CURRICULUM VITAE (2018)

Dr. JONATHAN M. SCHOLEY

Distinguished Professor Emeritus.
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1. Education

1. Undergraduate: BSc in Cell and Molecular Biology, 1977 (First class honors)
   MRC Cell Biophysics Unit/Biophysics Department, University of London, King's College

2. Post-graduate: PhD in Molecular Biology, 1981
   MRC Laboratory of Molecular Biology, University of Cambridge, Trinity College.

3. Post-doctorate: Cell Biology, 1982-1986
   Department of Molecular, Cell and Developmental Biology, U of Colorado at Boulder

2. Research Interests

a. *Scholey Laboratory*: Cell and Molecular Biology. Cell Biology of Motor Proteins in Mitosis and Ciliogenesis

Specific Projects: 1. Mitotic Motors and the Mechanism of Mitosis in *Drosophila* and Echinoderm embryos: 2. Kinesin-2 Motors, Intraflagellar Transport and Cilium Assembly on *C. elegans* sensory neurons and sea urchin swimming blastula-stage embryos.

Technical approaches: Protein and Nucleotide Biochemistry; Motor Protein Purification and Assay; Molecular Biology; Elucidation of Protein Dynamics and Function in Cells using Light Microscopy combined with Antibody Microinjection, RNA interference and Mutant Analysis; Quantitative Modeling.

b. *Postdoctoral Research:* Mitotic Motors and the Mechanism of Mitosis. Mentor: Professor J. Richard McIntosh, University of Colorado, Boulder.

c. *PhD Research:* Myosin Motors and the Regulation of Muscle Contraction and Actomyosin-based Cell Motility. Mentor: Dr John Kendrick-Jones, MRC LMB, Cambridge.

3. Professional Service and Awards.

(a) *Academic Appointments.*

7/1/86-6/30/93: Assistant Professor of (i) Biochemistry, Biophysics and Genetics and (ii) Cell and Structural Biology, University of Colorado Health Science Center, Denver, Colorado.
7/1/86-6/30/89: Staff Scientist, Department of Molecular and Cell Biology, National Jewish Hospital and Research Center, Denver, Colorado
7/1/89-6/30/92: Assistant Professor of Molecular Biology of Animal Cells, Department of Zoology, University of California, Davis.
7/1/92-6/30/93: Associate Professor of Cell Biology, Department of Molecular and Cell Biology, University of California, Davis.
Summer 1993: Lakian Visiting Summer Research Fellow, Marine Biological Laboratory, Woods Hole, Massachusetts.
01-03, 1995: Invited Visiting Professor and Lecturer, National Institute for Advanced Interdisciplinary Research, Tsukuba, Japan (Host Dr Takashi Shimizu).
2001-2007: Professor and Executive Committee Member, Center for Genetics and Development, University of California, Davis.
1997-1998: Visiting Professor, Department of Biochemistry and Biophysics, University of California, San Francisco (Hosts Professors Vale, Mitchison and Alberts).
2010-2011: Visiting Professor and Fulbright Senior Lecturer in Molecular Biology, Department of Molecular Biology and Genetics, Bogazici University, Istanbul, Turkey.
7/1/89-2015: Cell Biologist and Biochemist, Agricultural Experiment Station, University of California, Davis.
1993-2014: Professor of Cell Biology and Biochemistry, Department of Molecular and Cell Biology, University of California, Davis.
2011-2017: Adjunct Professor of Molecular Biology, Department of Molecular Biology and Genetics, Bogazici University, Istanbul, Turkey.
2014: Distinguished Professor of Cell Biology and Biochemistry, Department of Molecular and Cell Biology, University of California, Davis.
2015-present: Distinguished Professor Emeritus of Cell Biology and Biochemistry, Department of Molecular and Cell Biology, University of California, Davis. (Retired on 60th birthday, March 2015).

(b) *Awards and Miscellaneous Items etc.*

2017: Elected Fellow of the American Society for Cell Biology

2014: Distinguished Professor (Emeritus 2015).
Fall 2104: Faculty Lifetime Achievement Award from the Biochemistry, Molecular, Cellular and Developmental Biology Graduate Group, UC Davis.
2012-2013: UC Davis "Provost Hybrid Course Award" to develop the new senior level undergraduate class, "An iBioSeminars Class in Cell and Molecular Biology".

2010-2011: Fulbright Scholar: Senior Lecturer Award to Lecture in Molecular Biology at Bogazici University, Istanbul, Turkey
1/1/06-present: Editorial Board Member, Molecular Biology of the Cell.
2005-2008: Faculty of 1000, Cell Biology Faculty Member.
2000-2007: Editorial Board Member, Journal of Biological Chemistry.
1996: Elected Chair, Gordon Research Conference on Motile and Contractile Systems.
1995: Honorary Member, Golden Key National Honor Society.
1995: Invited Visiting Professor and Lecturer, National Institute for Advanced Interdisciplinary Research, NIBHT, Tsukuba Research Center, Tsukuba, Japan.
1994: Elected Vice-Chair, Gordon Research Conference on Motile and Contractile Systems.
1993-present: Editorial Board Member, Cytoskeleton.
1993: Lakian Summer Research Fellowship, Marine Biology Laboratory, Woods Hole, Mass.
1986-1988: Basil O'Connor Starter Research Scholar, March of Dimes Birth Defects Foundation
1983-1985: British-American Postdoctoral Research Fellowship from the British Heart Foundation and American Heart Association to do research at the Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, Colorado.
1982-1983: MRC Traveling Postdoctoral Fellowship to do research at the Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, Colorado
1980-82: Short-term appointment on the scientific staff of MRC Laboratory of Molecular Biology, Cambridge, England (Grade II, non-clinical scientist)
1977-1980: MRC Studentship for training in molecular biology research methods at the MRC Laboratory of Molecular Biology, Cambridge, UK.
1976-77: Sambrooke exhibition, Department of Biophysics, Kings College, London.
1973: GCE S-level (scholarship level) in Chemistry, Northampton Grammar School.

4 (a) Talks at University Departments and Meetings (Since 1994)

- *Prior to 1994*, I gave many research seminars but kept no records of them.
- *March 1994*, Invited Speaker, The Welcome Trust Meeting on Molecular Motors, London.
- *October, 1994*. Invited Seminar, Dept. of Biochemistry and Molecular Biology, U. of Southern California School of Medicine, Los Angeles.
- *October, 1994*. Invited Speaker, Airlie House Biophysical Society Meeting on Motor Proteins. Talk presented by Post-doctoral Fellow, Dr Doug Cole.
- *February, 1995*. Invited Speaker, The Keystone Symposium on Molecular Motors and the Cytoskeleton in Cell Growth, Organization and Differentiation. Session on "Mitosis".
- *February, 1995*. Invited Seminar, Tsukuba Research Center, Tsukuba, Japan.
- *February, 1995*. Invited Seminar, Department of Biology, University of Tokyo Meguro-Kyu Campus.
- *February, 1995*. Invited Seminar, Department of Cell Biology and Anatomy, University of Tokyo Medical School Campus.
- *April, 1995*. Selected Paper. Cold Spring Harbor Meeting on the Cytoskeleton and Cell Function. Talk presented by Post-doctoral Fellow, Dr Anna Kashina.
- *June, 1995*. Invited Seminar. Seminars in Biology Series, University of California, San Francisco Medical School.
- *September, 1995*. Invited Seminar, University of California, Berkeley, Division-wide seminar series.
- *December, 1995*. Invited Speaker. ASCB subgroup meeting on Molecular Motors.
- *May, 1996*. Invited Seminar. Dept. of Biology, University of California, Santa Barbara.
- *May, 1996*. Invited Seminar, Laboratory of Cell Biology, NIH, Bethesda, MD.
- *October, 1996*. Invited Speaker, UCD dept. of Nematology. Talk on "Motor Proteins and Amphid Cilia."
- *January, 1997*. Invited Seminar, UC Bodega Marine Laboratory.
- *May, 1997*. Invited Seminar, Dept. of Cell Biology and Anatomy, University of Cincinnati College of Medicine.
- *September, 1997*. Invited Chair and Symposium Speaker. Sea Urchin Developmental Biology Meeting, Woods Hole, Marine Biological Laboratory; "The Cell Biology of Cleavage".
- *October, 1997*. Invited Seminar, University of California at Berkeley, Department of MCB division wide seminar series.
- *April, 1998*. Invited Seminar, Dept. of Biology, University of California, Santa Cruz.
- *April, 1998*. Invited Seminar, Dept. of Cell Biology, University of Virginia Health Science Center.
- *May, 1998*. Invited Seminar, Dept. of Biology, University of North Carolina at Chapel Hill.
- *May, 1998*. Invited Seminar, Dept. of Biology, Yale University.
- *May, 1998*. Invited Seminar, Dept. of Cell Biology, Harvard Medical School.
- *May, 1998*. Invited Seminar, Dept. of Anatomy, University of Wisconsin, Madison.
- *June, 1998*. Invited Seminar, Department of Microbiology, UC Davis.
- *August, 1998*. Invited Symposium Speaker. Committee of Exellence in Science and Arts International Conference on Molecular Mechanisms of Intracellular Transports, Shonan Village, Japan.
- *September, 1998*. Invited Speaker. FEBS meeting on Molecular Motors, Marie Curie Research Center, Oxted, UK. Talk presented by post-doctoral fellow, Dr David Sharp.

