradham C, Byrum C, Glenn T, Hussain S, Manning G, Miranda E, Thomason R, Walton K, Wikramanayake A, Wu SY, Xu R, Brown CT, Chen L, Gray RF, Lee PY, Nam J, Oliveri P, Smith J, Muzny D, Bell S, Chacko J, Cree A, Curry S, Davis C, Dinh H, Dugan-Rocha S, Fowler J, Gill R, Hamilton C, Hernandez J, Hines S, Hume J, Jackson L, Jolivet A, Kovar C, Lee S, Lewis L, Miner G, Morgan M, Nazareth LV, Okwuonu G, Parker D, Pu LL, Thorn R, Wright R. (2006). The genome of the sea urchin *Strongylocentrotus purpuratus*. *Science*. 314(5801):941-52.

R.L. Morris, Hoffman MP, Obar RA, McCafferty SS, Gibbons IR, Leone AD*, Cool J*, Allgood EL*, Musante AM*, Judkins KM*, Rossetti BJ*, Rawson AP*, Burgess DR. (2006). Analysis of cytoskeletal and motility proteins in the sea urchin genome assembly. *Developmental Biology* 300(1):219-37.

R.L. Morris, C.N. English*, J.E. Lou*, F.J. Dufort*, J.J. Nordberg*, M. Terasaki, and B. Hinkle. (2004) Redistribution of the kinesin-II subunit KAP from cilia to nuclei during the mitotic and ciliogenic cycles in sea urchin embryos. *Developmental Biology* 274:56-69.

R.L. Morris, H.M. Brown, B.D. Wright, D.J. Sharp, W. Sullivan, and J.M. Scholey. (2001) Microinjection methods for analyzing the functions of kinesins in early embryos. In *Methods in Molecular Biology: Kinesin Protocols*. 164:163-172.

R.L. Morris. (2001) Navigating by landmarks. *Cell* 105:310-312. (book review of *Landmark Papers in Cell Biology*, edited by Joseph G. Gall and J. Richard McIntosh, Cold Spring Harbor, NY, and Bethesda, MD; American Society for Cell Biology and Cold Spring Harbor Laboratory Press, 532 pp.)

G C. Rogers, K. K. Chui, E..W. Lee*, K.P. Wedaman, D.J. Sharp, G. Holland, **R.L. Morris**, and J.M. Scholey. (2000). A Kinesin-Related Protein, KRP180, Positions Spindle Poles During Early Sea Urchin Embryonic Cell Division. *Journal of Cell Biology* 150:499-512.

R.L. Morris and J.M. Scholey. (1997) Heterotrimeric kinesin-II is required for the assembly of motile 9+2 ciliary axonemes on sea urchin embryos. *Journal of Cell Biology* 138:1009-1022.

G.-Q. Bi, **R.L. Morris**, G. Liao, J.M. Alderton, J.M. Scholey, and R.A. Steinhardt. (1997) Kinesin- and myosin-driven steps of vesicle recruitment for Ca²⁺-regulated exocytosis. *J. Cell Biology* 138:999-1008.

R.L. Morris and P.J. Hollenbeck. (1995) Axonal transport of mitochondria along microtubules and F-actin in living vertebrate neurons. *Journal of Cell Biology* 131:1315-1326.

R.L. Morris and P.J. Hollenbeck. (1993) The regulation of bidirectional mitochondrial transport is coordinated with axonal outgrowth. *Journal of Cell Science* 104:917-927.

B. Pouvelle, R. Spiegel, L. Hsiao, R.J. Howard, **R.L. Morris**, A.P. Thomas, and T.F. Taraschi. (1991) Direct access to serum macromolecules by intraerythrocytic malaria parasites. *Nature* 353:73-75.

M. Prentki, M.C. Glennon, A.P. Thomas, **R.L. Morris**, F.M. Matschinsky, and B.E. Corky. (1988) Cell-specific patterns of oscillating free Ca²⁺ in carbamylcholine-stimulated insulinoma cells. *Journal of Biological Chemistry* 263(23):11044-7.