- *April, 1999*. Invited Seminar, San Francisco State University. Colloquium in Cell, Molecular & Microbiology. Microtubule-based transport and ciliary assembly in neurons and embryos"
- *April, 1999*. Invited Speaker, American Society of Anatomists, Experimental Biology, '99. Symposium on Molecular Motors: Effects in Cell and Developmental Biology, Washington, DC. Talk on "Roles of Kinesin Motors in Organelle Transport, Mitosis and Ciliogenesis".
- *April, 1999*. Invited Seminar. Purdue University Dept. of Biological Sciences. Talk on "Microtubule-based Motor Proteins and Macromolecular Machines".
- *June, 1999*. Invited Seminar, MRC Laboratory of Molecular Biology, Cambridge, UK. Talk on "Microtubule Motors in Mitosis".
- *June, 1999*. Invited Seminar on "Microtubule Motors in Mitosis" Marie Curie Research Institute, Oxted, Surrey, UK.
- *June, 1999*. Recruitment Seminar, Dept. of Cell Biology and Anatomy, University of North Carolina, Chapel Hill. "Microtubule Motors in Mitosis".
- *September, 1999*. Invited Speaker, Conference on Cilia, Mucus, & Mucociliary Interactions, Lake Garda, Italy. Talk on "Intraciliary Trafficking in *C. elegans*" given by graduate student, Dawn Signor.
- *October, 1999*. Invited Recruitment Seminar, Dept. of Biology, University of Virginia. "Microtubule-based Transport in a Simple Nervous System"
- *November, 1999*. Invited Seminar, University of Minnesota, Dept. of Genetics, Cell Biology and Development. Talk on "Microtubule-based Transport in a Simple Nervous System".
- *March, 2000*. Invited Speaker at meeting on "Molecular Motors and Cell Dynamics" Les Treilles, Nice, France.
- *March, 2000*. Invited Seminar, Dept. of Cell Biology, U Mass Medical School. Talks on 1. Mitotic Motors in *Drosophila* Embryos and 2. Intraflagellar Transport in the *C.elegans* Nervous system.
- *March, 2000*. Invited Seminar, Dept. of Cell Biology, Harvard Medical School. "Motor Proteins in Ciliogenesis and Mitosis".
- *April, 2000*. Invited Seminar, School of Biological Sciences, University of Kentucky. Talks on "Microtubule-based Transport in the Nervous System" and "Microtubule-motors in Mitosis".
- *June, 2000* Invited Speaker, EMBO Workshop on Regulation of Cell Division in Drosophila, Cortona, Italy June 10-15, 2000
- *November, 2000*. Invited Speaker, The 11th Takeda Science Foundation Symposium on Bioscience, Meeting on Molecular Motors, Awaji Island, Japan.
- *January, 2001*. Invited Seminar, Department of Cell Biology, The Scripps Research Institute, San Diego. Talk on "Mitosis in *Drosophila* embryos".
- *March, 2001*. Recruitment Seminar at Indiana University, Bloomington Depts. of Biology and Chemistry. Talks entitled, 1. Microtubule-based Transport in *C. elegans* Neurons and 2. Mitotic Motors in the *Drosophila* embryo.
- *April, 2001*. Invited Seminar, Biomedical Engineering Laboratory, Swiss Federal Institute of Technology, Lausanne, Switzerland. Talks on 1. Transport in a primitive nervous system and 2. Mitotic Motors in the Drosophila Embryo.
- *June, 2001*. Speaker, 1st MTBio Workshop: Function and Regulation of Cellular Systems, experiments and models. Max Planck Institute for the Physics of Complex Systems, Dresden Germany. Talk on "Microtubule Motors and Mitosis".
- *September, 2001*. Invited Seminar, Indiana University School of Medicine, Indianapolis. Talk on "Microtubule Motors in Mitosis".

- *November, 2001*. Invited Seminar, UC Santa Cruz, Dept. of Chemistry. Seminar on "Mechanisms of Mitosis".
- *December, 2001*. Invited Speaker, ASCB Subgroup meeting on Primary and Sensory Cilia. Talk on "IFT-motors".
- *February, 2002*. Invited Symposium Speaker, Biophysical Society Annual Meeting, SF. Talk on "Microtubule motors in Mitosis".
- *May 2002*. Invited Seminar, Center for Tissue Regeneration and Repair. Orthopaedic Research Lab, UC Davis Medical Center, Sacramento "Microtubule Dynamics and Molecular Motors".
- *September, 2002*. Invited Seminar, University of Pittsburg on "Mechanics and Dynamics of Mitosis".
- *December, 2002*. Invited Speaker, Meeting on Molecular Motors, Hamburg, Germany. Symposium invited talk on "Mitotic motors".
- *December, 2002*. Invited Seminar, Max Planck Institue for Structural Molecular Biology. Talk on "Intracellular transport in *C.elegans* Neurons".
- *December, 2002*. Invited Speaker at ASCB Subgroup Meeting on The Spindle Matrix. Talk on "The spindle Matrix; a skeptic's view".
- *January, 2003*. Invited Seminar at UC Irvine. "Mechanics and Dynamics of the Mitotic Spindle"
- *February, 2003*. Invited Seminar at Merck. "Mechanics and Dynamics of the Mitotic Spindle".
- *May 2003*. Invited Seminar at Albert Einstein College of Medicine, NY on "Microtubule-based Motility during Mitosis".
- *October 2003*. Seminar at UC Davis: Joint Seminars in Molecular Biology series on "Mitosis".
- *November 2003*. Invited Speaker, COE conference on Molecular Motors, Hakone, Japan. Talk on "A model for Anaphase B".
- *December 2003*. Invited Speaker and Discussant), ASCB annual meeting subgroup on "A standardized kinesin nomenclature".
- *December 2003*. Invited Session Organizer, Speaker and Co-chair, ASCB Molecular Motors Minisymposium. Talk on "A model for Anaphase B" presented by Post-doctoral fellow, Dr Ingrid Brust-Mascher.
- *March, 2004*. Invited Chair and Speaker at the American Physics Society Annual Conference, Montreal. Symposium on "Molecular Motor and the Physics of Cell Division". Two talks;
1. Introductory lecture "A brief history of Mitosis".
2. "A Model for Anaphase B Spindle elongation".
- *March, 2004*. Invited Seminar at the Lerner Center, Cleveland Clinic Foundation. "Analysis of Mitotic Spindle Morphogenesis and Elongation"
- *April, 2004*. Invited Speaker at the AChemS conference, Sarasota, Florida, symposium on Intraflagellar Transport. Talk on "Intraflagellar Transport Motors in *C. elegans* Neurons."
- *July, 2004*. Invited Speaker at BioScience 2004 (British Biochemical Society annual Meeting), Glasgow. Symposium on Molecular Motors. Talk on "Intraflagellar Transport Motors in Sensory Cilia on *C. elegans* neurons.
- *July, 2004*. Invited Seminar at the MRC Laboratory of Molecular Biology, Cambridge, U.K. on "Functional cooperation between microtubule motors in ciliogenesis and mitosis".
- *September 2004*. Invited Speaker, EMBO meeting on "Aneuploidy in Cortona", Cortona, Italy. Talk on "Model for Anaphase B: Role of three mitotic motors in a switch from poleward flux to spindle elongation"

- *October 2004*. Invited Seminar, Carnegie institute for Embryology, Johns Hopkins University, MD. “Functional Cooperation between microtubule motors involved in Intraflagellar Transport and Mitosis”
- *October 2004*. Invited Seminar, University of Connecticut Health Science Center. “Functional Cooperation between microtubule motors involved in Intraflagellar Transport and Mitosis”
- *April 2005*. Invited Seminar, University of Pennsylvania Muscle Research Institute. “Intraflagellar Transport Motors in *C. elegans* Neurons”.
- *July 2005*. Invited Speaker, Gordon Research Conference on Motile and Contractile Systems. “Intraflagellar Transport Motors in *C. elegans* Neurons”.
- *July 2005*. Invited Speaker, Mathematical Biology of the Cell, Banf Conference Center, Calgary, BC, Canada. “Molecular and Mathematical Analysis of Anaphase A and B in *Drosophila embryos*”.
- *August 2005*. Invited Lecturer *C. elegans* course: Cold Spring Harbor. “Intraflagellar Transport in *Caenorhabditis elegans* Neurons. From molecular motors to ciliary disease.”
- *September 2005*. Invited Speaker, Harden conference on Molecular Motors, Robinson College, Cambridge UK. “Kinesin-2 motors and Intraflagellar Transport in *C. elegans* Neurons”
- *September 2005*. Invited Speaker, BMB graduate student-organized research colloquium. "Molecular Motors and Intraflagellar Transport in *C. elegans* Neurons".
- *January 2006*. Invited Seminar, University of California at Santa Cruz. “Intraflagellar Transport Motors in *C. elegans* Neurons”
- *January 2006*. Invited Seminar, University of Georgia, Athens. “Intraflagellar Transport Motors in *C. elegans* Neurons”
- *January 2006*. Invited Seminar, University of Alabama at Birmingham Medical School. “Intraflagellar Transport Motors in *C. elegans* Neurons”
- *June 2006*. Invited Speaker, Third International Workshop on Drosophila Cell Division Cycle, Porto, Portugal. "Molecular and Quantitative Analysis of Mitosis" (presented by Ingrid Brust-Mascher and Gul Civelekoglu in my place).
- *June 2006*. Co-organizer (with Larry Goldstein). McIntosh Symposium on the Molecular Basis of Motility and Mitosis. Talk entitled “Intraflagellar Transport Motors in *C. elegans* Neurons”
- *September 2006*. Invited Speaker, International Symposium on Bio-nanosystems, Matsushima, Japan. "Kinesin-2 Motors, Intraflagellar Transport and Cilium Biogenesis in C. elegans Neurons". Visiting Professor, Higuchi laboratory, Tohoku University of Sendai, Japan.
- *September 2006*. Focus group on Chromosome Dynamics. Talk on "Mathematical and Molecular Analysis of Mitosis" CBS, UC Davis.
- *October 2006*. MCB Faculty Chalk Talk. "Motoring along the Cilium. Role of Kinesin-2 Motors in building the Cell's Antenna".
- *November 2006*. Invited Speaker, Department of Molecular, Cellular and Developmental Biology, Yale University "Intraflagellar Transport Motors in C. elegans Neurons".
- *November 2006*. Invited Speaker, Department of Molecular, Cellular and Developmental Biology, University of Texas, Austin.
- *December, 2006*. Co-organizer (with Joel Rosenbaum), Special Interest Subgroup Meeting on "Intraflagellar Transport" ASCB annual meeting, San Diego. Talk entitled "Intraflagellar Transport Motors".
- *February, 2007*. Invited Speaker, Gordon Research Conference on Cilia and Mucociliary Interactions, Ventura Beach, California. Talk entitled "Kinesin-2 motors and sensory ciliogenesis in *C. elegans*".

- *February, 2007*. Bay Area Interest Group Symposium on "Mitosis and Cytokinesis in *Drosophila*", UCSF. Talk entitled "Molecular and Quantitative Analysis of Mitosis".
- *March, 2007*. Invited Seminar, Genentech, San Franciso. Talk entitled "Building the Cell's Antenna: The Intraflagellar Machinery of *C. elegans* Neurons".
- *April, 2007*. Invited Seminar, Department of Biology, University of North Carolina, Chapel Hill, NC. Talk entitled "Building the Cell's Antenna: The Intraflagellar Transport Machinery of *C. elegans* Neurons".
- *April, 2007*. Invited Seminar, Department of Biology, University of North Carolina, Chapel Hill, NC. Talk entitled "The Mitotic Spindle of the *Drosophila* Embryo: Molecular and Quantitative Analysis of a Protein Machine".
- *June, 2007*. Invited participant, Bay Area Meeting on "Mitosis and Cytokinesis" Genetech Hall, UCSF.
- *June, 2007*. Invited Speaker and chairperson, FASEB meeting on Mitosis: Spindle Assembly and Function. Indian Wells California. Talk entitled "Molecular and Quantitative Analysis of the Mitotic Machinery".
- *July 2007*. Invited Speaker and Thesis Committee Member, Free University of Amsterdam. Talk entitled "Mechanisms of Mitosis".
- *August, 2007*. Invited Speaker and Session Chairperson, FASEB meeting on the Biology of Cilia and Flagella. Talk entitled "The intraflagellar Transport Machinery of *C. elegans*". Vermont Academy, Saxton's River, Vermont.
- *August, 2007*. Invited Speaker, The 56th Fujihara Seminar. International Conference on Molecular Mechanisms of Intracellular Transport. The Roles of Kinesin and Dynein Superfamily Proteins. Hokkaido, Japan. Talk entitled "Roles of Kinesins in Mitosis and Ciliogenesis".
- *December, 2007*. Invited Seminar, Department of Biology, University of California at Santa Cruz. Talk entitled "Mechanisms of Mitosis: Relevance to Stem Cell Research".
- *March, 2008.* Seminar Speaker. Department of Molecular Biology and Genetics, Bosphorus University, Istanbul, Turkey. Talk entitled "Role of Motor Proteins in Building Subcellular Machines".
- *March, 2008*. Seminar Speaker, Program in Biology and Bioengineering. Sabanci University, Istanbul, Turkey. Talk entitled "Role of Motor Proteins in Building Subcellular Machines".
- *April, 2008*. Invited Speaker, SFB523 Symposium on Intracellular Transport and Trafficking. Max-Plank Institure for Biophysical Chemistry. Goettingen, Germany. Talk entitled "Intraflagellar Transport Motors in *C. elegans* Neurons".
- *April, 2008*. "Student Choice" invited Seminar, Department of Cellular Biology, Neurobiology and Anatomy. Medical College of Wisconsin. Talk entitled "Building the cell's antenna: Intraflagellar transport motors in *C. elegans* neurons".
- *May 2008.* Volunteered MCB Faculty Chalk Talk. "Mitosis: The strange case of the missing matrix".
- *September, 2008*. Invited Seminar, Department of Cell and Developmental Biology, Vanderbilt University Medical Center. Talk entitled "Building the Cell's Antenna: Intraflagellar transport motors in *C. elegans* Neurons".
- *September 2008*. Invited Speaker, UC Davis BMB graduate student-organized research colloquium. Talk entitled "Roles of Motor Proteins in Building SubCellular Machines: The Mitotic Spindle and the Sensory Cilium".
- *December, 2008*. Speaker, ASCB annual meeting special interests subgroup meeting on "The Spindle Matrix". Talk entitled "Balancing the mitotic force-balance in Drosophila embryo mitosis: Does a matrix help solve the equation?'.

- *March 2009.* Invited Speaker, Institute of Cell and Molecular biology, University of Porto, Portugal.
1. Graduate student lecture on “Mitotic Motors and the Mechanism of Mitosis”.
2. Meeting on the mechanisms of anaphase chromosome segregation – a tribute to Manuel Mota. Talk entitled “Anaphase Spindle Elongation in the Drosophila Embryo: Coupling Microtubule Dynamics to a Sliding Filament Mechannism”.
- *July 2009.* Invited Speaker, Gordon Research Conference on Motile and Contractlie Systems, Colby Sawyer College, New Hampshire. Talk entitled “Prometaphase Spindle Maintenance by Antagonisitic Slding Motors: Factors Required for a Robust Steady State”.
- *August 2009.* Invited Speaker, FASEB meeting on Mitosis, Il Ciocco, Lucca, Tuscany, Italy. Talk entitled “Length Control in *Drosophila* Embryo Mitosis: Prometaphase Spindle Maintenance and Anaphase Spindle Elongation”.
- *October 2009.* Research Talk for Graduate Students, UC Davis Biophysics Graduate Group. Title “Mitotic Motors and the Mechanisms of Mitosis.
- *January 2010.* Invited Speaker, Meeting on "Molecular Motors, Tracks and Transport", Pondicherry, India. Two talks entitled:
1. Microtubule Motors in Mitosis
2. Intraflagellar Transport in Sensory Cilia.
- *Feburary 2010.* Invited Speaker, Keystone Symposium Meeting on “Cilia in signaling and disease” Monterey, California. Title of talk “Cilium-based signaling: Dissection of the distal singlet pathway”.
-*June 2010.* Invited Speaker, UC Davis Cancer Center, Sacramento, Cancer Biology Seminar. Title of Talk, “Mitosis and Chromosome Segregation: Mechanisms of Anaphase B”.
-*March 2011.* Invited Speaker, Joint Biochemical Society/Wellcome Trust Conference on Cellular Functions of Cytoskeletal Motor Proteins, Hinxton, Cambridge, UK. Talk entitled “Mitotic Motors and the Mechanism of Anaphase B”. (Appointed Judge for Biochemical Society Centenary Best Poster Award).
-*April 2011.* Invited speaker, The Scripps Research Institute, Department of Cell Biology, San Diego. Talk entitled “Mitotic Motors and Chromosome Segregation: Mechanism of Anaphase B”
-*April 2011.* Volunteered MCB/UCD Faculty Chalk Talk. Talk entitled “Mitosis: A Problem in Protein Chemistry”.
-*May 2011.* Student-invited Speaker, Life Sciences Seminar, Northwestern University Cellular and Molecular Basis of Disease training grant, Chicago, IL. Talk entitled “Mitotic Motors and Chromosome Segregation: Mechanism of Anaphase B”
-*October 2011.* Invited Speaker and Chairperson, Session on Cytoskeleton and Motor Dynamics, 17th International Biophysics Congress, China National Convention Center, Beijing, China.
-*April 2012.* Invited speaker. Koc University Medical School, Istanbul, Turkey. (i) Chalk-talk to medical and molecular biology students on “Intraflagellar transport and cilia-related diseases; (ii) Research seminar entitled “Role of Biological Motors in the Assembly and Operation of Subcellular Machines”.
-*May 2012.* Invited Speaker "Retina Ciliopathies: From Genes to Mechanisms and Treatment - Fourteenth Annual Vision Research Conference" Fort Lauderdale, Florida. Talk entitled “Kinesin-2 motors drive the anterograde transport of IFT-particles, dynein motors and ciliary tubulin isotypes along sensory cilia”.
- *November 2012.* Invited speaker, Department of Molecular, Cell and Developmental Biology, UC Santa Cruz.

-*December 2012.* Invited Speaker, ASCB annual meeting subgroup minisymposium on "Building the Cell". Talk entitled "Length control of mitotic spindles and sensory cilia".
-*March 2013.* Invited Speaker, University of Pennsylvania Muscle Institute. Talk entitled "Mitotic Motors and Chromosome Segregation: The sliding filament mechanism of anaphase B"
-*August 2013.* Invited Speaker, Gordon Research Conference on Nanomechanical Interfaces, Hong Kong University of Science & Technology. Talk entitled "Motors adapted for mitosis and ciliogenesis".
-*September 2013.* Invited Speaker, British Society for Cell Biology Autumn Meeting on "Mechanochemical Cell Biology". Talk entitled "The sliding filament mechanism of anaphase B: interplay between mitotic motors and microtubule polymer dynamics".
-*September 2013.* Invited Speaker, EMBO workshop on "The *Drosophila* Cell Cycle", Dartington Hall, Devon, England. Talk entitled "The sliding filament mechanism of anaphase B: interplay between mitotic motors and microtubule polymer dynamics"
-*October 2013.* Invited Speaker, Department of Molecular Biology and Genetics Research Seminar Series, Bogazici University, Istanbul. Talk entitled "Motors adapted for mitosis and ciliogenesis".
-*December 2013.* Invited speaker, Department of Molecular, Cell and Developmental Biology, UC Santa Cruz. Talk entitled "Motors adapted for mitosis and ciliogenesis".
-*May 2014.* Invited Speaker. EMBO Conference series "Microtubule structure, regulation and function", EMBL Conference Centre, Heidelberg, Germany. Sent Project Scientist Dr Ingrid Brust-Mascher in my place due to conflict with study section reviewing.
-*July 2014.* Invited Attendee, MRC Laboratory of Molecular Biology Alumni Symposium, Molecular Biology at 50 and Beyond.
-*December 2014.* Invited Speaker, ASCB annual meeting subgroup minisymposium on "Nonconventional functions of molecular motors". Talk given by graduate student Bram Prevo (Peterman Lab, Free University, Amsterdam, NL) and entitled "Why combine two same-polarity, different-velocity motors to move the same cargo along C. elegans cilia?"
-*March 2015*. Exit Seminar, Dept of Molecular and Cell Biology, UC Davis "Motors adapted for Ciliogenesis and Mitosis".
-*March 2015.* Symposium for the PhD thesis defence of Bram Prevo, Department of the Physics of Living Systems, Vrije Universitat, Amsterdam, Holland. Talk entitled "Motors Adapted for Mitosis and Ciliogenesis".
- *September 2018.* Keynote Lecture. 6th International Congress of the Molecular Biology Association of Turkey. Izmir Biomedicine and Genome Center, Izmir Turkey. Talk entitled "Motor Proteins in the Assembly of Eukaryotic Cilia and Prokaryotic Flagella".