S.K. Majumdar, O. Delucia*, R. Holt*, C. Derivaux*, R. Marcus*, P. Erwin*, L. Mineo, P. Steed*, and **R.L. Morris***. (1987) Effects of limestone treatment on microbial communities and sediment chemistry in acid stressed Pennsylvania lakes, U.S.A. In: *Acid rain: scientific and technical advances*. R. Perry, R.M. Harrison, J.N.B. Bell, and J.N. Lester, eds. Selper, Ltd. London. p.465-472.

L. Mineo, S.K. Majumdar, J. Wasserman*, E. Abitanta*, G. Rall*, P. Steed*, and **R.L. Morris***. (1986) Ectomycorrhizal frequency of Pennsylvania oaks and other forest trees in two soil types as related to soil chemistry and tissue contents. *Proceedings of the Pennsylvania Academy of Sciences* 60:1, p.89.

P. Steed*, S.K. Majumdar, G. Rall*, R. Snyder*, **R.L. Morris***, K. Berger*, T. Baker*, and L. Mineo. (1986) Microbiological studied of two acid-stressed lakes in the Poconos before and after limestone application. *Proceedings of the Pennsylvania Academy of Sciences* 60:1, p.95.

S.K. Majumdar, P. Steed*, G. Rall, O. Delucia*, R. Snyder*, L. Mineo, **R.L. Morris***, C. Barthelmes*, K. Berger*, and T. Baker*. (1986) Impact of acid precipitation and lime neutralization on bacteria and diatom populations in two lakes in the Poconos, Pennsylvania. In: *Endangered and threatened species programs in Pennsylvania and other states: causes, issues, and management*. S.K. Majumdar, F. Brenner, and A. Rhoads, eds. Pennsylvania Academy of Sciences. p.472-485.

Published Abstracts:

A.N. Sholi*, Z.D. Abbott*, **R.L. Morris**. (2014) Metal ion effects on ciliary differentiation in *Lytechinus pictus* and *Echinarachnius parma* embryos. *The Bulletin*, MDI Biological Laboratory (in press).

L.M. Williams*, G.M. Beacham*, E.M. Doherty*, **R.L. Morris**. (2013) The differentiation of cilia subtypes during early stages of sea urchin (*Lytechinus pictus*) embryogenesis. *The Bulletin*, MDI Biological Laboratory V. 52, p 31.

L.M. Barkhouse*, **R.L. Morris**, J.M. Tomich, G.W. Conrad. (2013) Channel-forming peptide allows diffusion of riboflavin and dextran into the sea urchin embryo blastocoel and inhibits blastula spinning and sperm movement. *The Bulletin*, MDI Biological Laboratory V. 52, p 32-33.

R.L. Morris, L.M. Williams*, E.M. Doherty*, G.M. Beacham*, N.A. Sholi*, A.M. McCarthy*, K.M. Hewitt*, B.J. Rossetti*, R.T. Manguso*, M.L. Keyes*, I.D. Greenstein*, T. Shintaku*, A. Hussain*, A.M. Carson*, J. Browne*, A.P. Rawson*, J.J. Nordberg*, C.N. English*, D. Erkoboni. (2012). Mechanisms of ciliary growth and differentiation in echinoderm embryos. *Mol. Biol. Cell* 21 (suppl), abstract #2551. presented at the American Society for Cell Biology annual meeting, San Francisco, Dec 16, 2012.

A. Gianakas*, **R.L. Morris**, J. Henson. (2011) The rocketing motility of cytoplasmic ridges present in spreading sea urchin (*Strongylocentrotus droebachiensis*) coelomocytes is driven by Arp2/3 complex-facilitated actin polymerization. *The Bulletin*, MDI Biological Laboratory V. 52, p. 62.

R.L. Morris, I.D. Greenstein*, T. Shintaku*, A. Hussain*, A.M. Carson*, K.M. Hewitt*. (2010). Differentiation of Ciliary Subtypes During Echinoid Development. *Mol. Biol. Cell* 21 (suppl), abstract #159. presented at the American Society for Cell Biology annual meeting, Philadelphia, Dec 12, 2010.

A. Gianakas*, **R.L. Morris**, and J.H. Henson. (2010). Arp2/3 Complex-Facilitated Actin Polymerization Drives the Rocketing Motility Exhibited by Cytoplasmic Ridges in Spreading Sea Urchin Coelomocytes. *Mol. Biol. Cell* 21 (suppl), abstract #186. presented at the American Society for Cell Biology annual meeting, Philadelphia, Dec 12, 2010.