4 (b) Meeting/Seminar Organization:

- *December 1990*, ASCB annual meeting, Chair and Organizer, Minisymposium on Motor Proteins in Cell Division.
- *1992-2006*, UC Davis CBS Weekly Cytoskeleton Meeting Organizer. (Several labs from CBS participate in meeting – taken over by Frank McNally, Fall 2006).
- *July 1996*. Vice Chair and Co-organizer (with Prof John Condeelis) Gordon Research Conference on Motile and Contractile Systems.
- *July 1998*. Chair and Co-organizer (with Prof Mary Beckerle) Gordon Research Conference on Motile and Contractile Systems.
- *December 2003*. ASCB annual meeting, Chair and co-organizer (with Prof Mike Ostap), Minisymposium on Molecular Motors.
- *April 2005*. Annual *Drosophila* Research Conference, San Diego. Chair and Oranizer, Minisymposium on Mitosis and Meiosis.
- *June 2006*. Meeting to honor the career and retirement of Dr J. Richard McIntosh, UC Boulder, Colorado. Co-organizer (with Larry Goldstein). Symposium on the Molecular Basis of Motility and Mitosis.
- *December 2006*. ASCB annual meeting, San Diego. Chair and co-organizer (with Joel Rosenbaum), Special Interest Subgroup Meeting on "Intraflagellar Transport".
- *December 2008*. ASCB annual meeting, San Francisco. Chair and co-organizer (with Tim Mitchison), Special Interest Subgroup Meeting on “The Spindle Matrix”.
- *August 2009*. FASEB meeting on Mitosis, Il Ciocco, Italy. Chair of Fundraising Committee.
- *Academic years 2008-2010*. Chair of Committee for the “Joint issues in Molecular Biology” seminar series, College of Biological Sciences, UC Davis.
- *October 2011*. Chair and Co-organizer, Session on Cytoskeleton and Motor Dynamics, 17th International Biophysics Congress, China National Convention Center, Beijing, China.

5. Laboratory Staff: PhD Students, Post-docs and Technical Staff.

A. Graduate Students.

*1. Brent Wright (Ph.D. Cell and Structural Biology, 1993, University of Colorado MSTP program), *March of Dimes Research Studentship. Currently Practicing Physician (OB/GYN).
2. Dan Buster (Ph.D. Zoology (Molecular Cell Biology Focus, 1995)) Currently Research Scientist, Rogers Lab, Dept Cell Biology and Anatomy, Arizona State University, Tucson, Az .
*3. Dana Rashid (Ph.D Biochemistry and Molecular Biology, 2000). *NIH MCB training grant trainee. Currently Adjunct Faculty Researcher, Montana State University.
*4. Kitty Chui (Ph. D. Biochemistry and Molecular Biology, 2000). *NIH MCB training grant trainee. Currently Scientist, Bay Area Biotechnology Company.
*5. Dawn Signor (Ph.D. Cell and Developmental Biology, 2001). *NIH MCB training grant trainee. Currently Post-Doctoral Fellow, Blakely Lab, Vanderbilt University.
*6. Greg Rogers (Ph.D. Cell and Developmental Biology, 2001). *NIH MCB training grant trainee. Currently Assistant Professor. Department of Cell Biology and Anatomy, University of Arizona, Tuscon.
7. Mijung Kwon (Ph.D. Cell and Developmental Biology, 2004) Currently Post-Doctoral Fellow, Pellman Lab, Harvard Medical School.
*8. Li Tao (Biochemistry and Molecular Biology, 2007) *Chinese Government Award for Outstanding Self-Financed Students Aboard. Subsequently Project Scientist in our Lab.
9. Dhanya Cheerambathur (Cell and Developmental Biology. 2008) Currently Post-Doctoral Fellow, Desai Lab, Ludwig Institute for Cancer Research, University of California San Diego.
*10. Guangshuo Ou (Cell and Developmental Biology, 2006) *Recipient of 5th Annual Norton B Gilula Award from the ASCB and the Chinese Government Award for Outstanding Self-Financed Students Aboard. Currently Professor, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China.
*11. Xiaoyu Pan (Microbiology, 2008). *Chinese Government Award for Outstanding Self-Financed Students Aboard. Currently Protein Scientist, Bayer HealthCare Berkeley.
*12. Roy Wollman (Cell and Developmental Biology, co-supervised with Alex Mogilner from joint NSF/NIH grant) *NIH MCB training grant trainee and *UC system-wide GREAT trainee. Currently Assistant Professor, Dept. of Chemistry and Biochemistry, UC San Diego.
13. David Carlson (Biochemistry and Molecular Biology - joint mentor with Evans/Stahlberg).
14. Alan Wilde (Biophysics, MS awarded 2011)
15. Haifeng Wang (Biochemistry, Molecular, Cell and Developmental Biology, 2013)

B. Post-doctoral Fellows.

*1. Stanley Cohn. *ACS postdoctoral fellow. Professor and Chair of Biological Sciences, DePaul University.
*2. Cindy Troxell. *NSF plant cell biology postdoctoral fellow. Research Scientist with J. Richard McIntosh.
3. Janice Morand. Lecturer, MCB UC Davis.
4. Dimitri Skoufias. Research Scientist for the French Atomic Energy Commission, Institute for Structural Biology, Grenoble, France.
*5. Doug Cole. *Muscular Dystrophy Association Postdoctoral Fellow. Professor of Biochemistry, University of Idaho.

*6. Anna Kashina. *ACS California Division Postdoctoral Fellow. Associate Professor. University of Pennsylvania School of Veterinary Medicine.
*7. Bob Morris. *NIH Postdoctoral Fellow. Associate Professor and Chairperson, Department of Biology, Wheaton College.
*8. David Sharp. *NIH Postdoctoral Fellow. Associate Professor, Department of Biophysics and Physiology, Albert Einstein College of Medicine, NY.
9. Mimi Zhou. Staff Scientist, Diversa Corp., San Diego.
10. Steve Rogers (Interim Post-doc for Summer). Assistant professor, Department of Biology, University of North Carolina.
11. Eric Cytrynbaum (co-supervised with main supervisor Mogilner from joint NSF/NIH grant). Assistant Professor, Dept. of Mathematics, University of British Columbia, Canada.
12. Sandra Morales-Mulia. Staff Scientist. Dept. of Neuro-pharmacology, National Institute of Psychiatry, Mexico City, Mexico.
*13. Ingrid Brust-Mascher. *NIH Postdoctoral Fellow. Current (currently a Project Scientist in the Lab).
14. Gul Civelekoglu-Scholey Current (initially co-supervised with Mogilner from joint NSF/NIH grant), currently a Project Scientist in the Lab.
15. Revathi Ananthakrishnan (co-supervised with main supervisor Mogilner from joint NSF/NIH grant). Biostatistician at Parexel Int. MA USA.
16. Patrizia Sommi (co-supervised with Mogilner from joint NSF/NIH grant). Research Scientist at Department of Experimental Medicine, University of Pavia, Italy.
17. Melanie Thein. Scientific Writer, UC Davis Cancer center, Sacramento, CA, USA
18. Limin Hao. Currently Senior Research Scientist in the Departments of Neurology and Psychiatry, Mailman Research Center, McLean Hospital/Harvard Medical School.
19. Seyda Acar. Now a senior postdoctoral researcher in the Deparment of Physics and Astronomy at Vrie University, Amsterdam, Biophysics Laboratory of Dr Erwin Peterman.
20. Li Tao. Currently a Research Scientist in the Lab of Dr Bill Sullivan, UCSC.
21. Jane deLartigue. Currently a Freelance Science Writer and Editor Based in the UK.
*22. Hector Caro-Gonzalez. *NIH Minorities Program Postdoctoral Fellow and Trainee/Fellow, NIH T32 training grant in Oncogenic Signals and Chromosome Biology.
23. Haifeng Wang. Currently a Post-doctoral Researcher at Stanford University.

C. Technical Staff and Laboratory Managers.

1. Amie Ingold, Laboratory technician
2. Patricia Willy, Laboratory technician
3. Catharine Johnson, Laboratory technician
4. Karen Wedaman, Staff Research Associate
5. David Meyer, PGR
6. Cindy Hart, PGR
7. Aileen Tieu, PGR
8. Daniel Rines, PGR
9. Heather Brown, PGR
10. Jose Orozco, PGR
11. John Modrow, PGR
12. Ginger Elkins, PGR
13. Regina Walker, PGR

14. Kristine Adjemian, PGR/Lab manager
15. Matthew Sweeney, PGR
16. Eric McMahon, PGR
17. Manny Bakis, PGR
18. Joshua Snow, PGR
19. Amy Gunnarson, PGR/Lab manager
20. Amanda Donev, PGR/Lab manager
21. Judy Martin, Junior Specialist
22. Gaganjoat Sidhu, Junior Specialist

6. Grant Support

1. Title: Dynamics and Mechanics of Mitosis in *Drosophila*: Mechanism of Anaphase B. Funding; NIH grant R01 GM 55507 (J.M. Scholey, PI). Award date: 07/01/95– 03/01/15.