R.L. Morris, R.T. Manguso*, M.L. Keyes*, B.J. Rossetti*, A.P. Rawson*, T. Shintaku*, and Ian Greenstein*. (2009) Developmental Regulation Of The Ciliary Proteome in Sea Urchin. (abstract for poster presented at the Developmental Biology of the Sea Urchin meeting, MBL, Woods Hole MA, October 2009).

R.L. Morris, B.J. Rossetti*, A.P. Rawson*, A. Hussain*, T. Shintaku*, D. Perelman*. (2008) Developmental Regulation Of The Ciliary Proteome in Sea Urchin. *Molecular Biology of the Cell* 19 (suppl), abstract #1760. (CD-ROM). (abstract for poster presented at the American Society for Cell Biology annual meeting, San Francisco, Dec 16, 2008).

R.L. Morris, B.J. Rossetti*, D.R. Burgess, A.M. Musante*, K.M. Judkins*, A.P. Rawson*. (2006) Analysis of ciliary and flagellar genes in the sea urchin genome. *Molecular Biology of the Cell* 17 (supplement): Poster L54. (abstract for poster presented at the late breaking poster section of the American Society for Cell Biology Meeting, San Diego, CA, in December, 2006).

J.L. Verburg, **R.L. Morris**, and P.J. Hollenbeck. (2005) Mitochondrial transport and location within axons is not associated with differences in membrane potential. *Mol. Biol. Cell*, 21, 4299 (2010). (Abstract 301) (poster presented at the American Society for Cell Biology Meeting, San Francisco, CA, December, 2005). doi:10.1091/mbc.E11-08-0667

R.L. Morris, D. Erkoboni*, J. Nordberg*, C.N. English*, F.J. Dufort*, A.Manning*. (2005)

Stepwise ciliary growth on sea urchin embryos supported by kinesin-2. *Molecular Biology of the Cell* 16 (supplement). (abstract for poster presented at the American Society for Cell Biology Meeting, San Francisco, CA, December, 2005). doi:10.1091/mbc.E11-08-0667

R.L. Morris, G.C Collins, C.N. English*, D.M. Kyes*, and G.G. Ahrendts. (2003). ICUC: a digital imaging lab infusing active learning throughout an undergraduate science curriculum. *Molecular Biology of the Cell* 14(supplement):248a. 2003. (abstract presented at the American Society for Cell Biology Meeting, San Francisco, in December, 2003).

R.L. Morris, C. English*, J. Lou*, M. Terasaki, B. Hinkle, J. Nordberg*, and F. Dufort*. (2002) Redistribution of kinesin-II from cilia to nuclei during the cell cycle in early sea urchin embryos. *Molecular Biology of the Cell* 13(supplement):323a. (abstract presented with C. English, J. Nordberg, and M. Terasaki at the American Society for Cell Biology Meeting, San Francisco, in December, 2002).

R.L. Morris, M. Terasaki, B. Hinkle, J. Lou*, A. Manning*, J. Nordberg*, F. Dufort*, and M. Kwon. (2000) Stepwise growth and maturation of cilia on sea urchin embryos correlate with kinesin-II redistribution. *Molecular Biology of the Cell* 11(S):81a. (abstract presented with J. Lou, A. Manning, J. Nordberg, and M. Terasaki at American Society for Cell Biology Meeting, San Francisco, in December 2000).

R.L. Morris, F.J. Dufort*, J.J. Nordberg*, and M. Kwon. (1999) Stepwise growth and maturation of cilia on sea urchin embryos correlate with the presence of kinesin-II. *Molecular Biology of the Cell* 10(S):386a. (abstract presented with J. Nordberg, at American Society for Cell Biol. Mtg., Washington DC, Dec. 1999).

B. O'Rourke, **R.L. Morris**, D.K. Reibel, and A.P. Thomas. (1988) Digital image analysis of contraction and the calcium transient in Fura-2-loaded rat cardiomyocytes using a CCD camera. *FASEB Journal* 2(5):A979 (abstr).