2. Title: Intraflagellar Transport Motors in *C. elegans* Neurons. Funding; NIH grant R01 GM 50718 (J.M. Scholey, PI). Approximate award date: 04/01/94 - 03/31/11.

3. Title: Molecular Biology and Functions of Kinesin in Dividing Sea Urchin Embryonic Cells. Funding: American Cancer Society grant # BC530 (J.M. Scholey, PI). Approximate funding dates: July 1986 – 1996.

4. Title: Kinesin Phosphorylation.
Funding: NIH grant R01 GM 46376 (PI J.M. Scholey) Approximate award date: July 1991- June 1995

5. Title: Isolation and Characterization of Kinesin and Microtubules from Lymphocytes.
Funding: NIH grant SO7RR
Award Date: 1988 - 1990

6. Title: Analysis of Kinesin-related proteins.
Funding: March of Dimes Birth Defects Foundation Basic Sciences Grant # 1-1188
(PI J.M. Scholey).
Approximate award date: 1988 – 1995

7. Title: Identification of Multiple Mitotic Motors.
Funding: UC Cancer Research Coordinating Committee. (PI J.M. Scholey). Approximate award date: 1990-1992.

8. Title: Dynamics of Mitotic Spindle Morphogenesis.
Funding: NIH grant R01GM068952 (Joint NIH/NSF special program in cell biology/modeling. Co-Investigator with Alex Mogilner (PI), UCD Math and CBS) Award date: 07/01/2004-06/30/2007

7. Professional Societies

American Society for Cell Biology (Emeritus member and ASCB Fellow)
Biochemical Society (UK) (current)
Turkish Molecular Biology Society (lapsed)
Biophysical Society (lapsed)
American Society for Biochemistry and Molecular Biology (lapsed)
Member of the UC Davis Faculty Association (lapsed)

8. Teaching.

(a) Teaching at UC Davis

A. MCB 110V: An iBioseminars Course in Cell and Molecular Biology (2013-onwards): An upper division class offered to seniors in our Cell Biology, Genetics and Biochemistry and Molecular Biology majors that is aimed at teaching about cutting edge research in cell and molecular biology and was delivered for the first time during Spring quarter of 2013.

B. MCB 143: Cell and Molecular Biophysics (2001-2012): A course on the physical and chemical principles by which atoms and molecules form living, moving and reproducing cells. We discuss the physical nature of cytoplasm; molecular and structure/bonding; macromolecules, macromolecular assemblies and protein machines; use of physical techniques and modeling to study cytoskeletal polymer-motor dynamics and function during intracellular transport, mitosis and motility.

C. Biosci 102: Biochemistry; the structure and function of biomolecules (1993-2000): A core course on the biochemistry of macromolecules for biological sciences undergraduate majors.

D. Biosci 104: Cell Biology (1998-2000): A core course in cell biology for biological science undergraduate majors.

E. MCB 221D: Cell Biochemistry (1991-2012): A graduate student class which covers membranes, signaling, the cytoskeleton, cell division and the cell cycle (25%, i.e. 5 lectures).

F. MCB 138: Seminar in Biochemistry: An informal undergraduate seminar class using the most current primary literature (taught occasionally).

G. MCB 142 Advanced Cell Biology: Motile and Contractile Systems (1990-1993). A class on molecular mechanisms of motor protein function, muscle contraction and cell motility (50%, i.e. 10 lectures).

H. BIS 1A Introductory Molecular Biology (1989-1992). An elementary treatment of basic molecular biology for lower division biological sciences majors (i.e. protein and nucleic acid structure, synthesis and function) (50%, i.e. 20 lectures).

(b) Prior Teaching Experience: 1. Trinity College, Cambridge University (1978-81). Graduate student tutor in biochemistry for undergraduates taking the Natural Science Tripos.
2.University of Colorado, Dept of Molecular, Cell and Developmental Biology (1986). Cell and molecular biology journal club series for undergraduates in the department.
3.University of Colorado Health Science Center, Departments of Biochemistry, Biophysics and Genetics/Cell and Structural Biology (1987-89). 2 graduate student lectures per year on bioenergetics and the cytoskeleton.

(c) Teaching in Molecular Biology at Bogazici University, Istanbul, Turkey: (2010-2011) Fulbright Senior Lecturer in Molecular Biology; (i) a modification of MCB143, entitled BIO495: Cell and Molecular Biophysics; and (ii) a graduate class entitled "BIO580: The Molecular Biology of Mitosis and Cell Division". Fall, 2013, "BIO494: Quantitative Cell and Molecular Biology". This course combines studies of the basic molecular and biophysical processes

underlying cytoplasmic organization, intracellular transport, cell motility and cell division with mathematical modeling of these same processes .

9. Publications

1. Scholey JM, Taylor KA and Kendrick-Jones J (1980) Regulation of nonmuscle myosin assembly by calmodulin dependent light chain kinase. *Nature* 287:233-235.

2. Scholey JM, Taylor KA and Kendrick-Jones J (1981) The role of myosin light chains in regulating actin-myosin interaction. *Biochimie* 63:255-271.

3. Kendrick-Jones J and Scholey JM (1981) Myosin-linked regulatory systems. *Journal of Muscle Research and Cell Motility* 2:347-372.

4. Scholey JM, Smith RC, Drenckhahn D, Gröschel-Stewart U and Kendrick-Jones J (1982) Thymus myosin: Isolation and characterization of myosin from calf thymus and thymic lymphocytes, and studies on the effect of phosphorylation of its M_r = 20,000 light chain. *Journal of Biological Chemistry* 257:7737-7745.

5. Kendrick-Jones J, Taylor KA and Scholey JM (1982) Phosphorylation of nonmuscle myosin and stabilization of thick filament structure. In: Structural and Contractile Proteins, Methods in Enzymology (L.N. Cunningham and D.W. Frederiksen, eds.), pp. 364-370, Academic Press, New York.

6. Kendrick-Jones J, Tooth P, Taylor KA and Scholey JM (1982) Regulation of myosin-filament assembly by light-chain phosphorylation. *Cold Spring Harbor Symposium on Quantitative Biology* 46:929-938.

7. Kendrick-Jones J, Jakes R, Tooth P, Craig R and Scholey JM (1982) Role of myosin light chains in regulation of contractile activity, In: Basic Biology of Muscles: A Comparative Approach (B.M. Twarog, R.J.C. Levine and M.M. Dewey, eds.), pp. 255-272. Raven Press, New York.

8. Drenckhahn D, Kellner J, Mannherz HG, Gröschel-Stewart U, Kendrick-Jones J and Scholey JM (1982) Absence of myosin-like immunoreactivity in stereocilia of cochlear hair cells. *Nature* 300:531-532.

9. Drenckhahn D, Gröschel-Stewart U, Kendrick-Jones J and Scholey JM (1983) Antibody to thymus myosin: Its immunological characterization and use for immunocytochemical localization of myosin in vertebrate nonmuscle cells. *European Journal of Cell Biology* 30:100-111.

10. Smith RC, Cande WZ, Craig R, Tooth PJ, Scholey JM and Kendrick-Jones J (1983) Regulation of myosin filament assembly by light-chain phosphorylation. *Proceedings of the Royal Society* London B: 302:73-82.

11. Kendrick-Jones J, Cande WZ, Tooth PJ, Smith RC and Scholey JM (1983) Studies on the effect of phosphorylation of the 20,000 M_r light chain of vertebrate smooth muscle myosin. *Journal of Molecular Biology* 165:139-162.

12. Scholey JM, Neighbors B, McIntosh JR and Salmon ED (1984) Isolation of microtubules and a dynein-like MgATPase from unfertilized sea urchin eggs. *Journal of Biological Chemistry* 259:6516-6525.

13. Scholey JM, Porter ME, Grissom PM and McIntosh JR (1985) Identification of kinesin in sea urchin eggs, and evidence for its localization in the mitotic spindle. *Nature* 318:483-486.

14. Dinenberg AS, McIntosh JR and Scholey JM (1986) Studies on sea urchin egg cytoplasmic ATPases of possible significance for microtubule functions. *Annals of the New York Academy of Sciences* 466:431-435.

15. Scholey JM (1986) Cell Motility: Regulation by phosphorylation. *Nature* 320:215-216.

16. Vale RD, Scholey JM and Sheetz MP (1986) Kinesin: Possible biological roles for a new microtubule motor. *Trends in Biochemical Science* 11:464-468.

17. Porter ME, Scholey JM, Stemple DL, Vigers GPA, Vale RD, Sheetz MP and McIntosh RD (1987) Characterization of the microtubule movement produced by sea urchin egg kinesin. *Journal of Biological Chemistry* 262:2794-2802.

18. Leslie RJ, Hird RB, Wilson L, McIntosh JR and Scholey JM (1987) Kinesin is associated with a nonmicrotubule component of sea urchin mitotic spindles. *Proceedings of the National Academy of Sciences* (USA) 84:2771-2775.

19. Lye RJ, Porter ME, Scholey JM and McIntosh JR (1987) Identification of a microtubule-based cytoplasmic motor in the nematode *C. elegans*. *Cell* 51:309-318.

20. Cohn SA, Ingold AL and Scholey JM (1987) Correlation between the ATPase and microtubule translocating activities of sea urchin egg kinesin. *Nature* 328:160-163.

21. Saxton WM, Porter ME, Cohn SA, Scholey JM, Raff EC and McIntosh JR (1988) *Drosophila* kinesin: Characterization of microtubule motility and ATPase. *Proceedings of the National Academy of Sciences* 85:1109-1113.