ADDITIONAL SPONSORED STUDENT RESEARCH PRESENTATIONS:

* Asterisk denotes undergraduate author or co-author.

Extramural:

J. Bhatia*, B.J. Chick*, S.C. Cummings*, J.M. Fess*, B.A. Jeffrey*, E.A. Kovacs*, L.E. Shorey*, A.L. Silverio*, S.A. Tower*, R.-H. Yen*, and R.L. Morris (2006) The effects of mercury on primary culture chick sympathetic neurons.

- Poster presented with Bio324/Neurobiology students at the Northeast Undergraduate Research Organization for Neuroscience annual meeting. Hunter College, New York, NY. April 5, 2006.

J.K. Allegra*, J.M. Anger*, A.G. Asanchev*, R.J. Borkowski*, T.K. George*, D.M. Kyes, W.A. Sirois*, L.M. Suarez*, and R.L. Morris. (2004) "Do En Passant Synapses Form Between Primary Culture Sympathetic Neurons?"

- Poster presented with Bio324/Neurobiology students at the Northeast Undergraduate Research Organization for Neuroscience annual meeting. Wheaton College, Norton MA. May 2, 2004.

C. English* '03 (2003) "Redistribution of Kinesin-II from Cilia to Nuclei During the Cell Cycle in Early Sea Urchin Embryos."

- Poster presented at the Tri-Beta Biological Honor Society Northeastern District Convention at Worcester State College, Worcester, MA. April 5, 2003. Here Chris's presentation of the work he accomplished in my lab received the John C. Johnson Award for Excellence in Poster Presentation.
- Talk presented at the Eastern New England Biological Conference, Boston College, April 12, 2003.

R.L. Morris, M. Terasaki, B. Hinkle, C. English* '03, J. Lou* '01, S. Benz* '05, D. Erkoboni* '05, and C. Hunt* '03. (2002) "Redistribution of Kinesin-II and Microtubules During Ciliogenesis and Mitosis in Sea Urchin Embryos."

- Poster presented with students at the Developmental Biology of the Sea Urchin Meeting, Woods Hole, MA. May 1-5, 2002.

R.L. Morris, M. Terasaki, B. Hinkle, J. Lou* '01, A. Manning* '01, J.J. Nordberg* '00, F.J. Dufort* '00, and M. Kwon. (2000) "Stepwise growth and maturation of cilia on sea urchin embryos correlate with kinesin-II redistribution."

- *Poster presented with students at the Developmental Biology of the Sea Urchin Meeting, Woods Hole, MA. Sept 28 - Oct 1, 2000.*

Intramural:

* Asterisk denotes undergraduate author or co-author.

Chelsea Ettinger*, Hans Pope*, Adam Sholi*, Walker Fuchs*, Javon Mullings*, Robert L. Morris. (2014) "Characterization of Vegetal Cilia and Planar Cell Polarity."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 11, 2014.*

Leah M. Williams*, Adam Sholi*, Hans Pope*, Chelsea Ettinger*, Walker Fuchs*, Javon Mullings*, David Scott*, Elyse Doherty*, Gwen Beacham* Robert L. Morris. (2013) "Exploration of Ciliary Differentiation Using Heavy Metal Exposure and Microscopy."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 26, 2013.*

Kevin Hewitt* '12, N.Adam Sholi* '14, Ali McCarthy* '14, and Robert L. Morris (2012). "Characterization of Ciliary Gene Function in Embryos."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 14, 2012.*

Kevin Hewitt* '12, N.Adam Sholi* '14, Ali McCarthy* '14, and Robert L. Morris (2012). "Characterization of Ciliary Gene Function in Embryos."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 14, 2012.*

Jason Browne* '12, Elyse Doherty* '13, Leah Williams* '13, and Robert L. Morris (2012). "Characterization of Cilia on Skeleton-Forming Cells using Cell Culture and Immunofluorescence Techniques."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 14, 2012.*

Ian Greenstein* '11, Tatsushi Shintaku* '11, Kevin Hewitt* '12, Annalisa Carson* '11, Alexandra Wilson* '12, Leah Williams* '13, and Robert L. Morris (2011). "Molecular characterization of cilia formation in early sea urchin and sand dollar embryos."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 15, 2011.*