22. Ingold AL, Cohn SA and Scholey JM (1988) Inhibition of kinesin-driven microtubule motility by monoclonal antibodies to kinesin heavy chains. *Journal of Cell Biology* 107:2657-2667.

23. Porter ME, Grissom PM, Scholey JM, Salmon ED and McIntosh JR (1988) Dynein isoforms in sea urchin eggs. *Journal of Biological Chemistry* 263:6759-6771.

24. Scholey JM, Porter ME, Lye RJ and McIntosh JR (1989) Cytoplasmic microtubule motors: Kinesin and dyneins. In: The Cell Biology of Fertilization (H. Schatten and G. Schatten, eds.), pp. 139-163. Academic Press.

25. Scholey JM, Cohn SA and Ingold AL (1989) Biochemical and motile properties of sea urchin egg kinesin, In: Cell Movement (F.D. Warner and J.R. McIntosh, eds.),Vol. 2, pp. 307-319, A.R. Liss.

26. Cohn SA, Ingold AL and Scholey JM (1989) Quantitative analysis of sea urchin egg kinesin-driven microtubule motility. *Journal of Biological Chemistry* 264:4290-4297.

27. Scholey JM, Heuser J, Yang JT and Goldstein LSB (1989) Identification of globular mechanochemical heads of kinesin. *Nature* 338:355-357.

28. Scholey JM (1990) Multiple microtubule motors. *Nature* 342:118-120.

29. Johnson CS, Buster D and Scholey JM (1990) Light chains of sea urchin kinesin identified by immunoadsorption. *Cell Motility and the Cytoskeleton* 16:204-213.

30. Buster D and Scholey JM (1991) Purification and assay of kinesin from sea urchin eggs and early embryos. *Journal of Cell Science* 14S:109-115.

31. Wright BD, Henson JH, Wedaman KP, Willy PJ, Morand JN and Scholey JM (1991) Subcellular localization and sequence of a sea urchin kinesin heavy chain: Evidence for its association with membranes in the mitotic apparatus and interphase cytoplasm. *Journal of Cell Biology* 113:817-833.

32. Sawin KE and Scholey JM (1991) Motor proteins in cell division. *Trends in Cell Biology* 1:122-129.

33. Wright BD and Scholey JM (1992) Microtubule motors in the early sea urchin embryo. *Current Topics in Developmental Biology* 26:71-91.

34. Cole DG, Cande WZ, Baskin RJ, Skoufias DA, Hogan CJ and Scholey JM (1992) Isolation of a sea urchin egg kinesin-related protein using peptide antibodies. *Journal of Cell Science* 101:291-301.

35. Epstein H and Scholey JM (1992) Kinesins in the spindle: An update. *Trends in Cell Biology* 2:315-318.

36. Gelfand VI and Scholey JM (1992) Every motion has its motor. *Nature* 359:480-482.

37. Henson JH, Nesbitt D, Wright BD and Scholey JM (1992) Immunolocalization of kinesin in sea urchin coelomocytes. *Journal of Cell Science* 103(2):309-320.

38. Skoufias D and Scholey JM (1993) Cytoplasmic microtubule-based motor proteins. *Current Opinion in Cell Biology* 5:95-104.

39. Wedaman KP, Knight AE, Kendrick-Jones J and Scholey JM (1993) Sequences of sea urchin kinesin light chain isoforms. *Journal Molecular Biology* 231:155-158.

40. Hogan CJ, Wein H, Wordeman L, Scholey JM, Sawin KE and Cande WC (1993) Inhibition of anaphase spindle elongation "in vitro" by a peptide antibody that recognizes kinesin motor domain. *Proceedings of the National Academy of Sciences* (USA) 90:6611-6615.

41. Hall K, Cole DG, Yeh Y, Scholey JM and Baskin RJ (1993) Force-velocity relationships in kinesin-driven motility. *Nature* 364:457-459.

42. Wright BD, Terasaki M and Scholey JM (1993) Roles of kinesin and kinesin-like proteins in sea urchin early embryonic cell divisions: Evaluation using antibody microinjection. *Journal of Cell Biology* 123:681-689.

43. Cole DG, Chinn DS, Wedaman KP, Hall K, Vuong T and Scholey JM (1993) Novel heterotrimeric kinesin related protein purified from sea urchin eggs. *Nature* 366:268-270.

44. Skoufias DA, Cole DG, Wedaman KP and Scholey JM (1994) The carboxyl-terminal domain of kinesin heavy chain is important for membrane binding. *Journal of Biological Chemistry* 269:1477-1485.

45. Cohn SA, Saxton WM, Lye RJ and Scholey JM (1993) Analyzing microtubule motors in real time. *Methods in Cell Biology* 39:75-88.

46. Scholey JM and Leslie RD (1993) Sea urchin MAPs and microtubule motors. In: Guidebook to the Cytoskeletal and Motor Proteins. (Kreiss, T. and Vale, R.D., eds.), pp. 120-122, Oxford University Press.

47. Wright BD and Scholey JM (1993) Non-fluorescent immunolocalization antigens in mitotic sea urchin blastomeres. *Methods in Cell Biology* 37:223-240.

48. Scholey JM and Vale RD (1994) Kinesin-based organelle transport. In: Microtubules, Modern Cell Biology (J.S. Hyams and C.W. Lloyd, eds.), Vol. 13:343-365, Wiley-Liss.

49. Cole DG, Saxton WM, Sheehan KB and Scholey JM (1994) A slow homotetrameric kinesin-related motor protein purified from *Drosophila* embryos. *Journal of Biological Chemistry* 269:22913-22916.

50. Cole DG and Scholey JM (1995) Purification of kinesin-related proteins complexes from eggs and early embryos. *Biophysical Journal* 68:158s-162s

51. Cole DG and Scholey JM (1995) Structural variations among the kinesins. *Trends in Cell Biology* 5:259-262

52. Rashid DJ, Wedaman KP and Scholey JM (1995) Heterodimerization of the two motor subunits of the heterotrimeric kinesin, KRP 85/95. *Journal of Molecular Biology* 252:157-162.

53. Afshar K, Scholey JM and Hawley RS (1995) Identification of the chromosome localization domain of the *Drosophila* Nod Kinesin-like protein. *Journal of Cell Biology* 131(4):1-11

54. Henson JH, Cole DG, Terasaki M, Rashid DJ and Scholey JM (1995) Immunolocalization of the hetrotrimeric kinesin-like protein, KRP 85/95 to the mitotic apparatus of sea urchin embryos. *Developmental Biology* 171(1):182-194

55. Kashina AS, Baskin RJ, Cole DG, Wedaman KP, Saxon WM and Scholey JM (1996) A bipolar kinesin. *Nature* 379:270-272.

56. Scholey JM (1996) Kinesin-II, a membrane traffic motor in axons, axonemes and spindles. *Journal of Cell Biology* 133:1-4.

57. Kashina AS, Scholey JM, Leszyk JD and Saxton WM (1996b) An essential bipolar mitotic motor. *Nature* 384:225.

58. Wedaman KP, Meyer DW, Rashid DJ, Cole DG and Scholey JM (1996) Sequence and localization of the 115-kD accessory subunit of the heterotrimeric kinesin-II (KRP85/95) complex. *Journal of Cell Biology* 132(3):371-380.

59. Kashina AS, Rogers GC and Scholey JM (1997) The Bim C family of Kinesins: essential bipolar mitotic motors driving centrosome separation. *Biochimica et Biophysica Acta: Molecular Cell Research* 1357:257-271.

60. Henson JH, Cole DG and Scholey JM (1997) The heterotrimeric motor protein, Kinesin-II localizes to the midpiece and flagellum of sea urchin and sand dollar sperm. *Cell Motility and the Cytoskeleton* 38:29-37.

61. Bi G-Q, Morris RL, Liao G, Alderton JM, Scholey JM and Steinhardt RA (1997) Kinesin- and myosin-driven steps of vesicle recruitment for Ca^{2+}-regulated exocytosis. *Journal of Cell Biology* 138(5): 999-1008.

62. Morris RL and Scholey JM (1997) Heterotrimeric kinesin-II is required for the assembly of motile 9+2 ciliary axonemes on sea urchin embryos. *Journal of Cell Biology* 138(5):1009-1022.

63. Scholey JM (1998) Functions of Motor Proteins in echinoderm embryos: an argument in support of antibody inhibition experiments. Cell Motility and the Cytoskeleton 39:257-260.

64. Meyer D, Rines DR, Kashina AS, Cole DG and Scholey JM (1998) Purification of Novel Kinesins from Embryonic Systems. *Methods in Enzymology*, Vol. 298, Ch. 13, pp. 133-154.

65. Scholey JM and Wedaman KP (1998) The Heteromeric Kinesins. In: Guidebook to the Cytoskeletal and Motor Proteins (2nd Edition). (Vale, R. D., and Kreis, T., eds), pp. 409-411, Oxford University Press.

66. Sharp DJ, McDonald KL, Brown HM, Matthies HJ, Walczak C, Vale RD, Mitchison TJ and Scholey JM (1999) The bipolar kinesin, KLP61F, cross-links microtubules within interpolar microtubule bundles of *Drosophila* embryonic mitotic spindles. *Journal of Cell Biology* 144:125-138.

67. Signor D, Wedaman KP, Rose LS and Scholey JM (1999) Two heteromeric kinesin complexes in chemosensory neurons and sensory cilia of *Caenorhabditis elegans. Molecular Biology of the Cell* 10:345-360.

68. Orozco J, Wedaman KP, Signor D, Brown H, Rose LS and Scholey JM (1999) Movement of motor and cargo along cilia. *Nature* 398:674.

69. Sharp DJ, Yu C, Sisson J, Sullivan W and Scholey JM (1999) Antagonistic microtubule sliding motors position mitotic centrosomes in *Drosophila* embryos. *Nature Cell Biology* 1:50-54.