Amanda Rawson* '09 (2008). "Analysis of the Ciliary Life Cycle on Sea Urchin Embryos."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 11, 2008.*

Blair J. Rossetti* '09, Katrina Brakonkiecki* '10, Ali Hussain* '11, Colby Jenkins* '11, Matthew Migliozi* '11, David Perelman* '11, Amanda Rawson* '09, Tatsu Shintaku* '11, Julia Simundza* '09. (2008). "Analysis of the Ciliary Genes in the Sea Urchin Genome."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 11, 2008.*

Justin Jin* '06, Kyle Judkins* '08, Ashlan Musante* '08, Amanda Rawson* '09, Blair J. Rossetti* '09, Amanda Shorette* '09, and Ian Strachan* '09. (2008). "The Tubulin, Dynein, and Kinesin Gene Families in the Sea Urchin Genome."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 21, 2006.*

Jonah Cool* '04 (2004) "Candidate Regulatory Elements Controlling Ciliogenesis Genes."

- *Senior Honors Thesis and Thesis Talk. Wheaton College, Norton, MA. May 10, 2004.*

Danielle Erkoboni* '05, Meghan Tracewski* '04, Roxana Mesias* '06, Cassandra MacDonald* '06, and Jamaal Rawls-Payton* '05. "Cytoskeletal Dynamics of the Cilia Life Cycle."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 16, 2004.*

Jonah Cool* '04, Erin Allgood* '07, John Lee* '06, Alexander Myers* '07, and Robert Borkowski* '06, presented "Genomic Analysis of Ciliary Gene Regulation."

- *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 16, 2004.*

C. English* '03 (2003) "Redistribution and Function of Kinesin-II in Early Sea Urchin Embryos."

- *Senior Honors Thesis and Thesis Talk. Wheaton College, Norton, MA. May 8, 2003.*

- C. English* '03 (2003) "Redistribution of Kinesin-II from Cilia to Nuclei During the Cell Cycle in Early Sea Urchin Embryos."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 11, 2003.*
- C. English* '03. (2002) "Molecular Localization Signals in the Motor Protein Kinesin-II."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 19, 2002.*
- Catherine Hunt* '03, Steve Benz* '05, Danielle Erkoboni* '05. (2002) "Subcellular Movements of the Motor Protein Kinesin-II."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 19, 2002.*
- J. Lou* '01. (2001) "Behavior and Localization of Kinesin-II in Sea Urchin Embryos."
· *Senior Honors Thesis and Thesis Talk. Wheaton College, Norton, MA. May 19, 2001.*
- J. Lou* '01. (2001) "Functions of the Motor Protein Kinesin-II in Sea Urchin Development."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 20, 2001.*
- C. English* '03. (2001) "Microscopic Analysis of Cytoskeletal Dynamics in Developing Sea Urchin Embryos." · *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 20, 2001.*
- A. Manning* '01. (2000) "Comparative Ciliogenesis in Sea Urchin Embryos."
· *Poster presented to Trustees at Autumnfest, Wheaton College, Norton, MA. October 21, 2000.*
- J. Lou* '01. (2000) "Functions of the Motor Protein Kinesin-II in Sea Urchin Development."
· *Poster presented to Trustees at Autumnfest, Wheaton College, Norton, MA. October 21, 2000.*
- F.J. Dufort* '00. (2000) "An investigation of Kinesin-II in Ciliogenesis of Sea Urchin Embryos."
· *Senior Honors Thesis and Thesis Talk. Wheaton College, Norton, MA. May 20, 2000.*
- J.J. Nordberg* '00. (2000) "Ciliogenesis in Sea Urchin Embryos Occurs in Discrete Steps."
· *Senior Honors Thesis and Thesis Talk. Wheaton College, Norton, MA. May 20, 2000.*
- F.J. Dufort* '00. (2000) "An investigation of Kinesin-II in Ciliogenesis of Sea Urchin Embryos."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 14, 2000.*
- J.J. Nordberg* '00. (2000) "Ciliogenesis in Sea Urchin Embryos Occurs in Discrete Steps."
· *Poster presented at Academic Festival, Wheaton College, Norton, MA. April 14, 2000.*