70. Signor D and Scholey JM (2000) Microtubule-based transport in axons, dendrites and axonemes. *Essays in Biochemistry*. 35:89-102.

71. Cross RA and Scholey JM (1999) Kinesin: the tail unfolds. *Nature Cell Biology* 1:E119-E121.

72. Morris R, Brown H, Wright BD, Sharp D, Sullivan W and Scholey JM (2001) Microinjection methods for studying kinesins in early embryos. *Methods in Molecular Biology*, 164;163-172.

73. Rogers GC, Hart C, Wedaman KP and Scholey JM (1999) Identification of a carboxyterminal calmodulin-binding kinesin in animal (*S. purpuratus*) cells. *Journal of Molecular Biology*. 294:1-8.

74. Signor D, Wedaman KP, Orozco JT, Dwyer ND, Bargmann CI, Rose LS and Scholey JM (1999). Role of a class DHC1b dynein in retrograde transport of IFT motors and IFT raft particles along cilia, but not dendrites, in chemosensory neurons of living *Caenorhabditis elegans. Journal of Cell Biology*. 147:519-530.

75. Signor D, Wedaman KP, Orozco JT, Rose LS, and Scholey JM (2001). Ciliary growth by intraciliary trafficking. Volume II: Intl. Congress on Cilia, Mucus, and Mucociliary Interactions.

76. Sharp DJ, Brown H, Kwon M, Rogers GC, Holland G and Scholey JM (2000) Functional coordination of three mitotic motors in *Drosophila* embryos. *Molecular Biology of the Cell*. 11:241-253.

77. Sharp DJ, Rogers GC and Scholey JM (2000) Roles of motor proteins in building microtubule-based structures: A basic principle of cellular design. *Biophysica et Biochimica Acta*. 1496: 128-141.

78. Sharp DJ, Rogers GC and Scholey JM (2000) Cytoplasmic dynein is required for poleward chromosome movement during mitosis in *Drosophila* embryos. *Nature Cell Biology*. 2: 922-930.

79. Rogers GC, Chui KK, Lee EW, Wedaman KP, Sharp DJ, Holland G, Morris RL and Scholey JM (2000) A kinesin-related protein, KRP180, positions prometaphase spindle poles during early sea urchin embryonic cell division. *Journal of Cell Biology*. 150: 499-512.

80. Rogers GC, Sharp DJ, Rogers S and Scholey JM (2000) Dynein. Encyclopedia of Molecular Medicine. Vol. 2 pp. 1108-1116.

81. Sharp DJ, Rogers GC and Scholey JM (2000) Microtubule-motors in mitosis. *Nature*. 407: 41-47. (Commissioned review article)

82. Chui KK, Rogers GC, Kashina A, Wedaman KP, Sharp DJ, Nguyen DT, Wilt F and Scholey JM (2000) Roles of two homotetrameric kinesins in sea urchin embryonic cell division. *Journal of Biological Chemistry*. 275: 38005-38011.

83. Signor D, Rose LS and Scholey JM (2000) Analysis of the roles of kinesin and dynein motors in microtubule-based transport in the *C.elegans* nervous system. *Methods* 22:317-325.

84. Zhou HM, Brust-Mascher I and Scholey JM (2001) Direct visualization of the movement of the monomeric axonal transport motor, UNC-104, along neuronal processes in living *C. elegans*. *Journal of Neuroscience* 21:3749-3755.

85. Scholey JM, Rogers GC and Sharp DJ (2001) Mitosis, microtubules, and the matrix. *Journal of Cell Biology* 154: 261-266.

86. Brust-Mascher I and Scholey JM (2002) Microtubule flux and sliding in mitotic spindles of *Drosophila* embryos. *Molecular Biology of the Cell*. 13:3967-3975.

87. Scholey JM and Mogilner A. (2001). Mitotic Spindle Motors. In Molecular Motors. Schliwa, M. editor, Wiley-VCH publishers pp. 327-355.

88. Scholey JM (2002) Rafting along the Axon on Unc104 Motors. *Developmental Cell.* 2: 515-523.

89. Cytrynbaum EN, Scholey JM and Mogilner A. (2003). A force balance model of early spindle pole separation in *Drosophila* embryos. *Biophysical Journal*. 84: 757-769.

90. Scholey JM, Brust-Mascher I and Mogilner A (2003) Cell division. *Nature*. 422: 746-52.

91. Scholey JM (2003) Intraflagellar Transport. *Ann. Rev. Cell. Dev. Biol.* 19: 423-443.

92. Kwon MJ, Morales-Mulia S, Brust-Mascher I, Rogers GC, Sharp DJ and Scholey JM (2004) The chromokinesin, KLP3A, drives spindle pole separation during prometaphase and anaphase, and facilitates chromatid motility. *Molecular Biology of the Cell.* 15: 219-233

93. Rogers SL and Scholey JM (2004) Motility Assays for Microtubule Motor Proteins. *Encyclopedia of Life Sciences.* published online as doi:10.1038.npg/els.000262.

94. Rogers GC, Rogers SL, Schwimmer TA, Ems-McClung SC, Walczak CE, Vale RD, Scholey JM and Sharp DJ (2004) Two mitotic kinesins cooperate to drive sister chromatid separation during anaphase. *Nature* 427: 364-70.

95. Kwon M and Scholey JM (2004) Spindle mechanics and dynamics during mitosis in *Drosophila*. *Trends in Cell Biology* 14(4):194-205.

96. Lawrence CJ, Dawe RK, Christie KR, Cleveland DW, Dawson SC, Endow SA, Goldstein LSB, Goodson HV, Hirokawa N, Howard J, Malmbert RL, McIntosh JR, Miki H, Mitchison TJ, Okada Y, Reddy ASN, Saxton WM, Schliwa M, Scholey JM, Vale RD, Walczak CE and Wordeman L (2004) A Standardized Kinesin Nomenclature. *Journal of Cell Biology.* 167(1):19-22.

97. Scholey JM, Ou G, Snow J and Gunnarson A (2004) Intraflagellar Transport Motors in *Caenorhabditis elegans* Neurons. *Biochemical Transactions.* Nov; 32(Pt 5):682-4.

98. Snow J, Ou G, Gunnarson A, Walker R, Zhou HM, Brust-Mascher I and Scholey JM (2004) Two Anterograde Intraflagellar Transport Motors Cooperate to Build Sensory Cilia on *C. elegans* Neurons. *Nature Cell Biol.* 6 (11):1109-1113.

99. Brust-Mascher I, Civelekoglu-Scholey G, Kwon M, Mogilner A and Scholey JM (2004) Model for Anaphase B: Role of three mitotic motors in a switch from poleward flux to spindle elongation. *Proceedings of the National Academy of Sciences (USA)* 101(45): 15938-15943.

100. Wollman R, Cytrynbaum EN, Jones JT, Meyer T, Scholey JM and Mogilner A (2005) Efficient chromosome capture requires a bias in the 'search-and-capture' process during mitotic-spindle assembly. *Current Biol*ogy 15(9):828-32.

101. Morales-Mulia S and Scholey JM (2005) Spindle Pole Organization in Drosophila S2 Cells by Dynein, Abnormal Spindle Protein (Asp), and KLP10A. *Molecular Biology of the Cell* 16(7):3176-86.

102. Ou G, Qin H, Rosenbaum JL and Scholey JM (2005) The PKD protein qilin undergoes intraflagellar transport. *Current Biology* 15(11):R410-1.

103. Ou G, Blacque OE, Snow JJ, Leroux MR, Scholey JM (2005) Functional coordination of intraflagellar transport motors. *Nature* 436 (7050): 583-7.

104. Cytrynbaum EN, Sommi P, Brust-Mascher I, Scholey JM, Mogilner A (2005) Early Spindle Assembly in Drosophila Embryos: Role of a Force Balance Involving Cytoskeletal Dynamics and Nuclear Mechanics. *Molecular Biology of the Cell* 16(10):4967-81.

105. Goshima G, Wollman R, Stuurman N, Scholey JM and Vale RD (2005) Length control of the metaphase spindle. *Current Biology* 15(22): 1979-88.

106. Mogilner A, Wollman R, Civelekoglu-Scholey G and Scholey JM (2006) Modeling mitosis. *Trends in Cell Biology* 16(2):88-965.

107. Evans EJ, Snow JJ, Gunnarson AL, Ou G, Stahlberg H, McDonald KL and Scholey JM (2006) Functional modulation of IFT kinesins extends the sensory repertoire of ciliated neurons in *Caenorhabditis elegans. Journal of Cell Biology* 172(5): 663-669.

108. Scholey JM and Anderson KV (2006) Intraflagellar transport and cilium-based signaling. *Cell* 125: 439-442.

109. Civelekoglu-Scholey G, Sharp DJ, Mogilner A and Scholey JM. (2006) Model of chromosome motility in *Drosophila* embryos: Adaptation of a general mechanism for rapid mitosis. *Biophysical Journal* 90:3966- 3982

110. Efimenko E, Blacque OE, Ou G, Haycraft JC, Yoder BK, Scholey JM, Leroux MR and Svoboda P (2006) Caenorhabditis elegans DYF-2, an orthologue of human WDR19, is a component of the intraflagellar transport machinery in sensory cilia. *Molecular Biology of the Cell* (11): 4801-11.

111. Pan X, Ou G, Civelekoglu-Scholey G, Blacque OE, Endres N, Tao L, Mogilner A, Leroux MR, Vale RD and JM Scholey (2006) Mechanism of Transport of IFT particles in *C. elegans* cilia by the concerted action of kinesin-II and OSM-3 motors. *Journal of Cell Biology* 174, 1035-1045.

112. Blaque OE, Li C, Inglis PN, Esmail MA, Ou G, Mah AK, Baillie DL, Scholey JM Leroux MR (2006) The WD repeat-containing protein IFTA-1 is required for retrograde intraflagellar transport. *Molecular Biology of the Cell* (12):5053-62.

113. Tao L, Mogilner A, Civelekoglu-Scholey G, Wollman R, Evans, J, Stahlberg H and Scholey JM (2006) The homotetrameric kinesin-5, KLP61F bundles microtubules and opposes Ncd in Motility Assays. *Current Biology* 16: 2293.

114. Goshima, G, Wollman R, Goodwin SS, Zhang N, Scholey JM, Vale RD and Stuurman N (2007) Genes Required for Mitotic Spindle Assembly in *Drosophila* S2 cells. *Science* 316: 417-421.

115. Ou, G, Koga M, Blacque OE, Murayama T, Ohshima Y, Shafer JC, Li C, Yoder BK, Leroux MR and Scholey JM (2007) Sensory Ciliogenesis in *Caenorhabditis elegans:* Assignment of IFT Components into Distinct Modules Based on Transport and Phenotypic profiles. *Molecular Biology of the Cell* 18: 1554-1569.

116. Brust-Mascher I and Scholey JM (2007) Mitotic Spindle Dynamics in *Drosophila.* (2007) *International Review of Cytology* 259:139-172.

117. Cheerambathur D, Civelekoglu-Scholey G, Brust-Mascher I, Sommi P, Mogilner A and Scholey JM (2007) Quantitative Analysis of an Anaphase B Switch: Predicted Role for a Microtubule Catastrophe Gradient. *Journal of Cell Biology* 177: 995-1004.

118. Civelekoglu-Scholey G and Scholey JM (2007) Mitotic Motors: Kinesin-5 Takes a Brake. *Current Biology* 17: R544.

119. Inglis PN, Ou G, Leroux MR and Scholey JM (2007) The sensory cilia of *Caenorhabditis elegans. WormBook.* Review, March 8; 1-22.

120. Scholey JM (2008) Intraflagellar transport motors in cilia: moving along the cell's antenna. *Journal of Cell Biology* 180: 23-29.

121. Wollman R, Civelekoglu-Scholey G, Scholey JM and Mogilner A (2008) Reverse engineering of force integration in the *Drosophila* embryo mitotic spindle. *Molecular Systems Biology,* 4: 195.

122. Cheerambathur D, Brust-Mascher I, Civelekoglu-Scholey G and Scholey JM (2008) Dynamic partitioning of mitotic kinesin-5 crosslinkers between microtubule-bound and freely diffusing states. *J. Cell Biol.* 182, 429-438.

123. van den Wildenberg S, Tao L, Kapitein LC, Schmidt CF, Scholey JM and Peterman E (2008) The Homotetrameric Kinesin-5, KLP61F, Preferentially Crosslinks Microtubules into Antiparallel Orientations. *Current Biol.* 18, 1860-1864.

124. Brust-Mascher, I, Sommi, P., Cheerambathur, DK and Scholey, JM (2009) Kinesin-5 dependent poleward flux and spindle length control in *Drosophila* embryo mitosis. *Mol. Biol. Cell.*, 20, 1749-1762.

125. Scholey, JM (2009) Kinesin-5 in *Drosophila* Embryo Mitosis: Sliding Filament or Spindle Matrix Mechanism. *Cell Motility and the Cytoskeleton.* 66, 500 – 508.

126. Hao, L and Scholey, JM (2009) Intraflagellar Transport at a Glance. *Journal of Cell Science.* 122, 889 – 892.

127. Brust-Mascher, I, and Scholey, JM (2009) Microinjection of *Drosophila* Embryos for Studying Mitosis. *Journal of Visualized Experiments.* Sep 15;(31). pii: 1382. doi: 10.3791/1382.

128. Peterman EJ, Scholey JM (2009) Mitotic microtubule crosslinkers: insights from mechanistic studies. *Current Biology.* 19:R1089-94.

129. Tao L, Scholey JM. (2010) Purification and assay of mitotic motors. *Methods.* 51: 233-41.

130. Civelekoglu-Scholey G, Scholey JM. (2010) Mitotic force generators and chromosome segregation. *Cell Mol Life Sci.* 67:2231-50.

131. Goshima G, Scholey JM (2010). Control of Mitotic Spindle Length. *Annu Rev Cell Dev Biol.* 26, 21-57.

132. Civelekoglu-Scholey G, Tao L, Brust-Mascher I, Wollman R, Scholey JM. (2010). Prometaphase spindle maintenance by an antagonistic motor-dependent force balance made robust by a disassembling lamin-B envelope. *J Cell Biol*.188:49-68.

133. Wang, H., Brust-Mascher, I., Cheerambathur, D and Scholey, JM. (2010). Coupling between microtubule sliding, plus-end growth and spindle length revealed by kinesin-8 depletion. *Cytoskeleton.* 67, 715-728.

134. Pan X, Acar S, Scholey, JM. (2010) Torque generation by one of the motor subunits of heterotrimeric kinesin-2. *Biochem Biophys Res Commun.* 401(1):53-7

135. de Lartigue J, Brust-Mascher I, Scholey, JM. (2011) Anaphase B spindle dynamics in Drosophila S2 cells: Comparison with embryo spindles. *Cell Division.* 6:8.

136. Hao L, Efimenko E, Swoboda P, Scholey JM (2011). The Retrograde IFT Machinery of *C.elegans* Cilia: Two IFT Dynein Complexes? *PLoS One.* 6(6):e20995.

137. Hao, L., Thein M, Brust-Mascher I, Civelekoglu-Scholey G, Lu Y, Acar S, Prevo B, Shaham S, and Scholey JM (2011) Intraflagellar Transport Delivers Tubulin Isotypes to Sensory Cilium Middle and Distal Segments. *Nature Cell Biology.* 13(7): 790-798. DOI: 10.1038/ncb2268.

138. Brust-Mascher, I. and Scholey, JM (2011) Mitotic Motors and Chromosome Segregation: Mechanism of Anaphase B. *Biochemical Society Transactions.* 39:1149-53.

139. Scholey, J. M. (2012) Kinesin-2 motors transport IFT-particles, dyneins and tubulin subunits to the tips of Caenorhabditis elegans sensory cilia: Relevance to vision research? *Vision Research.* 75: 44-52.

140. Brust-Mascher, I., Ou, G., and JM Scholey (2013) Measuring Rates of Intraflagellar Transport Along *C. elegans* Sensory Cilia Using Fluorescence Microscopy. *Methods in Enzymology*, 524, 285-304.

141. Acar, S., Carlson, DB, Budamagunta, MS, Yarov-Yarovoy, V., Correia, JJ, Ninonuevo, MR, Jia, W, Tao, L, Leary, JA, Voss, JC, Evans, JE and JM Scholey (2013) The bipolar

Assembly domain of the mitotic motor, kinesin-5. *Nature Communications,* 4: 1343, DOI: 10.1038/ncomms2348.

142. Scholey, JM (2013) Compare and Contrast the Reaction Coordinate Diagrams for Chemical Reactions and Cytoskeletal Force Generators. *Molecular Biology of the Cell,* 24, 433-439.

143. Scholey, J.M. (2013) Kinesin-2: A family of heterotrimeric and homodimeric motors with diverse intracellular transport functions. *Annual Review of Cell and Developmental Biology.* 29:443–69.

144. Wang, H., Brust-Mascher I, Civelekoglu-Scholey G and JM Scholey (2013) Patronin Mediates a switch from Kinesin-13-dependent Poleward Flux to Anaphase B Spindle Elongation. *J. Cell Biology.* 203, 35-46.

145. Scholey JM (2013) Cilium Assembly: Tubulin Delivery by Kinesin-2 Powered IFT-Trains. *Current Biology.* 23(21):R956-9 (Invited Dispatch).

146. Brust-Mascher I, Civelekoglu-Scholey G, Scholey JM (2014) Analysis of mitotic protein dynamics and function in Drosophila embryos by live cell imaging and quantitative modeling. *Methods in Molecular Biology.* 1136, 3-30.

147. Wang, H, Brust-Mascher I and Scholey JM (2014) Sliding Filaments and Mitotic Spindle Organization. *Nature Cell Biology.* 16, 737-739.

148. Scholey JE, Nithiananthan S, Scholey JM and Al-Bassam J (2014) Structural basis for the assembly of the mitotic motor, kinesin-5 into bipolar tetramers. *Elife,* 3:e02217.

149. Wang H, Brust-Mascher I, Scholey JM. (2015) The microtubule cross-linker Feo controls the midzone stability, motor composition, and elongation of the anaphase B spindle in *Drosophila* embryos. *Molecular Biology of the Cell.* 26(8):1452-62.

150. Prevo B, Mangeol P, Oswald F, Scholey JM, Peterman EJ. (2015) Functional differentiation of cooperating kinesin-2 motors orchestrates cargo import and transport in *C. elegans* cilia. *Nature Cell Biology.* 17(12):1536-45.

151. Brust-Mascher I, Civelekoglu-Scholey G, Scholey JM. (2015) Mechanism for Anaphase B: Evaluation of "Slide-and-Cluster" versus "Slide-and-Flux-or-Elongate" Models. *Biophysical Journal*. 108(8):2007-18.

152. Prevo B, Scholey, JM and Peterman, EJ (2017) Intraflagellar Transport: Mechanisms of Motor Action, Cooperation and Cargo Delivery. *FEBS Journal.* 284: 2905-2931.

153. Khan, S and Scholey JM (2018) Assembly, Function and Evolution of Archaella, Flagella and Cilia. *Current Biology.* 28: R278-R292.

Q/A interview with Current Biology: Scholey, JM, (2006) *Current Biology*,16: R306-7.

www.mcb.ucdavis.edu/facultylabs/scholey/Journal%20Papers/q&ajonscholeycurrentbiology.pdf

Book Editor: Scholey, JM (1993) Motility Assays for Motor Proteins. *Methods in Cell Biology*. Volume 39, 304 pp, Pubs: Academic Press.